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Tuberculosis in Canada

2004

Canada

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Tuberculosis in Canada

2004

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Special Report of
the Canadian Tuberculosis Committee

Tuberculosis Among the Aboriginal Peoples of Canada, 2000 to 2004

Tuberculosis Prevention and Control, Public Health Agency of Canada
and
First Nations and Inuit Health Branch, Health Canada

Background

The incidence rate of active tuberculosis (TB) in Canada is considered low, especially in the global context. Canada's overall TB incidence rate in 2004 was 5.0 per 100,000 population. However, the incidence rate of TB in Canada is comprised of the combined rates of three origin-based groups: 'Canadian-born Aboriginal peoples', 'Canadian-born non-Aboriginal', and 'foreign-born', each with its own unique risk-factor and epidemiologic profile. Examination of the epidemiology of TB in these groups reveals large differences in the incidence rate of TB, with the highest rates reported among Canadian-born Aboriginal peoples.

Various reports have described the epidemiology of TB in Canadian-born Aboriginal peoples[1-3] highlighting prevention strategies, disproportionately high rates of disease, and a contrasted demographic and clinical picture when compared to the other origin-based groups. This report updates the epidemiology of TB among Aboriginal peoples of Canada and further examines selected demographic and clinical characteristics of persons with TB in this population.

Methods

Cases of new or relapsed TB disease reported to the Canadian Tuberculosis Reporting System (CTBRS) from 2000 to 2004 were examined. Cases of TB are reported to the CTBRS from each of the 10 provinces and 3 territories according to the national case definition. The CTBRS contains clinical and demographic characteristics on each case including origin. For this report, cases were divided into the following groups: Canadian-born Aboriginal peoples (Status and non-Status North American Indians*, Métis† and Inuit‡ peoples), Canadian-born non-Aboriginal and foreign-born. If origin or other data were reported as unknown, the case was excluded from the analysis.

* Indian people in Canada, both "status" and "non-status". Status Indians are registered with the federal government as Indians, according to the terms of the *Indian Act*.

† People of mixed Aboriginal and European ancestry who identify themselves as Métis and are distinct from First Nations people, Inuit or non-Aboriginal people.

‡ An Aboriginal people in Northern Canada, who live primarily in Nunavut, Northwest Territories, northern Quebec and northern Labrador. The word means "people" in the Inuit language – Inuktitut.

Updated annual population estimates by geography, age and sex for the overall Canadian[4], total Aboriginal, Inuit, and Métis[5] groups were obtained from Statistics Canada. Foreign-born population estimates are based on the 2001 census in a Statistics Canada, Demography Division customized product. Population estimates specific to the Status (North American) Indian group were obtained from Indian and Northern Affairs Canada[6§]. Coinciding updated population estimates for the non-Status North American Indian group were not available; therefore rates for this group are not included in this report. Updated population estimates are also not available for total Aboriginal, Inuit, Métis and foreign-born groups prior to 2001. For some graphs, historical rates using previously published population estimates and projections from different sources are displayed. Proportions are calculated using only cases with complete data in the denominator. Epidemiologic data are presented cumulatively for cases identified and reported from 2000 to 2004, unless otherwise specified.

Results

Incidence rate

From 2000 to 2004, 8,397 new and relapsed TB cases were reported to the CTBRS. Origin data were available for 8,229 (98%) of these cases. A total of 1,330 (16%) cases were reported as Canadian-born Aboriginal, 1,300 (16%) cases occurred in Canadian-born non-Aboriginals and 5,599 (68%) were among foreign-born individuals. Incidence rates reveal a disproportionate burden of disease among Aboriginal peoples. In 2004, the total Aboriginal rate was 4.8 times higher than the Canadian rate and 26.4 times higher than the rate of Canadian-born non-Aboriginals (see Table SR-1).

Table SR-1

Proportion of total cases and incidence rate of tuberculosis, by origin – Canada: 2004

Origin Group	Number of Cases	Proportions of Cases	Rate
Canadian born – Aboriginal*	268	16.6	23.8
Status (registered) Indian	202	12.5	27.5
Inuit	41	2.5	80.4
Métis	6	0.4	1.9
Non-status Indian**	19	1.2	–
Canadian born non-Aboriginal	214	13.3	0.9
Foreign-born	1,115	69.1	16.6
Unknown	16	1.0	
Canada	**1,613**	**100.0**	**5.0**

* Canadian-born Aboriginal = Status (registered) Indian + Inuit + Métis + Non-status Indian

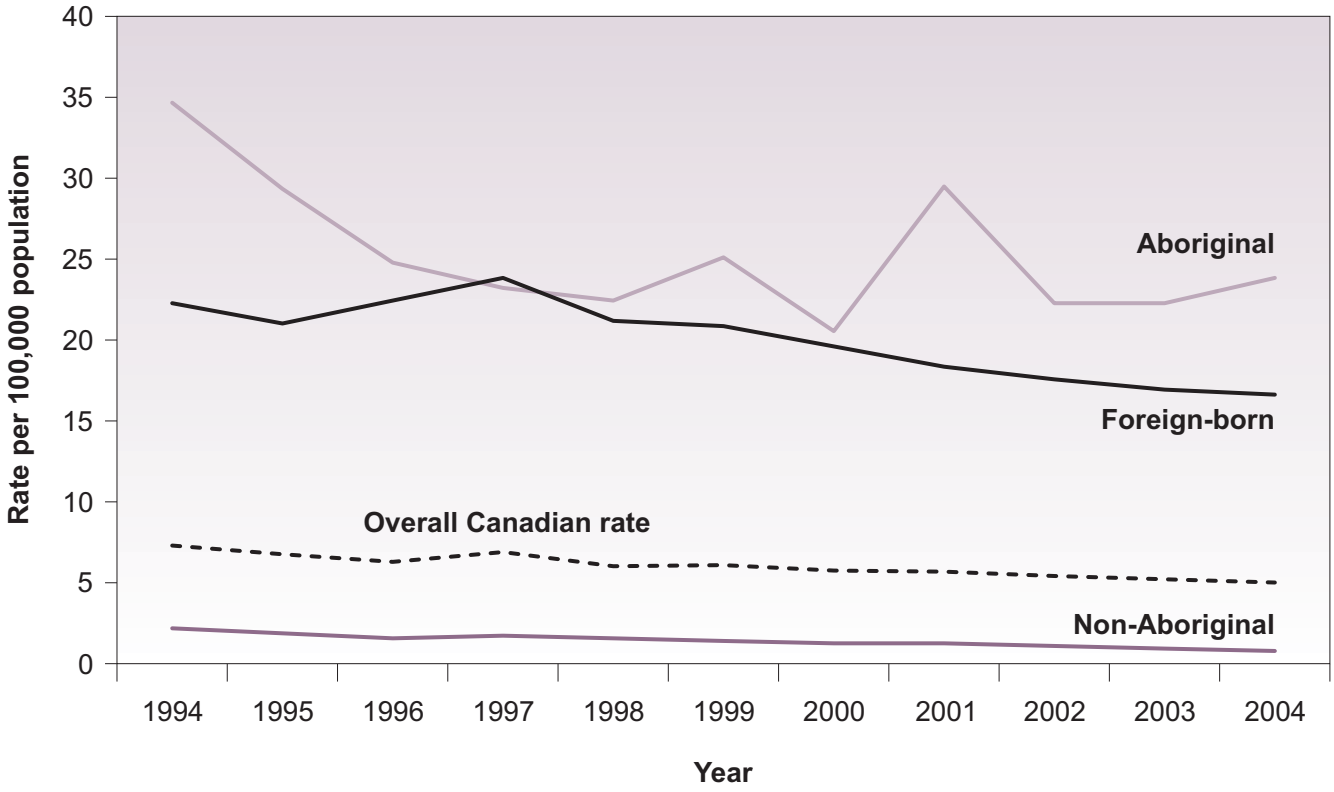
** Rate for non-status Indian not available as there are no accurate population estimates available

During the early 1990's the incidence rate of TB among Aboriginal peoples showed consistent decline. Though subject to fluctuations, the incidence of TB in this population since then appears to be stabilizing at a disproportionately high rate (see Figure SR-1).

§ The INAC population estimates are believed to be more accurate estimates of the true population counts for those identifying themselves with Status Indian origin.

Figure SR–1

TB incidence rate by origin – Canada: 1994–2004**



TB rates among individual Aboriginal groups showed varying patterns (see Figure SR–2). The incidence rate among Status Indians declined slowly during the 1990s. However it now appears to have stabilized. The incidence rate among the Métis has remained low at a median rate of 1.8 per 100,000††. The most striking finding is the rate of disease among the Inuit group. Large fluctuations in the incidence rate are evident, due to periodic outbreaks occurring in a relatively small population. In order to examine the trend in the incidence rate among the Inuit, the three-year moving averages of the incidence rate is presented in Table SR–2.

** Population denominators for the total Aboriginal population are not available prior to 1994

†† Separate population estimates are not available for the Métis group prior to 2001.

Figure SR-2

TB incidence rate by Aboriginal origin – Canada: 1994–2004

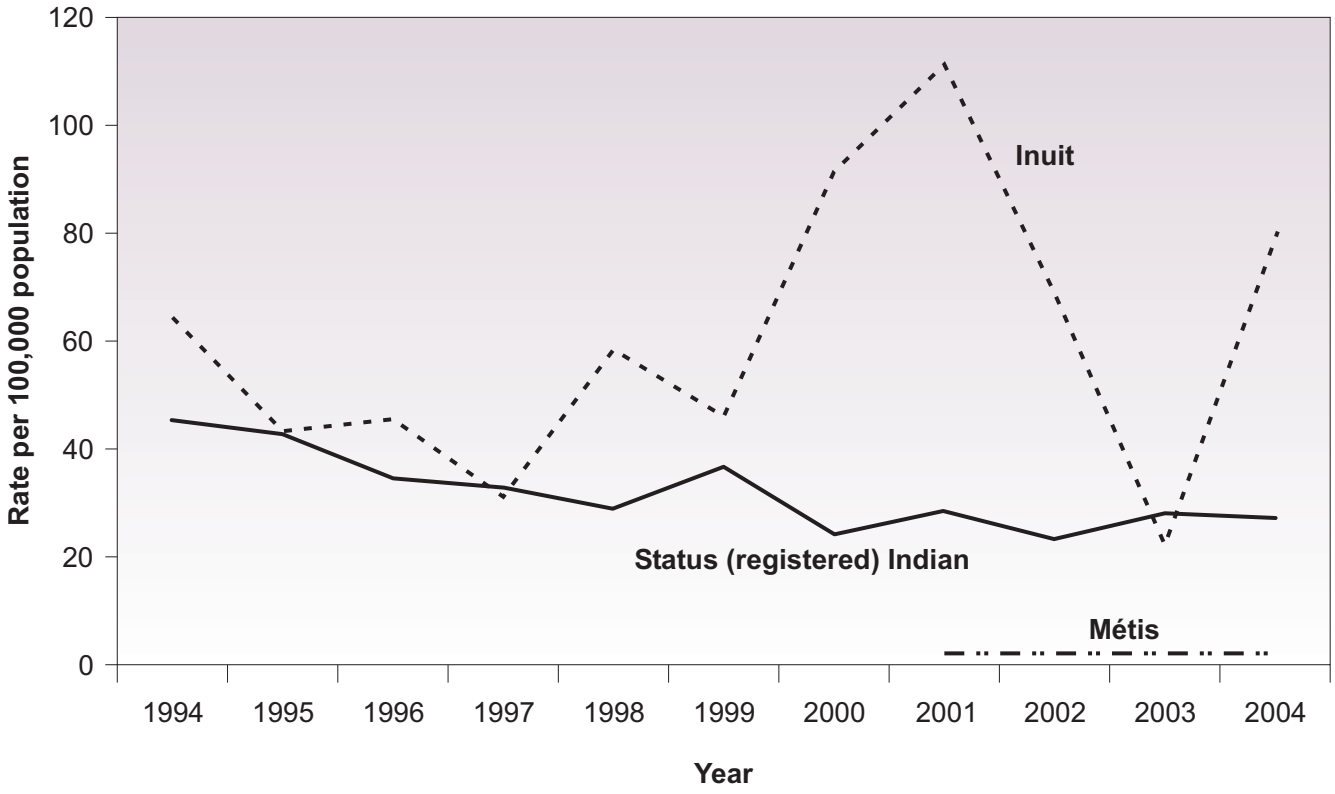


Table SR-2

Three-year moving average TB incidence rate among the Inuit – Canada: 1994–2004

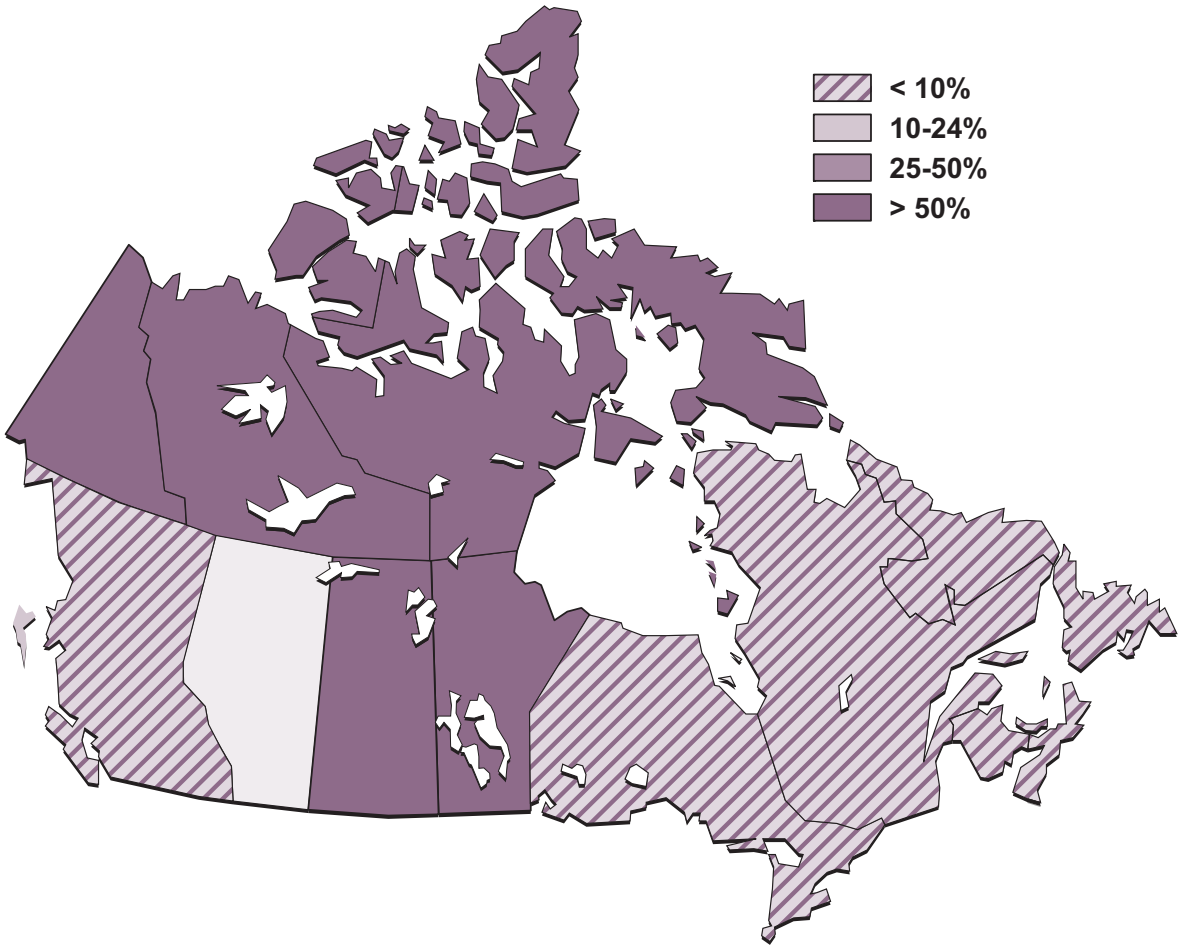
Year	Cases	Incidence rate	Three-year moving average rate
1994	35	64.5	
1995	24	43.1	51.0
1996	26	45.5	39.8
1997	18	30.9	45.0
1998	35	58.7	45.2
1999	28	45.9	65.4
2000	56	91.5	82.9
2001	53	111.4	90.2
2002	33	67.8	67.1
2003	11	22.1	56.7
2004	41	80.4	

Geographic distribution

Figure SR-3 presents the proportion of cases with Aboriginal origin in the provinces and territories. Proportions were highest in the Prairie provinces and the North (includes Northwest Territories, Nunavut and Yukon).

Figure SR-3

Proportion of total TB cases in Aboriginal peoples by province/territory – Canada: 2004

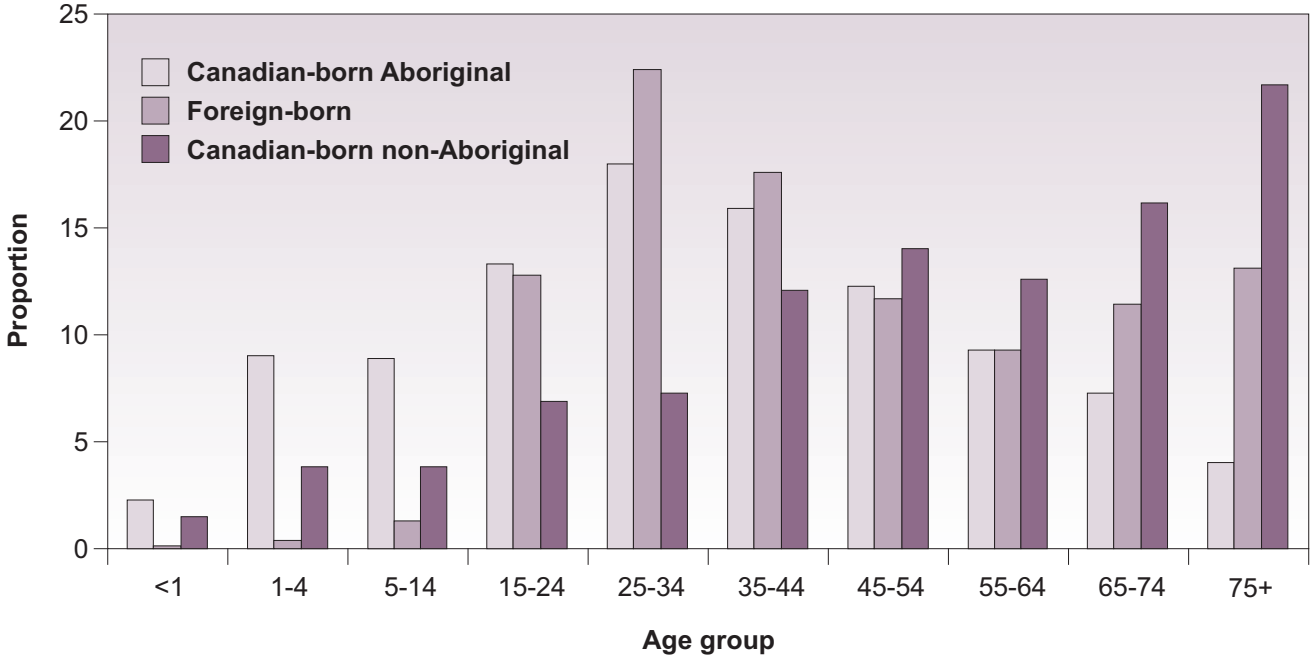


Age and sex

The age profile of TB cases differs greatly between the three origin-based groups. Thirty-five percent of cases among Aboriginal peoples were less than 25 years old at diagnosis compared with only 16% among Canadian-born non-Aboriginals and 14% among foreign-born cases. Persons aged 65 years and older accounted for only 12% of Aboriginal TB, whereas this demographic represented 38% of all TB reported in Canadian-born non-Aboriginals and 24% of foreign-born cases (Figure SR-4). Accordingly, cases among Aboriginal peoples were younger (median 34 years) than cases among Canadian-born non-Aboriginal people (median 55 years) and the foreign-born (median 42 years). Males accounted for a majority of reported cases in all ethnic origins (Aboriginal 54%, Canadian-born non-Aboriginal 65%, foreign-born 51%).

Figure SR–4

Proportion of TB cases by age group and origin – Canada: 2000–2004

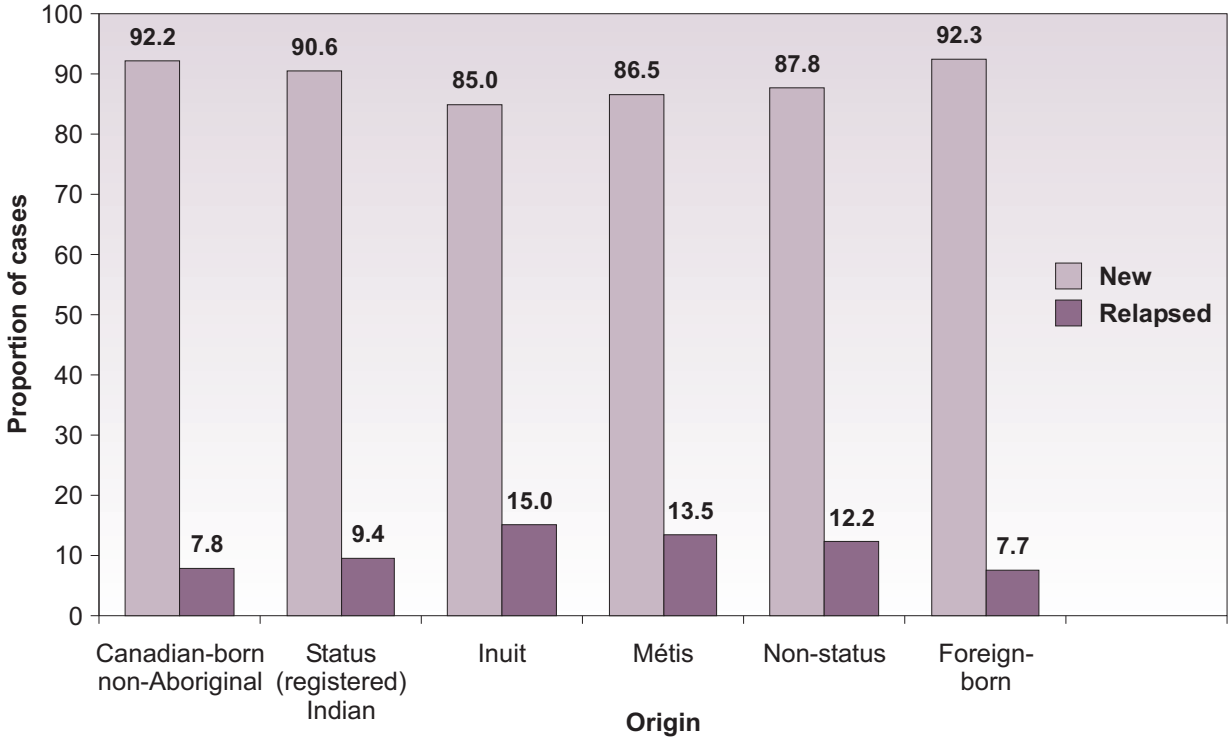


Clinical presentation

A history of previous TB disease (relapsed case) was reported for 657 (8%) of cases. More cases among Aboriginal peoples were reported as relapsed (11%) compared to cases among Canadian-born non-Aboriginal (8%) and the foreign-born (8%) (Figure SR–5).

Figure SR–5

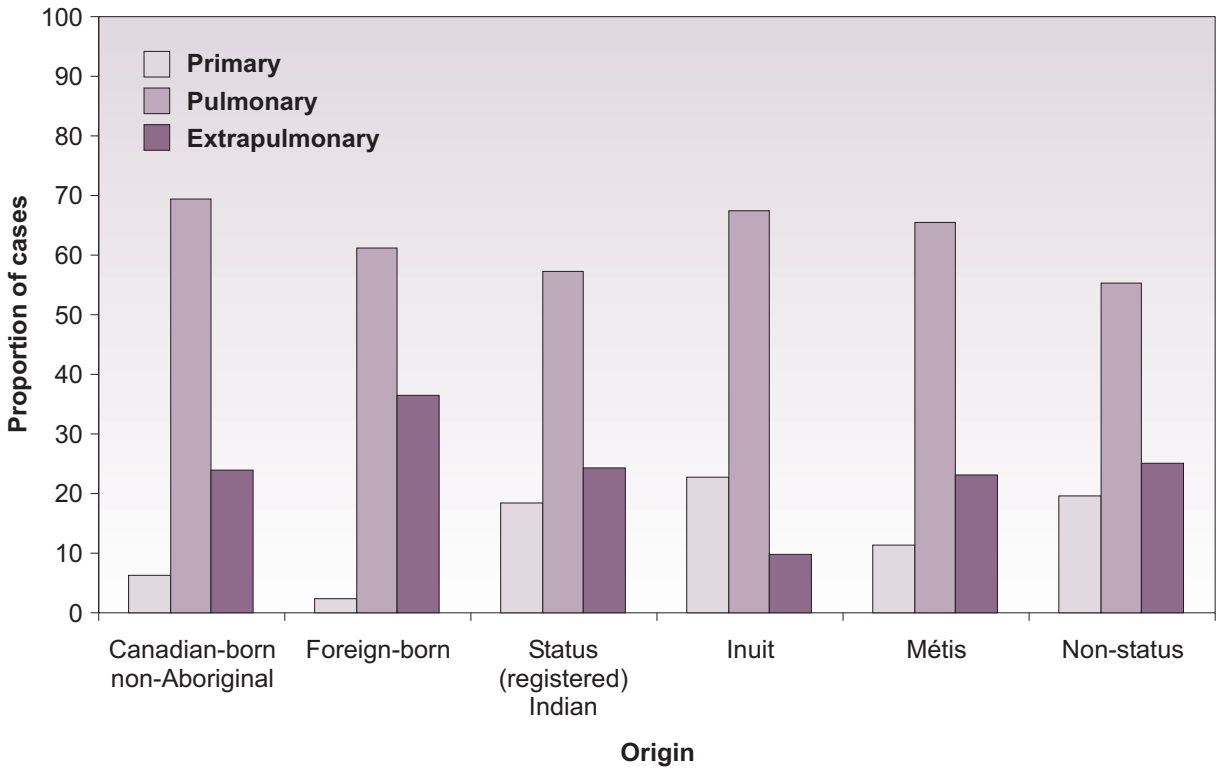
Proportion of cases reported as new or relapsed by origin – Canada: 2000–2004



The proportion of cases among Aboriginal peoples presenting as primary TB (19%) was higher than those among Canadian-born non-Aboriginal (2.4%) and foreign-born (6.4%) (Figure SR-6).

Figure SR-6

Proportion of tuberculosis cases by main diagnostic site and origin – Canada: 2000-2004



The proportion of cases among Aboriginal peoples that were pulmonary smear positive (34%) was similar to cases among Canadian-born non-Aboriginal (32%) but higher than cases among the foreign-born (21%).

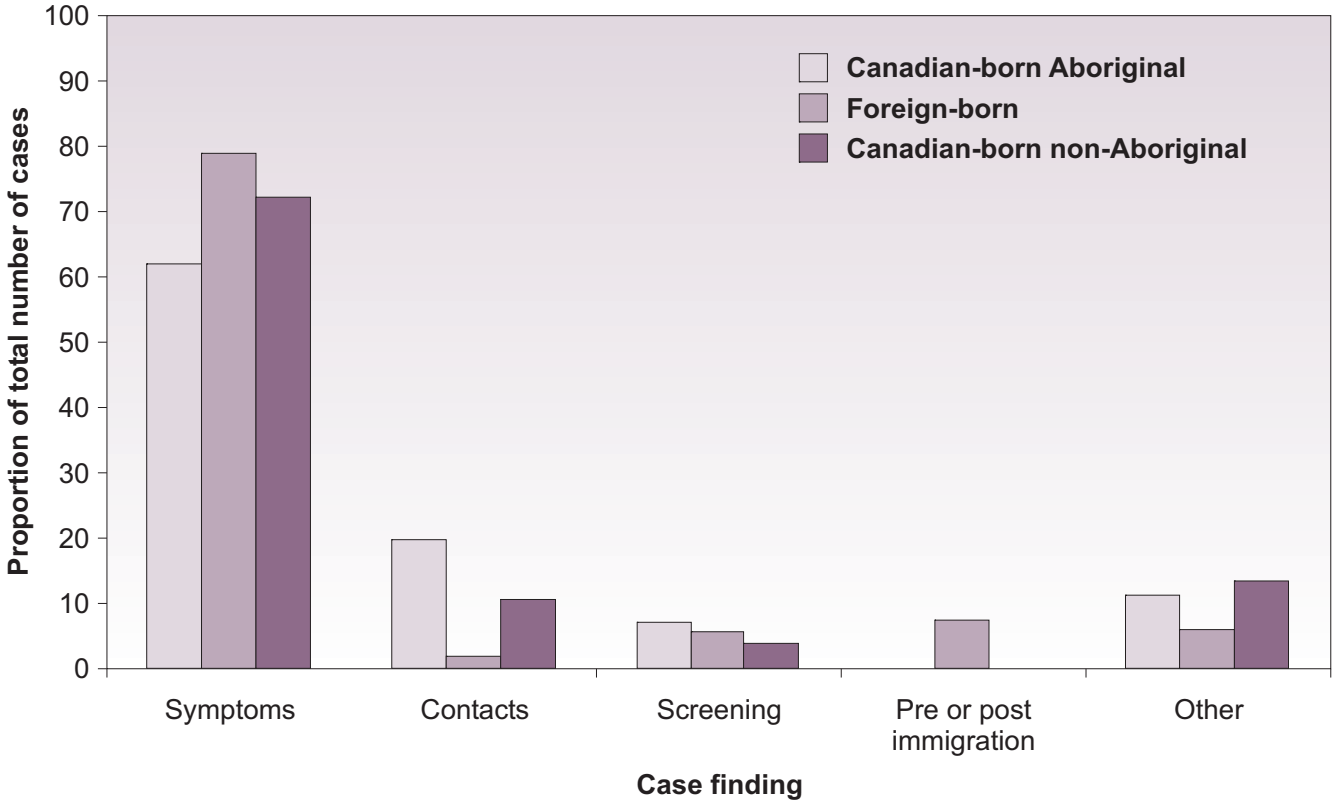
For cases of pulmonary TB, the proportion of those with cavitary⌗ disease was highest among Canadian-born Aboriginal peoples (11%) [Canadian-born non-Aboriginal cases (4%); foreign-born cases (3%)].

Cases among Aboriginal peoples were least likely to be detected through the identification of symptoms (62%) as compared with 72% of cases among the Canadian-born non-Aboriginal and 79% among the foreign born. (Figure SR-7).

⌗ Derived as a percent of all pulmonary cases using the ICD-9 or ICD-10 codes for tuberculosis of lung with cavitation.

Figure SR–7

Case finding by origin – Canada: 2000–2004



Drug resistance

Table SR–3 presents the proportion of cases, by origin, with any drug resistance and with multidrug resistance.

Table SR–3

Proportion of cases with drug resistance by origin – Canada: 2000–2004

Origin group	Resistance % (n)	
	Any drug resistance	MDR-TB
Canadian-born Aboriginal	1.7 (23)	0.2 (2)
Canadian-born non-Aboriginal	5.3 (69)	0.3 (4)
Foreign-born cases	10.0 (562)	1.2 (69)
Canada	**7.9 (654)**	**0.9 (75)**

HIV co-infection

The HIV status of TB cases is largely underreported in Canada. HIV status was known in only 30% of the Canadian-born Aboriginal cases, 15% of the Canadian-born non-Aboriginal cases and 15% of the foreign-born cases. Using available data, the proportion of cases who were HIV seropositive was 16% in Canadian-born Aboriginal cases, 24% of the Canadian-born non-Aboriginal cases and 8% of the foreign-born cases. In the unlikely event that these were the only co-infected cases, the co-infection rates were 5% among Canadian-born Aboriginal TB cases, 4% among Canadian-born non-Aboriginal cases and 1% among the foreign-born cases.

Treatment and treatment outcomes

In cases for which treatment mode was reported, the proportion of Aboriginal TB cases that were treated using directly observed therapy (DOT) was higher 1,036 (90%) than both Canadian-born non-Aboriginal 228 (48%) and foreign-born 665 (36%) TB cases. Treatment mode was missing in 59% of all cases. Table SR-4 presents the treatment outcome for all cases by origin group

Table SR-4

Outcome in cases of tuberculosis by origin – Canada: 2004

Origin group	Outcome % (n)		
	Cured or treatment completed	Death	Other
Canadian-born Aboriginal	85 (216)	8 (19)	7 (18)
Canadian-born non-Aboriginal	74 (96)	10 (13)	16 (20)
Foreign-born cases	77 (726)	3 (25)	20 (188)
Canada	79 (1,038)	4 (57)	17 (226)

* 'Other' includes 'treatment failure', 'absconded' and 'treatment ongoing'.

Discussion

This report provides a five-year profile of TB among Aboriginal peoples of Canada. The rate of TB disease among Canadian Aboriginal peoples has stabilized at a level substantially higher than Canadian-born non-Aboriginals and the foreign-born. The geographic distribution of TB rates remains constant, with higher disease burden among Aboriginal peoples in the North and lowest in the East. This is consistent with the prevailing theory of disease presentation related to time of first contact with European settlers[2,8]. TB cases among Canadian Aboriginal peoples appear to be younger with higher proportions of relapsed cases and diagnoses of primary disease.

Higher rates of cavitary disease and primary TB suggest delayed detection of disease and ongoing transmission of infection in the community. These findings highlight challenges in access and delivery of health care in some Aboriginal communities and the need for greater vigilance or suspicion of TB symptoms by health care practitioners.

High cure and treatment completion rates are encouraging and TB drug-resistance has still not emerged as an issue of concern among Canadian Aboriginal peoples. This may be related to higher proportion of cases being treated using directly observed therapy (DOT). Nevertheless, vigilance must be maintained through active clinical follow-up of cases and contacts under treatment.

Given that the HIV status of TB cases is largely underreported in Canada, the proportions reported here are likely overestimates, biased towards testing in those with co-existing risk factors of HIV infection. The World Health Organization has estimated HIV prevalence in all adult incident TB cases in Canada for 2004 to be 8.7%[9]. The lack of sufficient data on HIV co-infection in TB cases highlights the need for systematic HIV testing and reporting for all TB cases in Canada. This information is vital for monitoring the progress of the prevention and control of TB in Canada including in Aboriginal peoples.

The fact that the burden of TB disease in Canadian-born Aboriginals remains at over 25 times that of the Canadian-born non-Aboriginal peoples in 2004 is unacceptable. In fact, this rate disparity has increased from 20 times the non-Aboriginal rate in 1999[3]. With country of birth in common, attributable risk factors may include a large reservoir of illness in some Aboriginal communities and challenges in providing adequate primary and public health services to peoples in remote areas. Furthermore, many Aboriginal peoples in Canada face lower socioeconomic conditions leading to malnutrition and over-crowded living conditions. Further challenges to the prevention and control of TB include high prevalence of latent TB infection, higher rates of diabetes and end-stage renal disease, genetic factors, factors related to living in isolated communities, substance abuse, and HIV[10,11,12].

In the spirit of the Stop TB Global Plan goal of halving the prevalence of TB disease worldwide by 2015, the Canadian Tuberculosis Committee has established a goal of reaching a national incidence rate of 3.6/100,000 population by 2015[13]. In order to reach this goal, significant decreases in the rate of TB in Canadian-born Aboriginal peoples are required. These decreases are highly dependent on improvements in socio-economic conditions, early detection of cases, improved TB knowledge and vigilance in primary healthcare workers, appropriate and complete treatment, and the availability of adequate resources.

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Association of Medical Microbiology and Infectious Disease Canada

Canadian Lung Association

Canadian Public Health Laboratory Network

Canadian Thoracic Society

Citizenship and Immigration Canada

Correctional Service Canada

First Nations and Inuit Health Branch
Health Canada

National Microbiology Laboratory
Public Health Agency of Canada

Tuberculosis Prevention and Control
Public Health Agency of Canada

Executive Summary

In 2004, 1,613 cases (5.0 per 100,000) of new active and relapsed tuberculosis (TB) were reported to the Canadian Tuberculosis Reporting System (CTBRS). The highest rate, 108.0 per 100,000 population, was reported from Nunavut. The TB incidence rate was lowest in Prince Edward Island where the reported incidence rate was 0.7 per 100,000. The three most populous provinces (British Columbia, Ontario and Quebec), which collectively make up 76% of Canada's population, accounted for 76% of the total reported cases.

Individuals between the ages of 25 and 34 years made up the largest number of reported cases, accounting for 20% of the total. However, the corresponding case rate of 7.4 per 100,000 for this age group was surpassed by the age-specific rates of 8.0 and 10.0 per 100,000 for those in the older age groups of 65 to 74 years and greater than 74 years, respectively.

In 2004, TB among foreign-born individuals accounted for 69% of all reported cases. Canadian-born non-Aboriginal and Canadian-born Aboriginal cases made up 13% and 17%, respectively. Birthplace was unknown for 1% of cases.

Pulmonary TB, defined as TB of the lungs and conducting airways, was the most frequently reported main diagnostic site, representing 58% of all reported cases in 2004. TB of the peripheral lymph nodes accounted for 16% of all cases and was the second most commonly reported diagnostic site.

Of the 1,613 cases reported in 2004, 1,265 cases were culture positive, of which 1,172 had resistance information reported. Of these, 1,024 (87%) had no resistance to first-line TB drugs. Nine percent were resistant to one drug and the remaining 4% showed patterns of resistance to two or more drugs prescribed. The most common type of mono-resistance was to isoniazid (INH) accounting for 33% of all reported resistance. Multi-drug resistant TB (defined as resistance to at least isoniazid and rifampin) accounted for 0.7% of all reported drug sensitivity test results.

For TB cases initially reported in 2003, 1,503 patients had treatment outcomes submitted in 2004 either as an individual case report (677) or in aggregate (826 cases).

A total of 1,203 of all cases (80%) were reported as being culture negative or having completed treatment.

The vast majority of individuals placed on TB drug therapy in Canada received treatment as per the *Canadian Tuberculosis Standards*[1]. Eighty-eight percent of these cases received three or more anti-tuberculosis drugs.

The total number of reported cases of TB in Canada has shown a continual decrease over the past decade. However, this decrease is mostly a reflection of a decreasing number of cases in the Canadian-born non-Aboriginal population. The number of cases in the Canadian-born Aboriginal population has shown a minimal decrease, whereas cases in the foreign-born population have remained relatively constant. The TB incidence rate has been slowly declining in all population sub-groups over the past decade. Similarly, the overall incidence rate has shown a slow but steady decline over time; however this appears to be stabilizing at 5.0 per 100,000 population.

[1] Long R. ed. *Canadian Tuberculosis Standards, 5th edition*. Ottawa: Canadian Lung Association and Health Canada, 2000.

Introduction

The *2004 Tuberculosis in Canada* annual report is a publication of Tuberculosis Prevention and Control (TBPC), Public Health Agency of Canada (PHAC). Reports of new active and relapsed tuberculosis cases come to TBPC through the Canadian Tuberculosis Reporting System (CTBRS) from the ten provinces and three territories.

TBPC stores and maintains surveillance reports on tuberculosis (TB) in Canada from the early 1920s. In 1994 responsibility for the CTBRS was transferred from Statistics Canada to Health Canada. In September 2004, TBPC became part of the PHAC which assumed responsibility for the annual reporting.

The report contains information on the overall TB case counts and case rates for selected demographic and clinical characteristics. The report outlines case and treatment outcome data on the following:

- province/territory
- sex
- age
- birthplace
- new and relapsed cases
- main diagnostic site
- bacterial status
- method of detection
- immigration status
- HIV status
- patterns of drug resistance
- treatment outcomes
- drug regimens

Appendices to the report include data tables (*Appendix I*), technical notes on the methods (*Appendix II*), population estimates for 2004 (*Appendix III*) and the World Health Organization (WHO) estimated incidence of TB in the 22 high burden countries, 2004 (*Appendix IV*). Further appendices include the WHO TB epidemiological regions and the member countries (*Appendix V*), the WHO reporting form for 2004 cases *(Appendix VI*), Canadian case and treatment outcome reporting forms (*Appendix VII*) and the members of the Canadian Tuberculosis Committee (*Appendix VIII*).

The annual reports on TB have undergone and will continue to undergo revisions in format and content from year to year. It is the goal of TBPC to continue to adapt and improve this publication in response to changes in the epidemiology and clinical management of TB. Comments on the content and/or format of this document are always welcome.

Results

Section I – 2004 Case Reporting

National Trends

Following a peak in the epidemic in the early 1940s, the reported incidence of TB has shown continued decline (Figure 1). Over the past decade the reported incidence and number of cases of TB has continued to decrease (Figure 2; Table A). In 2004, 1,613 cases of TB were reported to the CTBRS representing an incidence rate of 5.0 per 100,000. New active cases made up the vast majority of reported cases (4.6 per 100,000); the rate of relapse was 0.4 per 100,000.

Table A

Incidence rate of tuberculosis in Canada, three-year moving average: 1994–2004

Year	Number of reported cases	Crude rate per 100,000	Three-year moving average
1994	2,106	7.3	—
1995	1,964	6.7	6.8
1996	1,877	6.3	6.6
1997	1,995	6.7	6.3
1998	1,809	6.0	6.2
1999	1,820	6.0	5.9
2000	1,723	5.6	5.8
2001	1,772	5.7	5.5
2002	1,660	5.3	5.4
2003	1,629	5.1	5.2
2004	1,613	5.0	—

Geographic Distribution

Several jurisdictions reported incidence rates below the national rate. TB incidence remained lowest in the Atlantic provinces (New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island) and was highest in Nunavut and the Northwest Territories (Table B, Figure 3).

Figure 1

Tuberculosis incidence and mortality rates – Canada: 1924–2004

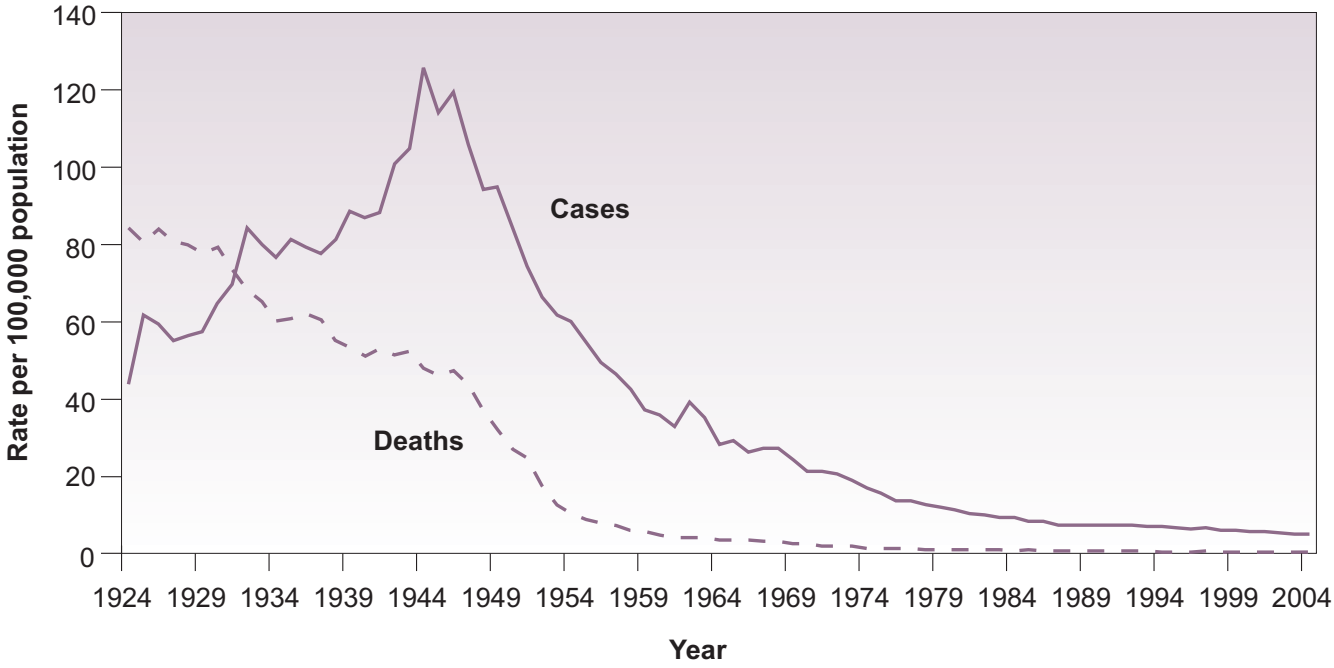


Figure 2

Tuberculosis cases and incidence rates – Canada: 1984–2004

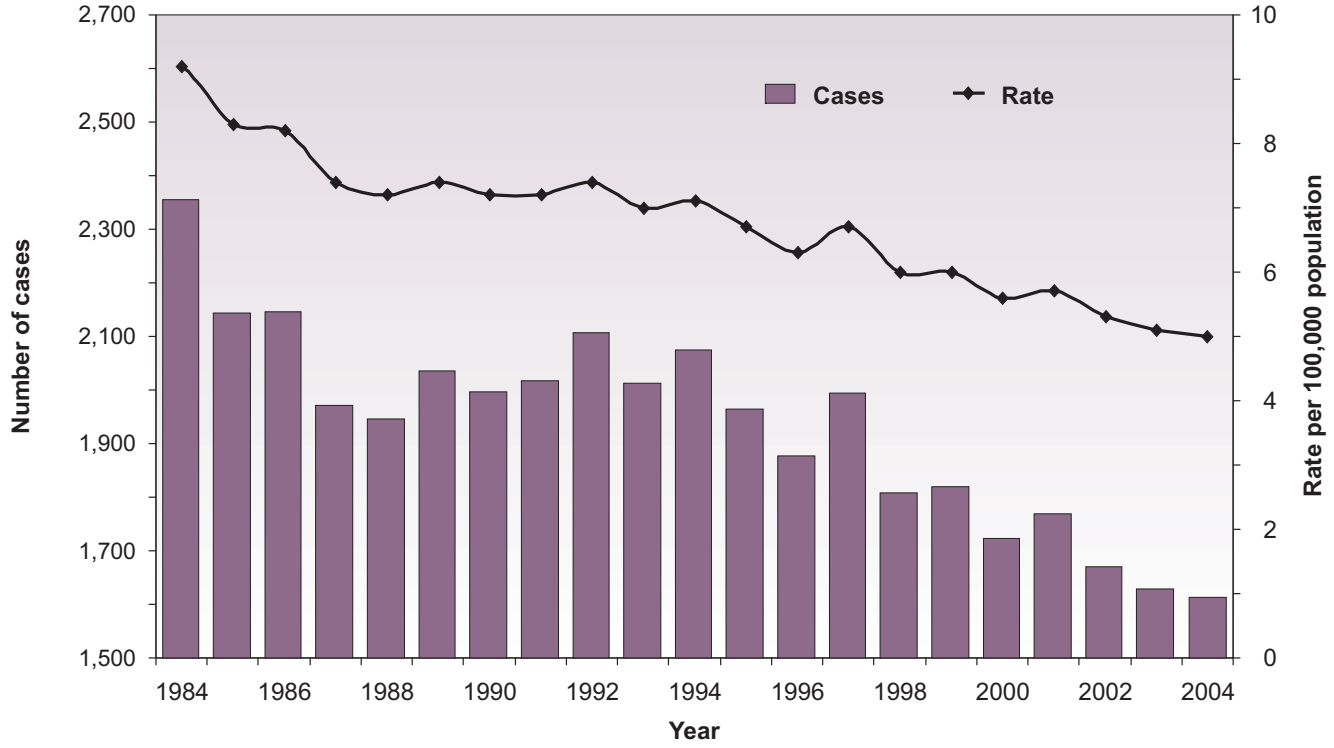


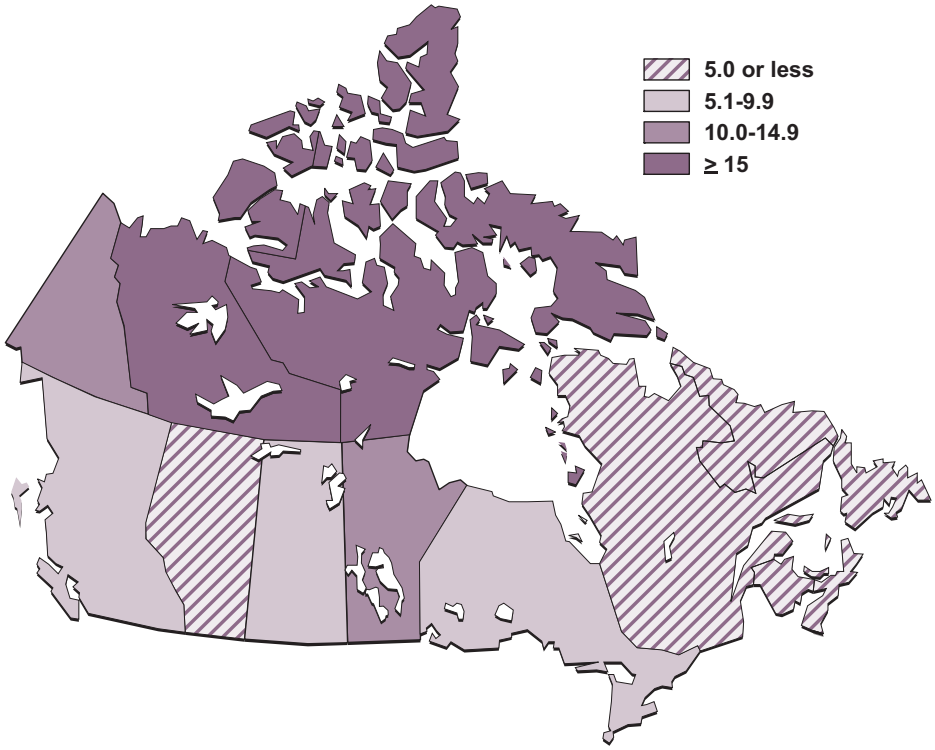
Table B

Ranked tuberculosis incidence in Canada – provinces/territories: 2004

Reporting province or territory	Abbreviation	Incidence rate per 100,000
Nunavut	Nvt.	108.0
Northwest Territories	N.W.T.	23.4
Yukon	Y.T.	12.9
Manitoba	Man.	12.3
British Columbia	B.C.	7.1
Saskatchewan	Sask.	7.0
Ontario	Ont.	5.6
Alberta	Alta.	3.4
Quebec	Que.	2.9
Newfoundland and Labrador	N.L.	1.4
New Brunswick	N.B.	1.3
Nova Scotia	N.S.	0.9
Prince Edward Island	P.E.I.	0.7
CANADA		**5.0**

Figure 3

Tuberculosis incidence rate by province/territory as compared with national rate (5.0 per 100,000): 2004

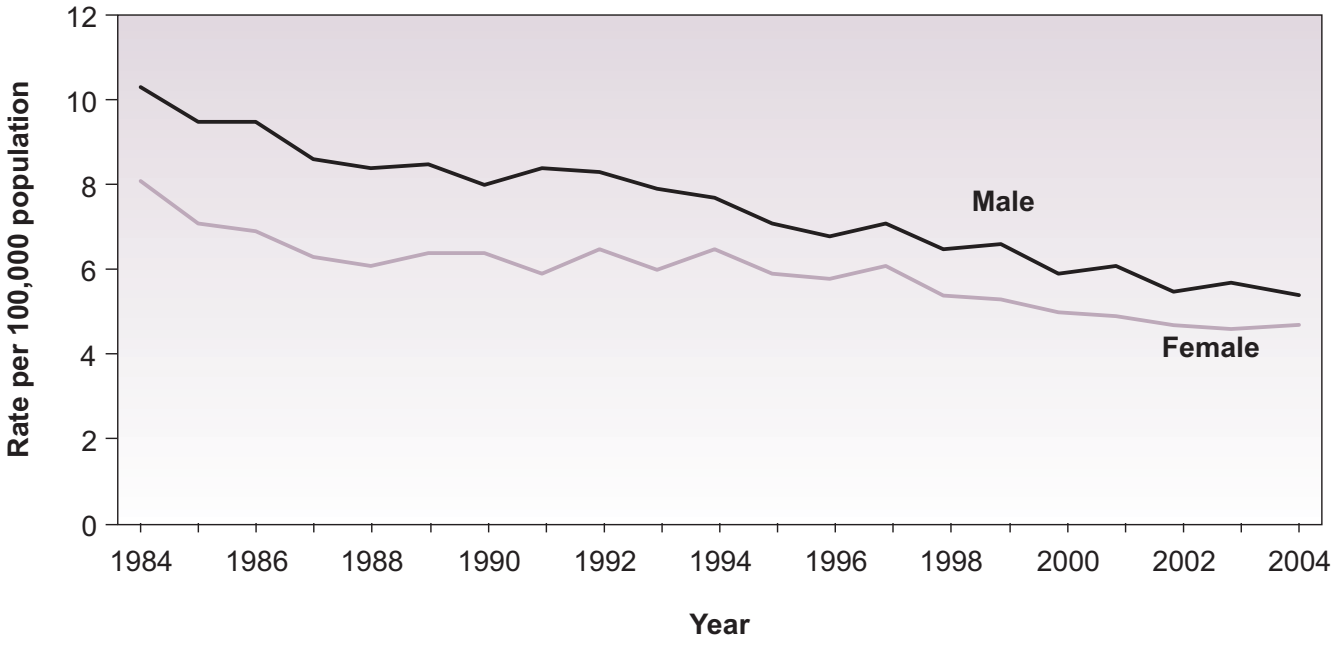


Sex and Age Group Distribution

Over the past two decades, incidence rates of TB in males and females have followed a similar pattern of decline. While case reporting and incidence have always been higher in males, there has been a noted decrease in the differential between males and females over the past several years. In 2004, the presentation of tuberculosis by sex continued to reveal a larger number of reported cases among males (848 cases, 5.4 per 100,000) than among females (765 cases, 4.7 per 100,000) (Figure 4; *Appendix I*, Tables 2B and 2C).

Figure 4

Tuberculosis incidence rate by sex – Canada: 1984–2004



In 2004, individuals aged 25 to 34 years made up the largest number of reported cases, accounting for 20% of the total. However, the corresponding incidence rate of 7.4 per 100,000 for this age group was surpassed by the age-specific rates of 8.0 and 10.0 per 100,000 for those in the older age groups of 65 to 74 and greater than 74 years, respectively (Figure 5; *Appendix I*, Table 2A).

By age group and sex, the incidence rate of TB was similar in males and females for all age groups with the exception of those aged 65 and older where the incidence rate in males was approximately twice that of females (Figure 6; *Appendix I*, Tables 5B and 5C).

Birthplace Distribution

Since collection of the data variable "origin" began in 1970 (Canadian-born Aboriginal, Canadian-born non-Aboriginal and foreign-born), there has been a steady increase in the proportion of reported TB cases among the foreign-born population and a relative decline in the proportion of Canadian-born non-Aboriginal cases. The proportion of reported TB cases in Canadian-born Aboriginals has remained relatively constant (Figure 7). In 2004, the proportion of foreign-born cases, Canadian-born Aboriginal cases and Canadian-born non-Aboriginal cases was 69%, 17% and 13%, respectively. Origin was unknown for 1% of the cases.

Figure 5

Tuberculosis incidence rate by age group – Canada: 2004

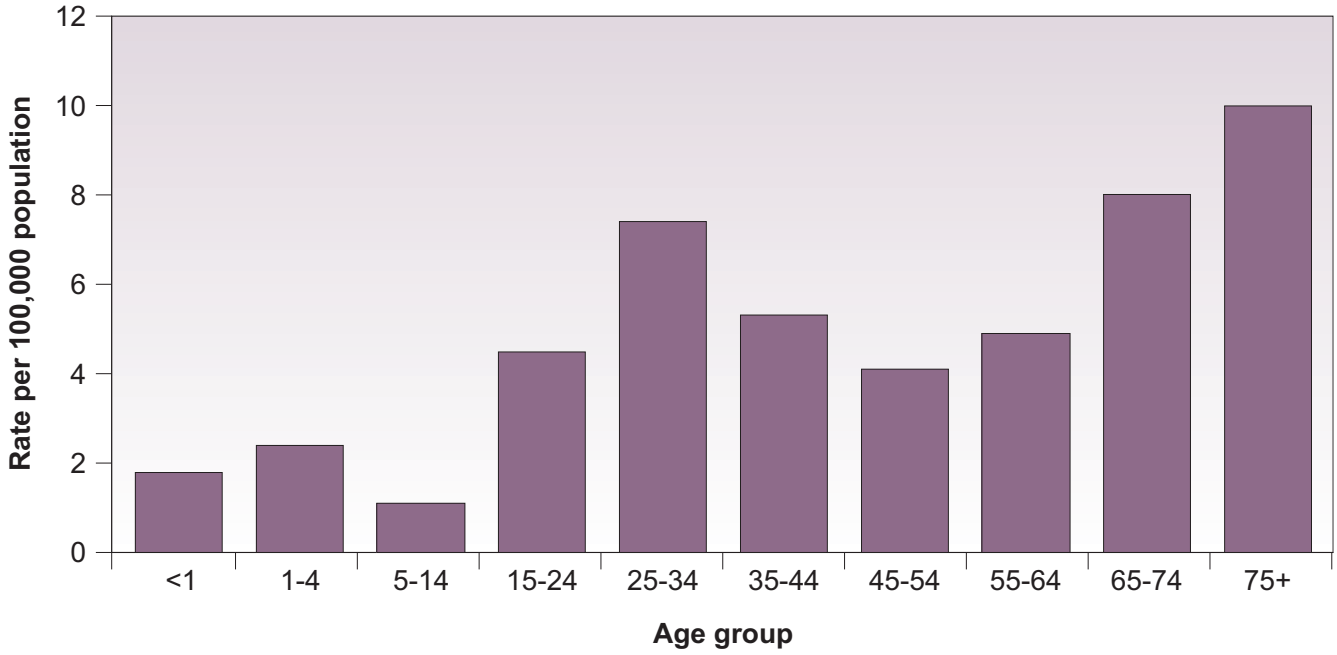


Figure 6

Tuberculosis incidence rate by age group and sex – Canada: 2004

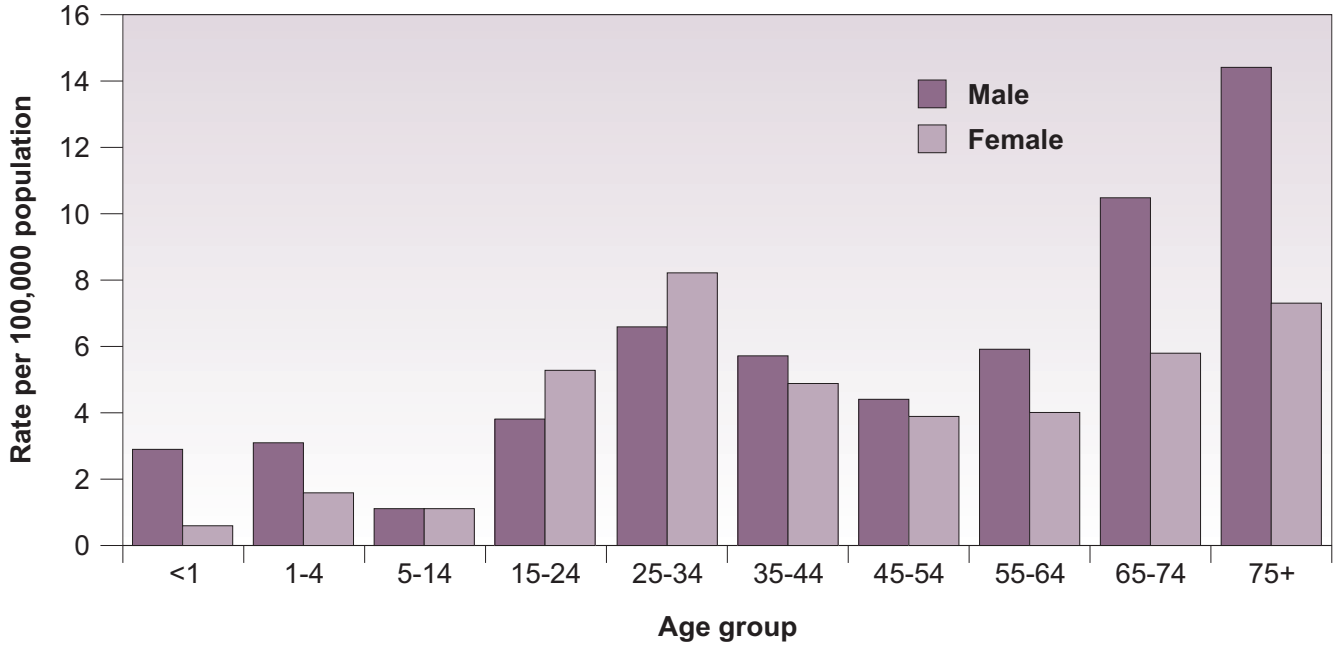
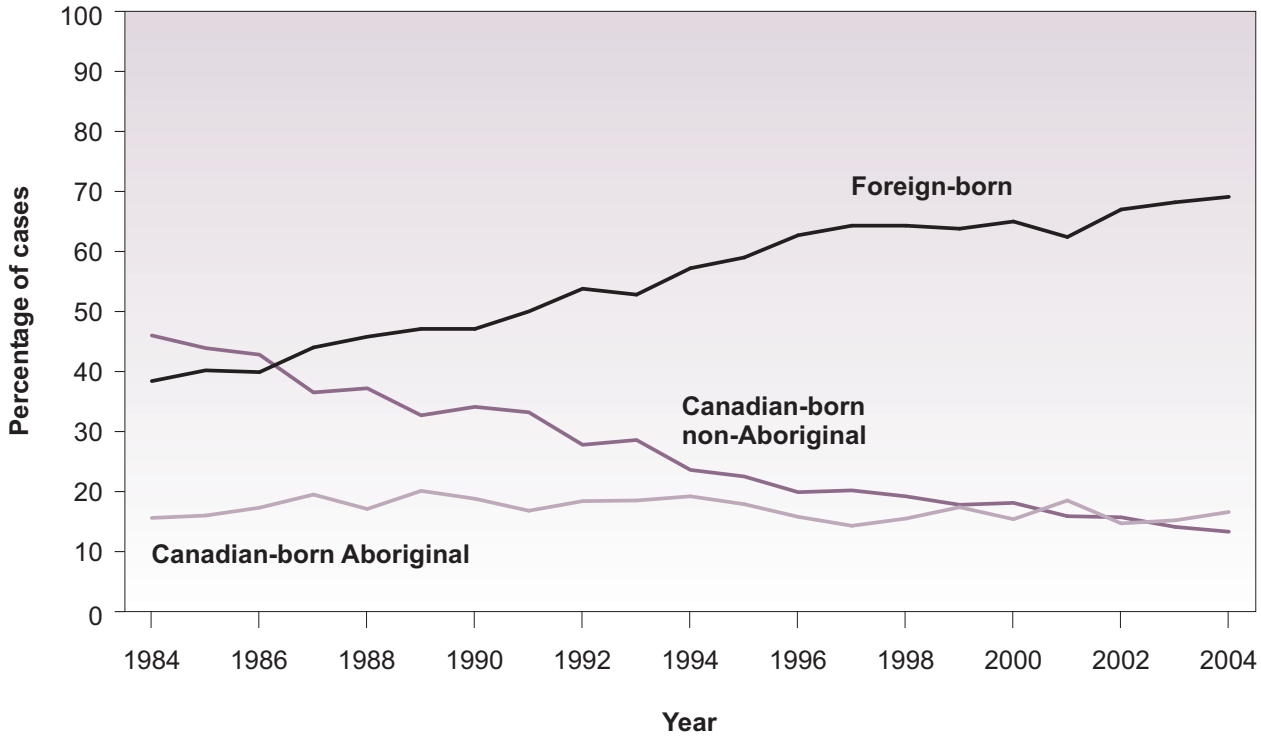


Figure 7

Percentage of tuberculosis cases by origin – Canada: 1984–2004



The total number of cases in the Canadian-born population, both Aboriginal and non-Aboriginal, has shown a minimal decrease in the past decade, whereas cases in the foreign-born population have remained relatively constant (Figure 8; *Appendix I*, Table 3)

The TB incidence rate was highest in the Canadian-born Aboriginal population (23.8 per 100,000). For the foreign-born population the incidence rate was 16.6 per 100.000 population. In the Canadian-born non-Aboriginal population, TB incidence was 0.9 per 100,000. The TB incidence rate has been slowly but steadily declining in all population sub-groups over the past decade (Figure 9; *Appendix I*, Table 6).

TB cases in foreign-born most often occurred in the 25–34 age group; whereas, Canadian-born non-Aboriginal cases were more often reported in the older demographic (75+). Canadian-born Aboriginal cases were in the younger age groups (Figure 10; *Appendix I*, Table 8). For Canadian-born non-Aboriginal cases, the median age was 57 years whereas for the foreign-born the median age was 41 years and for the Canadian-born Aboriginal cases it was 34 years.

The geographic distribution of TB cases by origin shows the provinces of Alberta, British Columbia and Ontario reporting the highest proportions of foreign-born cases (81%, 75% and 88%, respectively). In Quebec, foreign-born cases accounted for almost two-thirds of all reported cases (61%). In Saskatchewan, Canadian-born Aboriginal peoples comprised 86% of all cases and in the territories (Northwest Territories, Nunavut and Yukon) Canadian-born Aboriginal peoples accounted for 98% of all cases. (Figure 11; Table C; *Appendix I*, Table 6).

Figure 8

Number of tuberculosis cases by origin – Canada: 1994–2004

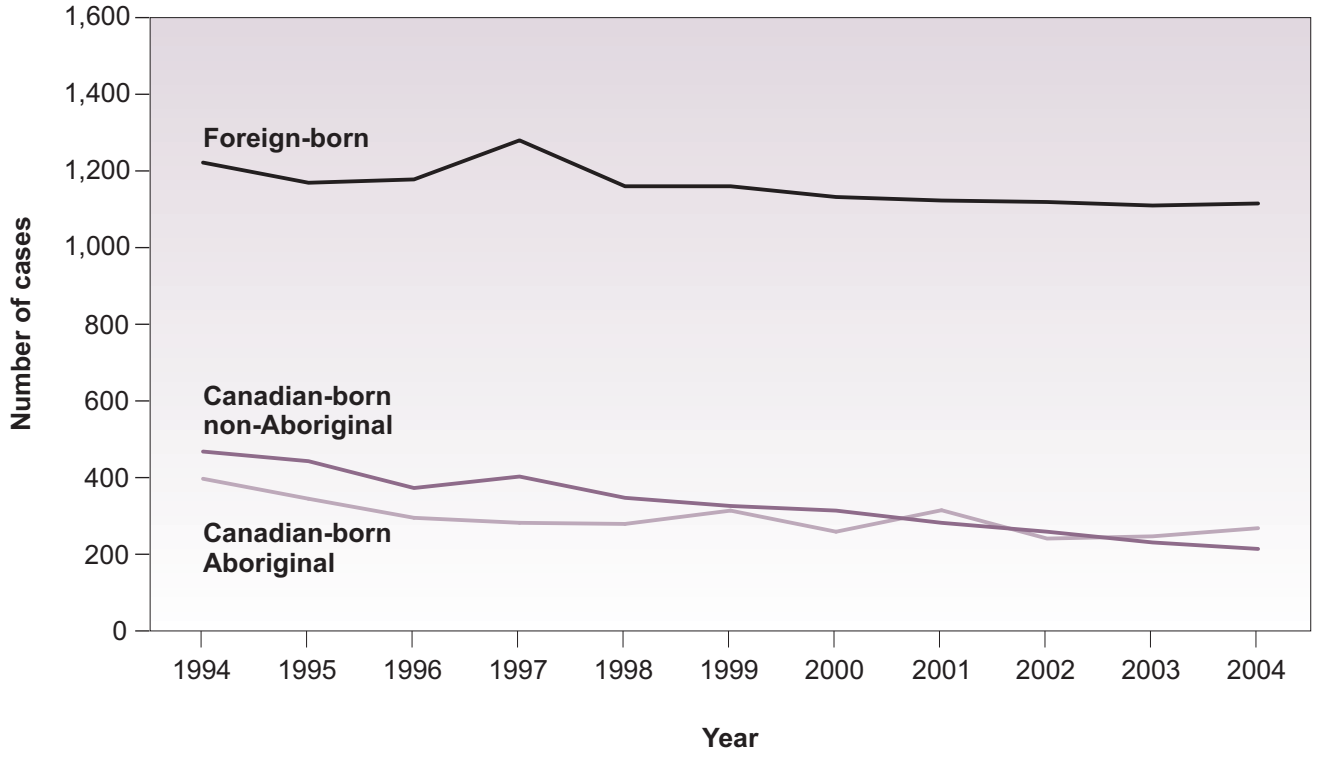


Figure 9

Tuberculosis incidence rate by origin – Canada: 1994–2004

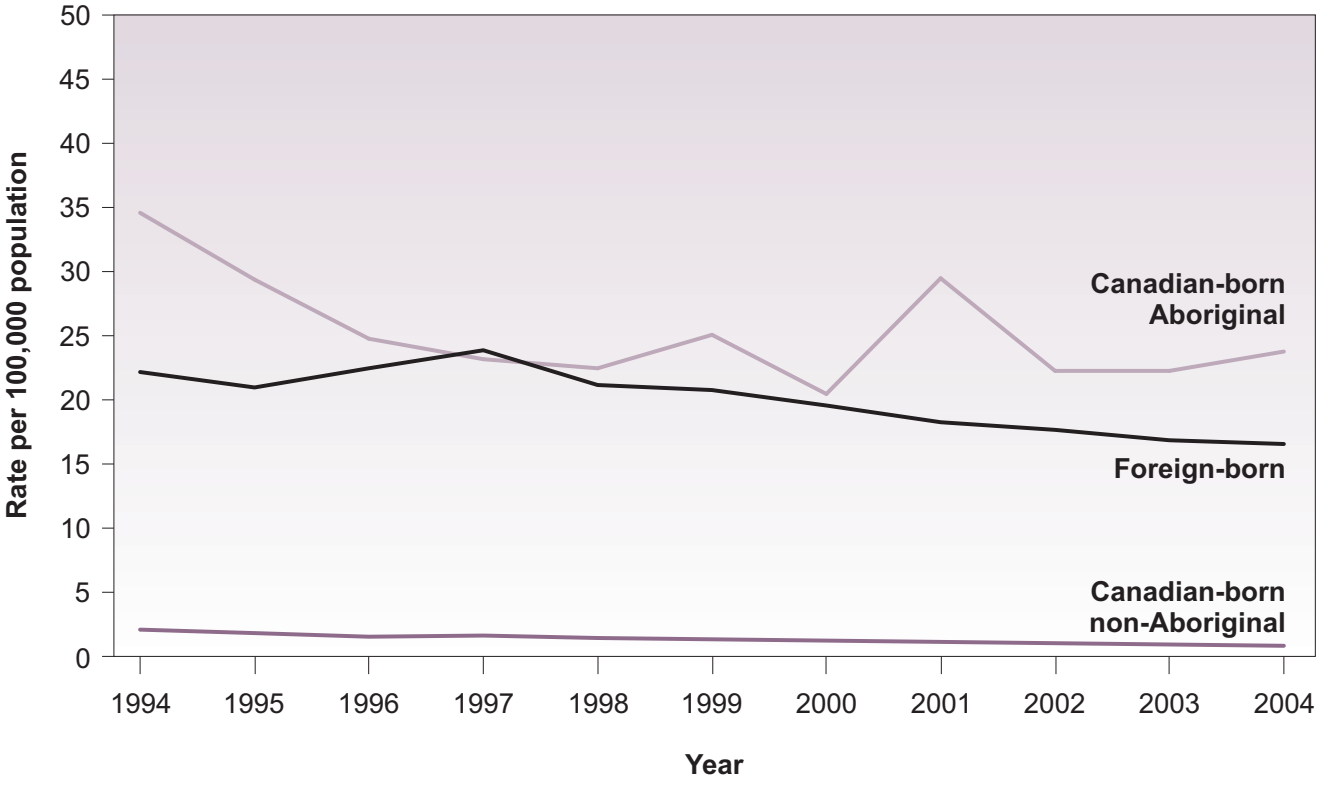


Figure 10

Proportion of tuberculosis cases by age group and origin – Canada: 2004

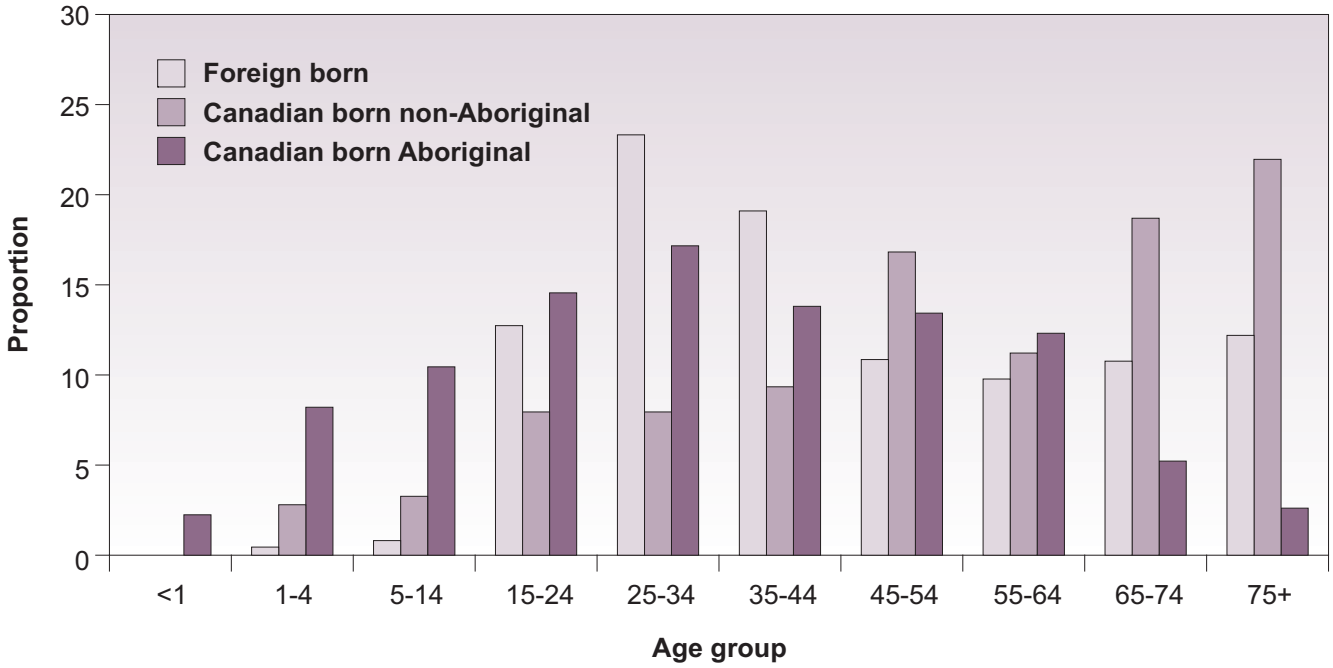
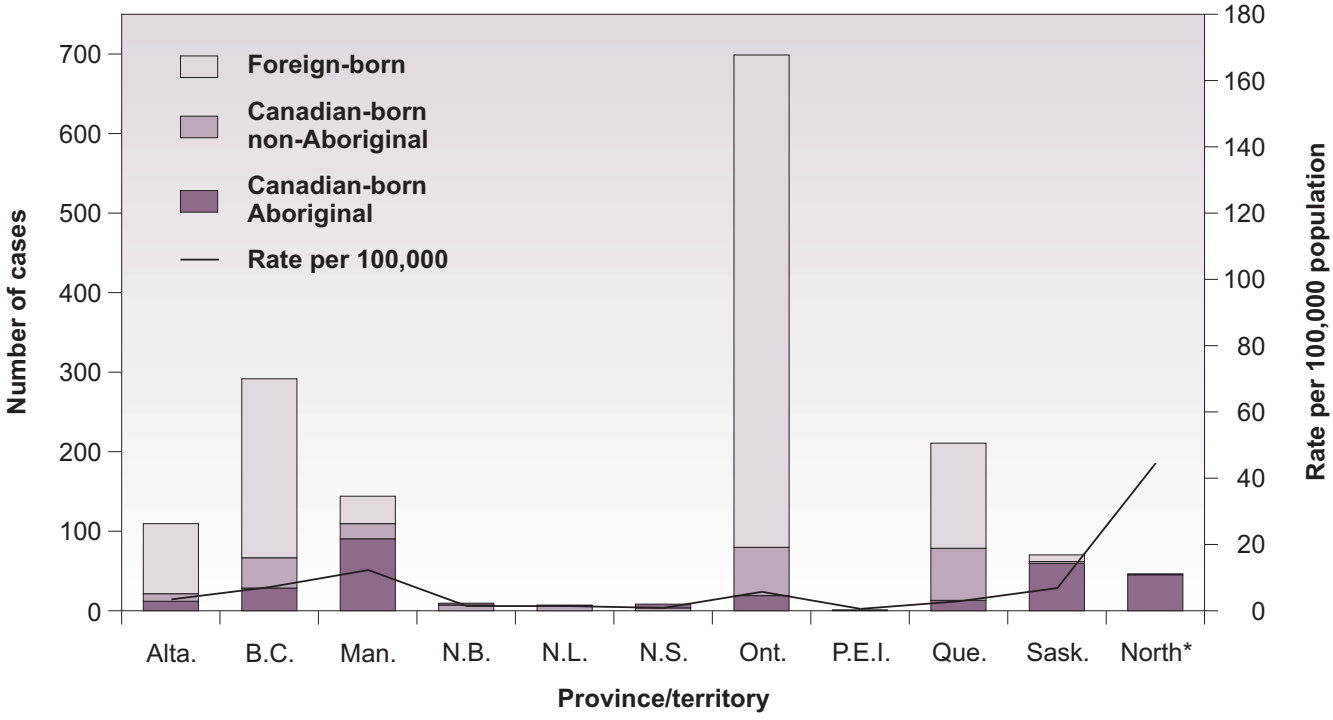


Figure 11

Origin of TB cases and overall incidence rate – provinces/territories: 2004



* Includes Northwest Territories, Nunavut and Yukon Territory.

Table C

Percentage of tuberculosis cases in Canada by origin – provinces/territories: 2004

Reporting province or territory	Canadian-born non-Aboriginal	Canadian-born Aboriginal	Foreign-born	Unknown birthplace
Alberta	8.3	11.0	80.7	0.0
British Columbia	13.0	9.4	75.3	2.3
Manitoba	13.2	63.2	23.6	0.0
New Brunswick	70.0	0.0	30.0	0.0
Newfoundland and Labrador	85.7	0.0	14.3	0.0
North*	2.2	97.8	0.0	0.0
Nova Scotia	50.0	0.0	50.0	0.0
Ontario	8.7	2.7	88.4	0.1
Prince Edward Island	100.0	0.0	0.0	0.0
Quebec	29.7	5.9	60.7	3.7
Saskatchewan	2.9	85.7	11.4	0.0
CANADA	**13.3**	**16.6**	**69.1**	**1.0**

Note: Totals may not always equal 100 due to rounding.

*North includes Northwest Territories, Nunavut and Yukon

When analysed by STOP-TB Partnership/WHO TB epidemiological regions, the number of foreign-born cases was highest among individuals originating in the Western Pacific Region (446 cases; 29.3 per 100,000). However, the highest incidence rate (48.1 per 100,000 population) was among individuals from the Africa-High HIV-Prevalence Region, (AFR-High). Figure 12 shows the proportion of foreign-born TB by Region, reported in Canada between 1994 and 2004. Table D shows the foreign-born TB incidence rate in Canada by WHO region of birth compared to the WHO estimated TB incidence rate for that region.

Table D

Comparison of the reported foreign-born tuberculosis incidence rate in Canada by STOP-TB Partnership/WHO TB epidemiological regions of birth (per 100,000 population) with WHO estimated tuberculosis incidence rate in the respective region

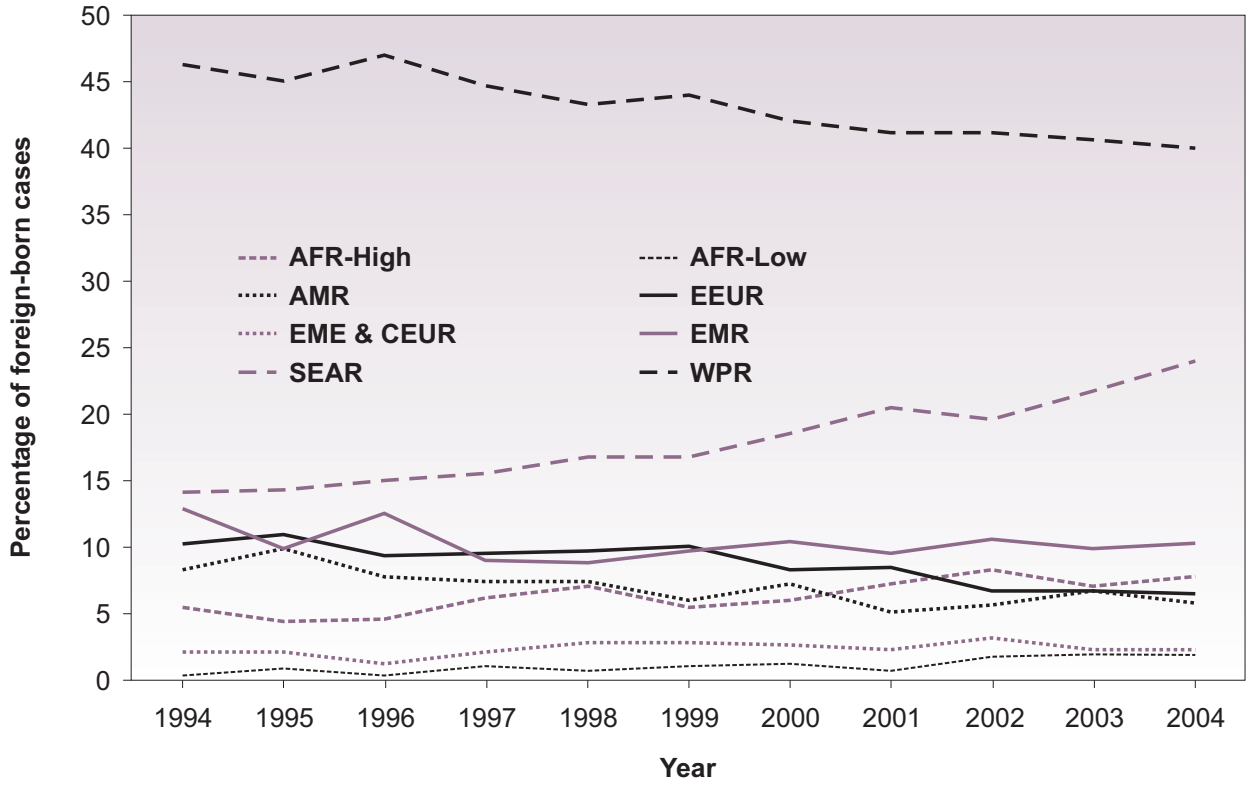
WHO regions*	Reported rate in Canada, 2004	WHO estimate TB incidence rate in regions, 2004**
Africa, High HIV Prevalence (AFR High)	48.1	412
Africa, Low HIV Prevalence (AFR Low)	23.7	203
American region (AMR) - Latin American Countries (LAC)	8.7	63
Eastern Europe (EEUR)	8.6	96
Eastern Mediterranean (EMR)	19.0	122
Established Market Economies (EME) and Central Europe (CEUR)	2.7	13
South-East Asia (SEAR)	43.5	182
Western Pacific (WPR)	29.3	119
Overall	**16.6**	**140**

* Source: The Stop TB Partnership and World Health Organization. *Global Plan to Stop TB 2006–2015*. Geneva, World Health Organization, 2006 (WHO/HTM/STB/2006.35).

** Source: *Global tuberculosis control: surveillance, planning, financing, WHO report 2006*. Geneva, World Health Organization (WHO/HTM/TB/2006.362).

Figure 12

Percentage of foreign-born tuberculosis cases by STOP-TB Partnership/WHO TB epidemiological regions – Canada: 1994–2004



Diagnostic Details

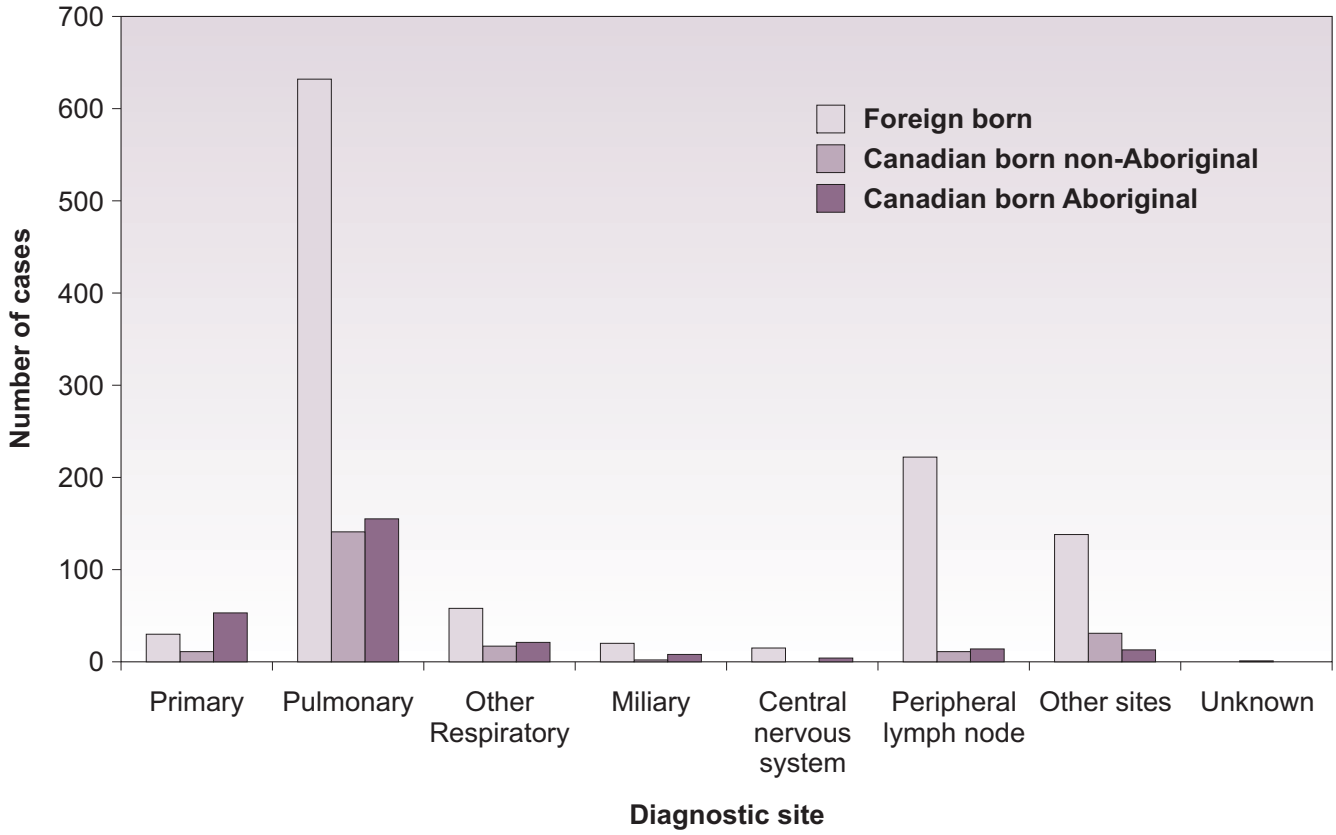
Pulmonary tuberculosis, which includes tuberculosis of the lungs and conducting airways (see Technical Annex for complete definition) was the most frequently reported diagnostic site, accounting for 58% of reported cases in 2004 (*Appendix I*, Table 4), followed by tuberculosis of the peripheral lymph nodes which accounted for 16% of the reported cases. Eleven percent of the cases were classified as "other", which includes: tuberculosis of the intestines, peritoneum and mesenteric glands, bones and joints, genitourinary system, skin, eye, ear, thyroid, adrenal and spleen.

The proportion of TB cases by diagnostic site showed some variation by origin. Whereas pulmonary TB accounted for 66% of Canadian-born non-Aboriginal cases, this proportion was lower for both Canadian-born Aboriginal cases (58%) and foreign-born cases (57%). The proportion of cases diagnosed with TB of the peripheral lymph nodes was highest for the foreign-born at 20%, and 46% of these cases were in individuals born in the Western Pacific and South East Asia regions (*Appendix I*, Table 10).

There were a total of 94 cases of primary TB. Fifty-six percent of these cases were reported in the Canadian-born Aboriginal population and represented 20% of the total number of Aboriginal cases. TB of the central nervous system (CNS) was rare, accounting for only 19 (1%) of the reported cases. Similarly, miliary/disseminated TB was infrequently diagnosed, representing 30 (2%) of the reported cases (Figure 13; *Appendix I*, Table 10). There was only one case for which the diagnostic site of disease was unknown.

Figure 13

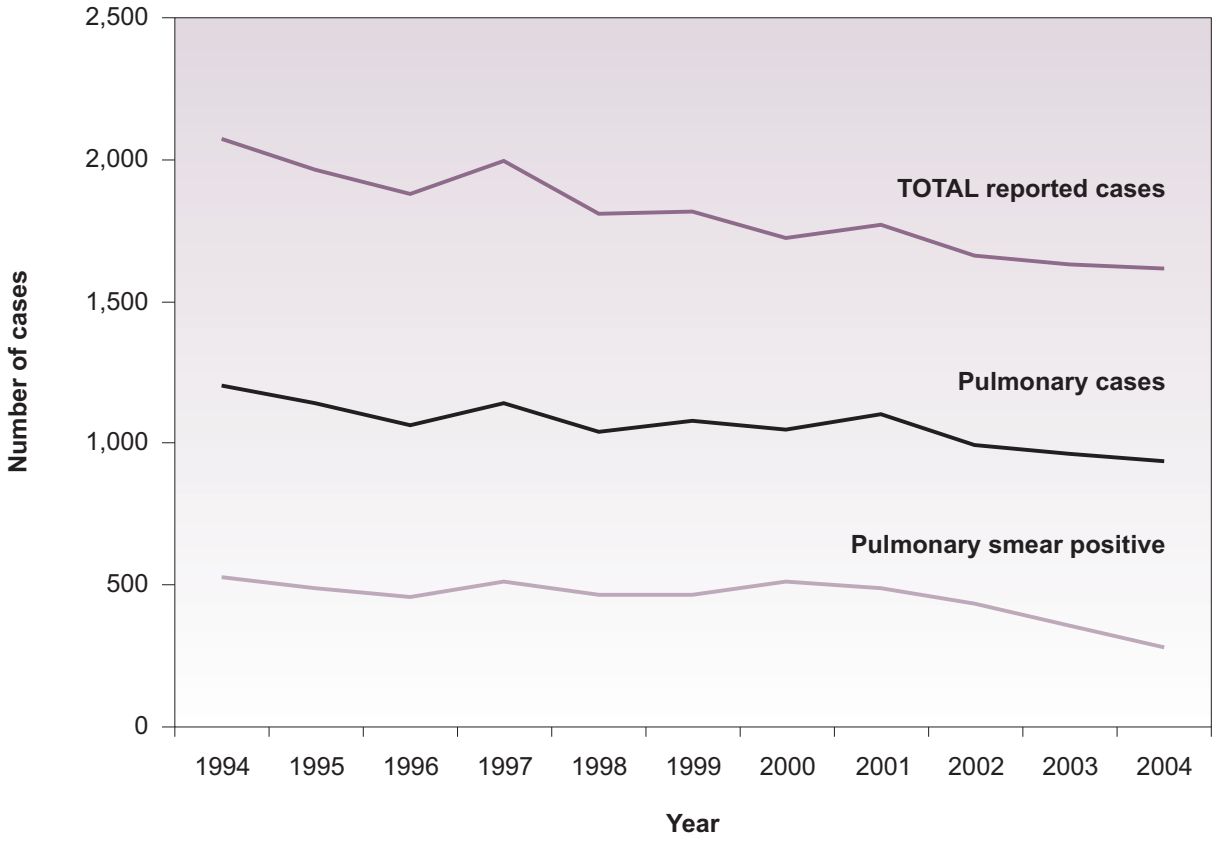
Tuberculosis cases by main diagnostic site and origin – Canada: 2004



Of the 935 cases of pulmonary TB cases reported, smear status was available for 542 cases. Of these, 52% (280 cases) were smear positive denoting the most infectious form of pulmonary TB. Figure 14 shows the relationship between the total number of cases reported, the number of cases that were pulmonary and of those, the number that were pulmonary smear positive for the years 1994 through to 2004.

Figure 14

Pulmonary sputum smear positive tuberculosis cases – Canada: 1994–2004



Case detection

Detection of the majority of cases was through presentation of symptoms to a medical professional (76%) (*Appendix I*, Table 17).

Deaths

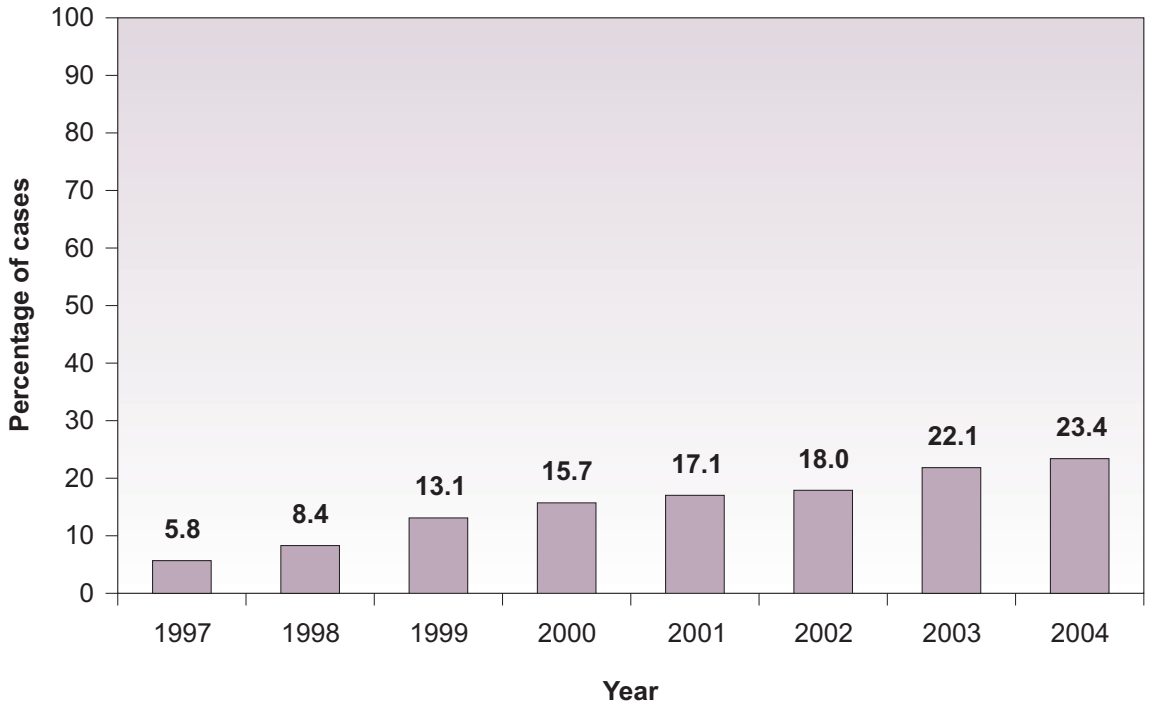
Of the 1,613 cases diagnosed in 2004, 105 were reported to have died in 2004. TB was reported as the underlying cause of death for 24 cases (23%). TB contributed to death, but was not the underlying cause for 44 cases (42%). Cause of death was not reported for 9 cases. (*Appendix I*, Tables 21 and 22).

HIV Status

HIV status was reported for 23% of TB cases (Figure 15; *Appendix I*, Table 23). Of the 378 cases for which HIV status was reported, 40 (11%) were positive.

Figure 15

Percentage of tuberculosis cases for which HIV status was reported – Canada: 1997-2004



Resistance Patterns

Of the 1,613 cases reported in 2004, 1,265 cases were culture positive. Of these, resistance information was available for 1,172 cases: 87% showed no resistance to first-line TB drugs (isoniazid, rifampin, ethambutol, pyrazinamide or streptomycin[2]), 9% percent were resistant to one drug and the remaining 3% showed patterns of resistance to two or more drugs prescribed. The most common type of mono-resistance was to isoniazid (INH) accounting for 33% of all reported resistance. Multi-drug resistant TB (MDR-TB), defined as resistance to at least INH and rifampin, accounted for 0.7% of results of all drug sensitivity reports (*Appendix I*, Table 15).

Foreign-born cases accounted for 91% of resistance to one or more drugs and all of the eight MDR-TB cases. Six percent of the Canadian-born non-Aboriginal cases and four percent of Canadian-born Aboriginal cases were resistant to one or more first line anti-tuberculosis drugs (*Appendix I*, Table 15).

[2] As of 2005, streptomycin is considered a second-line TB drug even though it may be used for initial treatment.

Section II – 2003 Treatment Outcomes

National Trends

Treatment outcome data for new active and relapsed cases reported in the previous year are submitted to TBPC using a separate reporting form (*Appendix VII* – Reporting forms). For 2003, 1,503 patients had treatment outcome reports submitted, either as an individual case report (677) or for some jurisdictions in aggregate (826 cases).

Of the cases for which outcome were reported, the majority were reported as cured or treatment completed without culture at the end of treatment (1,203 cases, 80%). Of the remaining cases for which treatment outcome was known, 124 (8.3%) died prior to completing treatment.

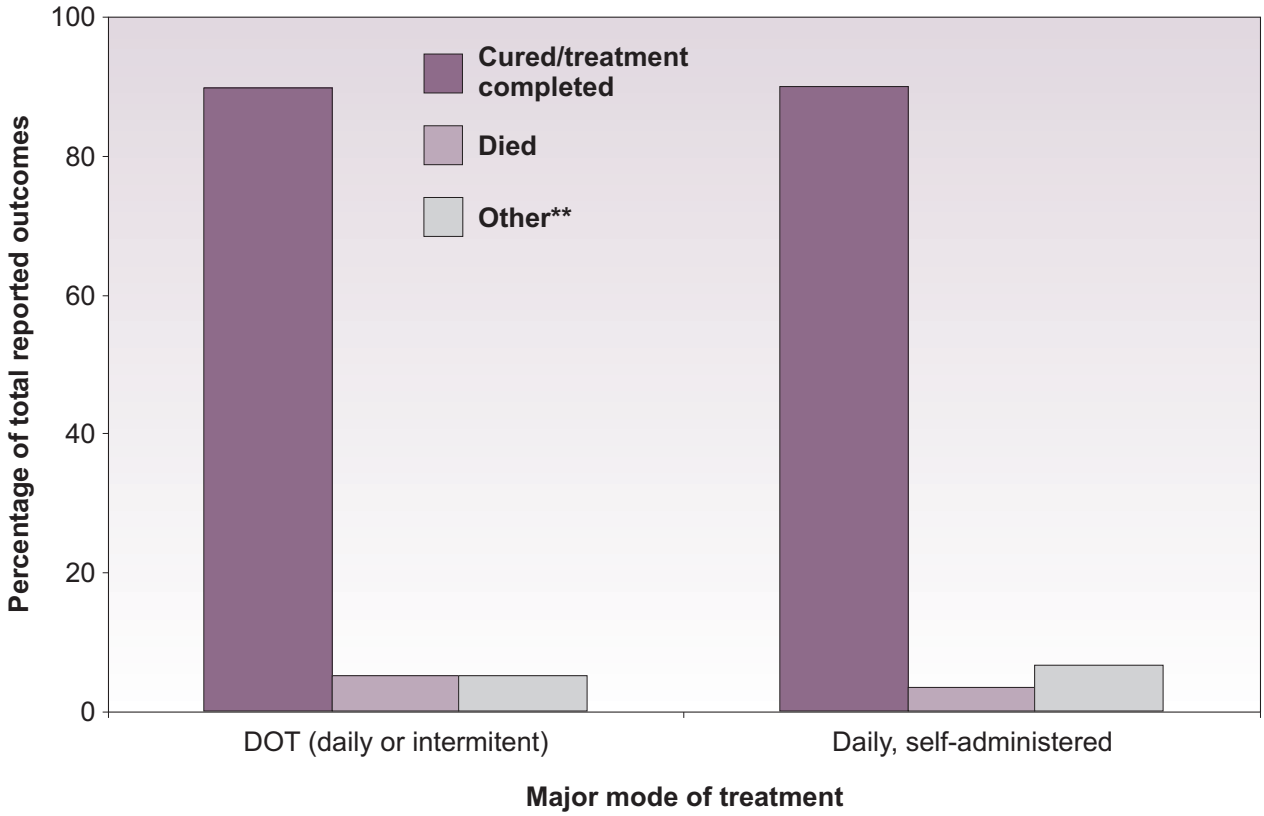
The majority of individuals were reported to have received treatment as per the *Canadian Tuberculosis Standards, 5th edition*[3]. Drug regimen reporting was complete for 648 cases. Eighty-six percent of these cases received three or more anti-tuberculosis drugs (*Appendix I*, Table 25).

For 807 patients for whom mode of treatment was reported, 53% were on Directly Observed Therapy (DOT). An additional 40% self-administered their medications. For 7% of the cases, mode of treatment was recorded as "Other". Ninety percent of those patients on DOT and those who self-administered their medication were reported to have been successfully treated (Figure 16).

[3] Long, R. ed. *Canadian Tuberculosis Standards, 5th edition*. Ottawa: Canadian Lung Association and Health Canada, 2000.

Figure 16

Treatment outcome status of tuberculosis cases by major mode of treatment – 2003*



* Ontario not included as results were not available

** Other – absconded, transferred, treatment ongoing, unknown

Section III – Measuring progress towards national targets

In 1997, the National Consensus Conference on Tuberculosis recommended that the Canadian goal of TB prevention and control should be to reduce the annual number of TB cases (new and relapsed) by five percent annually. The overall average rate of change of such cases from 1994 to 2004 was 2.5% (see Table E).

Table E

Average rate of change in the number of cases and in incidence rate for new and relapsed TB cases in Canada: 1994–2004

Reporting year	Number of reported cases	Rates	Rate of change (%)	
			Case	Rate
1994	2,106	7.3		
1995	1,964	6.7	6.7	7.7
1996	1,877	6.3	4.4	5.4
1997	1,995	6.7	-6.3	-5.2
1998	1,809	6.0	9.3	10.1
1999	1,820	6.0	-0.6	0.2
2000	1,723	5.6	5.3	6.2
2001	1,772	5.7	-2.8	-1.7
2002	1,660	5.3	6.2	7.2
2003	1,629	5.1	2.0	3.0
2004	1,613	5.0	1.0	2.0
		Average rate of change	**2.5**	**3.5**

*Negative number indicates a percent increase in the annual number of cases from the previous reporting year.

In 2006, the Canadian Tuberculosis Committee[4] (CTC) reviewed this national goal in view of the targets set in the *Global Plan to Stop TB 2006–2015*[5] to reduce the global burden of TB disease by 50% relative to 1990 levels for 2015. The CTC recommended a target Canadian TB (new and relapsed) incidence rate of 3.6 per 100,000 population (or less) by 2015. This represents one half of the disease burden in Canada as compared to the 1990 incidence rate. Achieving this goal will require a three per cent annual reduction in the incidence rate between 2005 and 2015.

[4] For information on the membership and terms of reference for the Canadian Tuberculosis Committee please see http://www.phac-aspc.gc.ca/tbpc-latb/ctc-ccla/index.html.

[5] Stop TB Partnership and World Health Organization. *Global Plan to Stop TB 2006–2015*. Geneva, World Health Organization, 2006 (WHO/HTM/STB/2006.35).

The *Canadian Tuberculosis Standards, 5th edition*, has set program performance standards for the ideal anti-tuberculous drug regimen and its delivery. These standards require that at a minimum treatment:

- Convert sputum cultures to negative within 5-6 months of treatment being started;
- Achieve relapse rate of less than 3% within 2 years of cessation of treatment (only for cases previously diagnosed in Canada);
- Result in drug resistance rates of no more than 2-3%;
- Be cost-effective since directly observed therapy is the optimal mode of drug delivery; and
- Be tolerated by the patient.

The CTBRS contains data that can approximate measuring progress towards achieving some of these standards for the entire cohort of TB cases reported in Canada. The result of the last sputum culture is documented for 86% (1,915 of 2,225) of pulmonary cases reported to the CTBRS over the past five years (1999-2003). Of these, 5% remained culture positive at the time of the treatment outcome report (i.e., one year following diagnosis). A large proportion was reported as culture negative (62%). For 33% of the cases a final culture was not done.

The rate of relapse within two years of cessation of treatment, for cases previously diagnosed in Canada was extremely low, averaging less than one percent of reported cases for the last five years of reporting (1998–2002). The rate of secondary or acquired drug resistance was also very low, averaging two percent from 1998 through to 2002.

Section IV – International reporting

The PHAC provides data to the WHO on an annual basis. This reporting focuses only on pulmonary smear positive cases and the treatment outcome of these cases by major mode of treatment (e.g., DOTS or non-DOTS). The WHO global targets for TB include 70% detection of all pulmonary smear positive cases and of these cases an 85% cure or treatment completion rate. Table F provides the reported treatment outcome data for laboratory confirmed pulmonary cases in Canada between 1998 and 2003, inclusive.

Table F

Treatment outcome of laboratory confirmed pulmonary cases, Canada: 1998-2003*

	1998		1999		2000		2001		2002		2003	
Treatement outcome	**DOTS**	***Non-DOTS***	**DOTS**	***Non-DOTS***	**DOTS**	***Non-DOTS***	**DOTS**	***Non-DOTS***	**DOTS**	***Non-DOTS***	**DOTS**	***Non-DOTS***
Total cohort registered for treatment	211	*258*	238	*165*	258	*155*	281	*193*	215	*139*	200	*166*
Cured	79	*72*	78	*70*	121	*74*	86	*58*	85	*9*	57	*12*
Completed	102	*99*	139	*54*	91	*56*	148	*93*	106	*105*	119	*124*
Cured or completed treatment (% of total)	**181 (86%)**	***171 (66%)***	**217 (91%)**	***124 (75%)***	**212 (82%)**	***130 (84%)***	**234 (83%)**	***151 (78%)***	**191 (89%)**	***114 (82%)***	**176 (88%)**	***136 (82%)***
Died	8	30	7	26	23	10	27	25	11	13	17	17
Failed	0	0	0	0	2	0	0	0	0	0	0	0
Defaulted	4	8	7	6	8	4	13	6	7	8	3	8
Transferred out	3	23	2	5	1	8	3	10	2	4	2	5
Treatment ongoing	3	3	4	3	8	2	3	1	1	0	0	0
Unknown	12	23	1	1	4	1	0	0	3	0	2	0

* Numbers may differ from *Global Tuberculosis Control, WHO Report 2006* (which reports 2004 case data and 2003 treatment outcome data) due to late reporting of cases to Public Health Agency of Canada.

Conclusion

The total number of reported cases of TB in Canada has shown continual decrease over the past decade. However, this decrease is mostly a reflection of a decreasing number of cases in the Canadian-born non-Aboriginal population. The number of cases in the Canadian-born Aboriginal population has shown a minimal decrease, whereas cases in the foreign-born population have remained relatively constant.

Pulmonary tuberculosis makes up the majority of the cases reported in Canada (58%). Fifty-two percent of those cases with known smear status were positive, denoting the most infectious form of TB.

Determining the Canadian incidence rate of TB-HIV co-infection from this surveillance system is not yet possible. HIV status was reported for only 23% of cases, of which 11% were HIV sero-positive. Moreover, this proportion is likely biased towards HIV testing in those with known risk factors for HIV infection. In the unlikely event that these were the only co-infected cases, the overall co-infection rate was 2%. Corbett et al[6] have estimated that 10-19% of adult TB cases in Canada are attributable to HIV. The most recent report by the WHO has estimated HIV prevalence in adult incident TB cases in Canada in 2005 to be 8.3%.[7]

There are a number of important personal and public health reasons for screening for HIV in patients with TB and their contacts, as well as screening and prevention of TB in patients with HIV.[8] Screening for HIV in TB cases and reporting of the results are essential activities for prevention and control of future TB cases in Canada.

Drug resistance has not yet emerged as a significant problem in Canada. Cases of MDR-TB represent less than 1% of the reported cases of drug resistance in this reporting system.

For the treatment outcome data received, the majority of TB cases were reported as cured or completed treatment. Analysis on the treatment outcome status of laboratory confirmed pulmonary cases indicates that 85% are cured or have completed treatment which meets the WHO international target.

In keeping with the targets set in the *Global Plan to Stop TB 2006-2015*[9] to reduce the global burden of TB disease by 50%, the Canadian tuberculosis incidence rate would have to be reduced to 3.6 per 100,000 by 2015 . Achieving this incidence rate will require an average per annum decrease in the number of reported cases of 3% between 2005 and 2015.

As the epidemiology of TB in Canada and the world evolves, the CTBRS and the annual report, *Tuberculosis in Canada*, will continue to undergo improvements in the quality and nature of the data reported.

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6 Corbett EL, Watt CJ, Walker N, Maher D, Williams BG, Raviglione MC, Dye C. The Growing Burden of Tuberculosis: Global Trends and Interactions with the HIV Epidemic. Arch Intern Med. 2003; 163: 1009-1021.

7 Global tuberculosis control: surveillance, planning, financing, WHO report 2006. Geneva, World Health Organization (WHO/HTM/TB/2006.362).

8 Long R, Houston S, Hershfield E, for the Canadian Tuberculosis Committee of Health Canada. Recommendations for screening and prevention of tuberculosis in patients with HIV and for screening for HIV in patients with tuberculosis and their contacts. CMAJ 2003; 169 (8): 789-791.

9 Stop TB Partnership and World Health Organization. *Global Plan to Stop TB 2006–2015*. Geneva, World Health Organization, 2006 (WHO/HTM/STB/2006.35).

Appendix I
Data Tables: 2004

Table 1A

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 – Canada and provinces/territories: 1994–2004

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.
1994	Cases	**2,106**	14	0	12	16	361	864	116	147	178	324	10	64	-
	Rate	**7.3**	2.4	0.0	1.3	2.1	5.0	8.0	10.3	14.6	6.6	8.8	33.7	98.5	-
1995	Cases	**1,964**	11	1	13	8	380	800	108	155	126	308	2	52	-
	Rate	**6.7**	1.9	0.7	1.4	1.1	5.3	7.3	9.6	15.3	4.6	8.2	6.6	78.3	-
1996	Cases	**1,877**	24	3	15	15	332	780	97	113	140	316	6	36	-
	Rate	**6.3**	4.3	2.2	1.6	2.0	4.6	7.0	8.6	11.1	5.0	8.2	19.1	53.4	-
1997	Cases	**1,995**	15	5	7	7	360	780	96	121	166	405	2	31	-
	Rate	**6.7**	2.7	3.7	0.8	0.9	4.9	6.9	8.4	11.9	5.9	10.3	6.3	45.9	-
1998	Cases	**1,809**	8	2	18	9	289	742	116	98	158	329	2	38	-
	Rate	**6.0**	1.5	1.5	1.9	1.2	4.0	6.5	10.2	9.6	5.4	8.3	6.4	56.6	-
1999	Cases	**1,820**	12	2	15	15	314	698	132	116	149	328	1	23	15
	Rate	**6.0**	2.2	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	**1,723**	10	2	3	10	318	700	98	104	133	285	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	**1,772**	19	3	8	10	259	699	115	114	116	381	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	**1,660**	9	1	9	11	282	716	98	89	128	286	0	4	27
	Rate	**5.3**	1.7	0.7	1.0	1.5	3.8	5.9	8.5	8.9	4.1	6.9	0.0	9.6	93.9
2003	Cases	**1,629**	7	3	6	12	255	693	127	91	110	305	1	12	7
	Rate	**5.1**	1.2	2.2	0.6	1.6	3.4	5.7	10.9	9.2	3.5	7.3	3.3	28.4	24.0
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	7.1	12.9	23.4	108.0

Table 1B

Reported new active tuberculosis cases and incidence rate per 100,000 – Canada and provinces/territories: 1994–2004

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.
1994	Cases	**1,838**	12	0	12	15	306	723	107	141	160	294	9	59	-
	Rate	**6.3**	2.1	0.0	1.3	2.0	4.3	6.7	9.5	14.0	5.9	8.0	30.3	90.8	-
1995	Cases	**1,736**	9	1	10	7	348	668	96	143	116	290	2	46	-
	Rate	**5.9**	1.6	0.7	1.1	0.9	4.8	6.1	8.5	14.1	4.2	7.7	6.6	69.3	-
1996	Cases	**1,671**	21	3	11	9	294	689	84	109	129	287	4	31	-
	Rate	**5.6**	3.8	2.2	1.2	1.2	4.1	6.2	7.4	10.7	4.6	7.4	12.7	46.0	-
1997	Cases	**1,770**	13	4	5	6	323	687	86	110	150	360	2	24	-
	Rate	**5.9**	2.4	2.9	0.5	0.8	4.4	6.1	7.6	10.8	5.3	9.1	6.3	35.5	-
1998	Cases	**1,625**	7	2	16	7	262	650	104	91	146	306	2	32	-
	Rate	**5.4**	1.3	1.5	1.7	0.9	3.6	5.7	9.1	8.9	5.0	7.7	6.4	47.6	-
1999	Cases	**1,622**	11	2	12	13	278	595	123	110	141	304	1	17	15
	Rate	**5.3**	2.1	1.5	1.3	1.7	3.8	5.2	10.8	10.8	4.8	7.6	3.2	41.8	55.9
2000	Cases	**1,538**	10	2	3	8	297	599	88	100	120	262	2	7	40
	Rate	**5.0**	1.9	1.5	0.3	1.1	4.0	5.1	7.7	9.9	4.0	6.5	6.6	17.3	145.5
2001	Cases	**1,571**	17	2	5	10	233	610	108	104	105	335	0	8	34
	Rate	**5.1**	3.3	1.5	0.5	1.3	3.1	5.1	9.4	10.4	3.4	8.2	0.0	19.6	120.9
2002	Cases	**1,484**	6	1	7	10	252	632	92	83	121	254	0	4	22
	Rate	**4.7**	1.2	0.7	0.7	1.3	3.4	5.2	8.0	8.3	3.9	6.2	0.0	9.6	76.6
2003	Cases	**1,470**	4	1	5	11	240	613	118	82	104	275	1	9	7
	Rate	**4.6**	0.6	0.7	0.5	1.5	3.2	5.0	10.2	8.2	3.3	6.6	3.3	21.3	24.0
2004	Cases	**1,469**	4	1	8	9	204	636	131	63	100	276	4	9	24
	Rate	**4.6**	0.8	0.7	0.9	1.2	2.7	5.1	11.2	6.3	3.1	6.6	12.9	21.0	81.0

Note: Cases of which activity status is unknown are included in the total (Table 1A).

Table 1C

Reported relapsed tuberculosis cases and incidence rate per 100,000 – Canada and provinces/territories: 1994–2004

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.
1994	Cases	**228**	2	0	0	1	55	100	9	6	18	30	1	6	-
	Rate	**0.8**	0.3	0.0	0.0	0.1	0.8	0.9	0.8	0.6	0.7	0.8	3.4	9.2	-
1995	Cases	**194**	2	0	3	1	28	102	12	12	10	18	0	6	-
	Rate	**0.7**	0.4	0.0	0.3	0.1	0.4	0.9	1.1	1.2	0.4	0.5	0.0	9.0	-
1996	Cases	**178**	3	0	3	5	36	72	9	4	11	29	1	5	-
	Rate	**0.6**	0.5	0.0	0.3	0.7	0.5	0.6	0.8	0.4	0.4	0.7	3.2	7.4	-
1997	Cases	**200**	2	1	2	1	34	73	10	11	16	43	0	7	-
	Rate	**0.7**	0.4	0.7	0.2	0.1	0.5	0.7	0.9	1.1	0.6	1.1	0.0	10.4	-
1998	Cases	**153**	1	0	2	2	22	66	12	7	12	23	0	6	-
	Rate	**0.5**	0.2	0.0	0.2	0.3	0.3	0.6	1.1	0.7	0.4	0.6	0.0	8.9	-
1999	Cases	**158**	1	0	2	1	33	69	9	6	8	23	0	6	0
	Rate	**0.5**	0.2	0.0	0.2	0.1	0.5	0.6	0.8	0.6	0.3	0.6	0.0	14.8	0.0
2000	Cases	**148**	0	0	0	1	18	70	10	4	13	22	1	3	6
	Rate	**0.5**	0.0	0.0	0.0	0.1	0.2	0.6	0.9	0.4	0.4	0.5	3.3	7.4	21.8
2001	Cases	**155**	2	1	3	0	16	61	5	10	11	40	0	0	6
	Rate	**0.5**	0.4	0.7	0.3	0.0	0.2	0.5	0.4	1.0	0.4	1.0	0.0	0.0	21.3
2002	Cases	**139**	3	0	2	1	19	56	6	6	7	34	0	0	5
	Rate	**0.4**	0.6	0.0	0.2	0.1	0.3	0.5	0.5	0.6	0.2	0.8	0.0	0.0	17.4
2003	Cases	**105**	3	1	1	1	15	35	9	9	6	22	0	3	0
	Rate	**0.3**	0.6	0.7	0.1	0.1	0.2	0.3	0.8	0.9	0.2	0.5	0.0	7.1	0.0
2004	Cases	**120**	3	0	0	1	15	40	13	7	9	23	0	1	8
	Rate	**0.4**	0.6	0.0	0.0	0.1	0.2	0.3	1.1	0.7	0.3	0.5	0.0	2.3	27.0

Note: Cases of which activity status is unknown are included in the total (Table 1A).

Table 2A

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by age group – Canada: 1994–2004

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 unknown
1994	Cases	**2,106**	20	73	100	277	415	269	227	213	279	233	0
	Rate	**7.3**	5.2	4.5	2.5	7.0	8.5	5.6	6.5	8.6	13.6	16.7	-
1995	Cases	**1,964**	27	67	87	228	335	323	205	215	253	224	0
	Rate	**6.7**	7.1	4.2	2.2	5.7	7.0	6.6	5.6	8.6	12.2	15.5	-
1996	Cases	**1,877**	14	66	63	216	361	305	191	195	251	215	0
	Rate	**6.3**	3.7	4.2	1.6	5.4	7.6	6.1	5.0	7.7	12.0	14.4	-
1997	Cases	**1,995**	8	50	57	222	391	291	216	232	250	278	0
	Rate	**6.7**	2.2	3.2	1.4	5.5	8.4	5.7	5.5	9.0	11.9	18.0	-
1998	Cases	**1,809**	20	60	72	187	314	307	184	174	235	256	0
	Rate	**6.0**	5.8	3.9	1.8	4.6	7.0	5.9	4.5	6.6	11.0	16.0	-
1999	Cases	**1,820**	32	55	61	204	339	254	193	173	244	265	0
	Rate	**6.0**	9.4	3.7	1.5	5.0	7.7	4.8	4.6	6.3	11.4	16.1	-
2000	Cases	**1,723**	17	50	44	207	316	278	208	160	204	239	0
	Rate	**5.6**	5.0	3.4	1.1	5.0	7.3	5.3	4.8	5.7	9.5	14.0	-
2001	Cases	**1,772**	11	33	70	180	322	290	208	184	219	255	0
	Rate	**5.7**	3.3	2.3	1.7	4.3	7.5	5.5	4.6	6.3	10.1	14.5	-
2002	Cases	**1,660**	10	42	45	210	312	263	201	161	199	217	0
	Rate	**5.3**	3.1	3.0	1.1	4.9	7.2	5.0	4.4	5.2	9.1	11.9	-
2003	Cases	**1,629**	7	34	41	198	332	277	206	153	178	203	0
	Rate	**5.1**	2.1	2.5	1.0	4.6	7.6	5.3	4.4	4.7	8.1	10.8	-
2004	Cases	**1,613**	6	33	45	198	324	272	198	167	177	193	0
	Rate	**5.0**	1.8	2.4	1.1	4.5	7.4	5.3	4.1	4.9	8.0	10.0	-

Table 2B

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by age group – males – Canada: 1994-2004

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 unknown
1994	Cases	**1,140**	9	36	53	143	207	154	135	117	154	132	0
	Rate	**7.9**	4.6	4.3	2.6	7.0	8.4	6.5	7.7	9.6	16.6	25.4	-
1995	Cases	**1,065**	9	31	41	110	175	199	121	123	147	109	0
	Rate	**7.3**	4.6	3.8	2.0	5.4	7.2	8.2	6.7	10.0	15.6	20.3	-
1996	Cases	**1,013**	9	30	35	107	186	162	104	106	143	131	0
	Rate	**6.9**	4.6	3.7	1.7	5.2	7.8	6.5	5.5	8.5	14.9	23.6	-
1997	Cases	**1,062**	6	27	25	94	195	161	118	131	141	164	0
	Rate	**7.2**	3.3	3.4	1.2	4.6	8.3	6.3	6.0	10.3	14.5	28.4	-
1998	Cases	**966**	16	31	38	78	162	164	100	105	125	147	0
	Rate	**6.5**	9.1	4.0	1.8	3.7	7.1	6.3	4.9	8.0	12.6	24.6	-
1999	Cases	**999**	20	28	24	99	176	141	117	96	144	154	0
	Rate	**6.6**	11.5	3.7	1.1	4.7	7.9	5.4	5.6	7.1	14.4	24.9	-
2000	Cases	**924**	10	27	24	97	168	149	117	88	101	143	0
	Rate	**6.1**	5.8	3.6	1.1	4.5	7.7	5.6	5.4	6.3	10.0	22.3	-
2001	Cases	**984**	6	15	45	92	153	168	124	111	127	143	0
	Rate	**6.4**	3.5	2.1	2.1	4.2	7.0	6.3	5.6	7.7	12.5	21.5	-
2002	Cases	**863**	5	18	15	95	167	142	105	90	116	110	0
	Rate	**5.6**	3.0	2.5	0.7	4.3	7.6	5.4	4.6	5.9	11.3	15.9	-
2003	Cases	**894**	3	21	14	102	162	161	127	86	105	113	0
	Rate	**5.7**	1.8	3.0	0.7	4.6	7.3	6.1	5.4	5.4	10.1	15.7	-
2004	Cases	**848**	5	22	23	85	146	147	104	99	110	107	0
	Rate	**5.4**	2.9	3.1	1.1	3.8	6.6	5.7	4.4	5.9	10.5	14.4	-

Table 2C

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by age group – females – Canada: 1994–2004

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 unknown
1994	Cases	**966**	11	37	47	134	208	115	92	96	125	101	0
	Rate	**6.5**	5.9	4.7	2.4	6.9	8.6	4.8	5.3	7.7	11.2	11.5	-
1995	Cases	**899**	18	36	46	118	160	124	84	92	106	115	0
	Rate	**6.1**	9.7	4.6	2.4	6.1	6.7	5.1	4.6	7.3	9.4	12.7	-
1996	Cases	**864**	5	36	28	109	175	143	87	89	108	84	0
	Rate	**5.8**	2.7	4.7	1.4	5.6	7.5	5.7	4.6	6.9	9.6	9.0	-
1997	Cases	**933**	2	23	32	128	196	130	98	101	109	114	0
	Rate	**6.2**	1.2	3.0	1.6	6.5	8.5	5.1	5.0	7.7	9.6	11.8	-
1998	Cases	**843**	4	29	34	109	152	143	84	69	110	109	0
	Rate	**5.5**	2.4	3.9	1.7	5.5	6.8	5.5	4.1	5.1	9.7	10.9	-
1999	Cases	**821**	12	27	37	105	163	113	76	77	100	111	0
	Rate	**5.3**	7.3	3.7	1.9	5.2	7.5	4.3	3.6	5.6	8.8	10.7	-
2000	Cases	**799**	7	23	20	110	148	129	91	72	103	96	0
	Rate	**5.2**	4.2	3.2	1.0	5.4	6.9	4.9	4.2	5.1	9.1	9.0	-
2001	Cases	**787**	5	18	25	88	169	122	84	73	91	112	0
	Rate	**5.0**	3.1	2.6	1.3	4.3	7.9	4.6	3.7	4.9	8.0	10.2	-
2002	Cases	**797**	5	24	30	115	145	121	96	71	83	107	0
	Rate	**5.1**	3.1	3.5	1.5	5.5	6.8	4.6	4.2	4.5	7.2	9.5	-
2003	Cases	**735**	4	13	27	96	170	116	79	67	73	90	0
	Rate	**4.6**	2.5	1.9	1.4	4.6	7.9	4.5	3.3	4.1	6.3	7.8	-
2004	Cases	**765**	1	11	22	113	178	125	94	68	67	86	0
	Rate	**4.7**	0.6	1.6	1.1	5.3	8.2	4.9	3.9	4.0	5.8	7.3	-

Table 3

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by birthplace – Canada: 1994-2004

Birthplace			Year of diagnosis										
			1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Canadian-born	Aboriginal												
	North American Indian	Cases	271	265	218	256	205	255	174	257	202	230	221
		Rate	–	–	–	–	–	–	–	36.0	27.9	31.1	29.2
	Status (registered) Indian	Cases	268	262	218	212	191	247	167	199	165	204	202
		Rate	45.3	42.9	34.6	32.8	29.0	36.6	24.2	28.3	23.1	28.1	27.2
	Non-status Indian	Cases	3	3	0	44	14	8	7	58	37	26	19
		Rate	–	–	–	–	–	–	–	–	–	–	–
	Inuit	Cases	35	25	26	18	35	28	56	53	33	11	41
		Rate	64.5	43.1	45.5	30.9	58.7	45.9	91.5	111.4	67.8	22.1	80.4
	Metis	Cases	91	55	51	8	39	31	29	5	6	6	6
		Rate	–	–	–	–	–	–	–	1.6	1.9	1.6	1.9
	Total Aboriginal	**Cases**	**397**	**345**	**295**	**282**	**279**	**314**	**259**	**315**	**241**	**247**	**268**
		Rate	**34.6**	**29.4**	**24.8**	**23.2**	**22.5**	**25.1**	**20.5**	**29.5**	**22.3**	**22.3**	**23.8**
	Non-Aboriginal	Cases	468	443	373	403	347	326	314	282	259	231	214
		Rate	2.2	1.9	1.6	1.7	1.5	1.4	1.3	1.2	1.1	1.0	0.9
	Total Canadian-born	**Cases**	**865**	**788**	**668**	**685**	**626**	**640**	**573**	**597**	**500**	**478**	**482**
		Rate	**3.7**	**3.2**	**2.7**	**2.8**	**2.5**	**2.6**	**2.2**	**2.4**	**2.0**	**1.9**	**1.9**
Foreign-born	Africa, High HIV Prevalence (AFR-High)	Cases	63	50	52	74	76	62	63	77	88	80	87
		Rate	–	–	–	–	–	–	–	48.8	52.3	45.2	48.1
	Africa, Low HIV Prevalence (AFR-Low)	Cases	5	10	5	12	9	12	14	8	19	22	21
		Rate	–	–	–	–	–	–	–	11.3	24.5	26.0	23.7
	American Region – Latin American and Caribbean Countries (AMR)	Cases	101	113	92	97	87	70	80	60	62	74	65
		Rate	–	–	–	–	–	–	–	8.8	8.8	10.2	8.7

...cont'd

Table 3 *Cont'd*

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by birthplace – Canada: 1994-2004

Birthplace			Year of diagnosis										
			1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Foreign-born *(cont'd)*	Established Market Economies and Central Europe (EME-CEUR)	Cases	130	128	109	124	115	116	96	101	76	76	72
		Rate	–	–	–	–	–	–	–	3.8	2.8	2.9	2.7
	Eastern Europe (EEUR)	Cases	27	27	15	28	33	32	30	24	36	23	26
		Rate	–	–	–	–	–	–	–	9.4	13.2	7.9	8.6
	Eastern Mediterranean (EMR)	Cases	159	122	147	119	104	113	118	107	119	110	115
		Rate	–	–	–	–	–	–	–	22.7	22.8	19.2	19.0
	South-East Asia (SEAR)	Cases	170	160	172	197	195	189	206	234	218	245	268
		Rate	–	–	–	–	–	–	–	47.0	40.3	41.8	43.5
	Western Pacific Region (WPR)	Cases	538	512	527	556	495	490	464	435	443	447	446
		Rate	–	–	–	–	–	–	–	33.1	31.8	30.4	29.3
	Unknown	Cases	29	47	59	73	46	76	61	77	58	33	15
		Rate	–	–	–	–	–	–	–	–	–	–	
	Total foreign-born	**Cases**	**1,222**	**1,169**	**1,178**	**1,280**	**1,160**	**1,160**	**1,132**	**1,123**	**1,119**	**1,110**	**1,115**
		Rate	**22.2**	**21.0**	**22.5**	**23.9**	**21.2**	**20.8**	**19.6**	**18.3**	**17.6**	**16.9**	**16.6**
Unknown		Cases	19	7	31	30	23	20	18	52	41	41	16
		Rate	–	–	–	–	–	–	–	–	–	–	
TOTAL		**Cases**	**2,106**	**1,964**	**1,877**	**1,995**	**1,809**	**1,820**	**1,723**	**1,772**	**1,660**	**1,629**	**1,613**
		Rate	**7.2**	**6.7**	**6.3**	**6.7**	**6.0**	**6.0**	**5.6**	**5.7**	**5.3**	**5.1**	**5.0**

Table 4

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by main diagnostic site – Canada: 1994-2004

Main diagnostic site			Year of diagnosis										
			1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Respiratory	Primary*	Cases	154	164	120	131	130	154	99	120	88	79	94
		Rate	0.5	0.6	0.4	0.4	0.4	0.5	0.3	0.4	0.3	0.2	0.3
	Pulmonary**	Cases	1,260	1,167	1,097	1,171	1,071	1,105	1,068	1,132	1,019	962	935
		Rate	4.3	4.0	3.7	3.9	3.6	3.6	3.5	3.6	3.2	3.0	2.9
	Other respiratory†	Cases	70	71	69	75	63	62	64	52	57	64	98
		Rate	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Nonrespiratory	Miliary	Cases	47	32	40	50	30	25	25	16	17	20	30
		Rate	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Meninges and CNS	Cases	19	21	18	25	24	15	16	17	18	25	19
		Rate	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
	Peripheral lymph node	Cases	302	254	241	268	276	244	258	235	242	249	251
		Rate	1.0	0.9	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8
	Other‡	Cases	227	228	270	259	189	189	163	180	194	193	185
		Rate	0.8	0.8	0.9	0.9	0.6	0.6	0.5	0.6	0.6	0.6	0.6
Unknown		Cases	27	27	22	16	26	26	30	20	25	37	1
		Rate	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0

* 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); 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.

Table 5A

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by age group – Canada and provinces/territories: 2004

Age group		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.
<1	Cases	**6**	0	0	0	0	0	0	2	2	0	0	0	0	2
	Rate	**1.8**	0.0	0.0	0.0	0.0	0.0	0.0	14.4	16.6	0.0	0.0	0.0	0.0	279.3
1 – 4	Cases	**33**	0	0	0	0	2	8	3	13	1	1	1	0	4
	Rate	**2.4**	0.0	0.0	0.0	0.0	0.7	1.5	5.3	27.2	0.6	0.6	78.9	0.0	139.2
5 – 14	Cases	**45**	0	0	0	0	4	12	12	7	0	5	0	0	5
	Rate	**1.1**	0.0	0.0	0.0	0.0	0.4	0.7	7.4	5.1	0.0	1.0	0.0	0.0	74.1
15 – 24	Cases	**198**	1	0	4	2	21	81	30	11	14	30	0	0	4
	Rate	**4.5**	1.4	0.0	3.2	2.0	2.2	4.8	18.0	7.3	2.9	5.2	0.0	0.0	73.1
25 – 34	Cases	**324**	0	0	0	1	46	154	38	11	23	45	1	1	4
	Rate	**7.4**	0.0	0.0	0.0	1.0	4.5	8.9	24.5	9.1	4.8	7.9	25.1	13.7	78.8
35 – 44	Cases	**272**	0	0	0	0	32	126	22	6	19	59	1	1	6
	Rate	**5.3**	0.0	0.0	0.0	0.0	2.7	6.1	12.6	4.3	3.7	8.8	18.3	13.6	153.6
45 – 54	Cases	**198**	1	0	1	0	28	88	16	9	16	34		3	2
	Rate	**4.1**	1.2	0.0	0.7	0.0	2.4	4.9	9.6	6.4	3.4	5.2	0.0	53.2	77.3
55 – 64	Cases	**167**	0	0	0	0	25	73	11	6	12	35	1	1	3
	Rate	**4.9**	0.0	0.0	0.0	0.0	2.8	5.8	9.4	6.3	4.1	7.6	30.5	32.9	197.9
65 – 74	Cases	**177**	4	1	1	1	30	72	3	3	9	48		3	2
	Rate	**8.0**	10.7	9.8	1.4	1.9	5.3	8.5	3.9	4.3	5.0	16.0	0.0	244.5	366.3
75 +	Cases	**193**	1		2	6	31	86	7	2	15	42	0	1	0
	Rate	**10.0**	3.4	0.0	3.2	12.1	6.7	11.7	8.6	2.6	9.9	15.4	0.0	157.5	0.0
TOTAL	**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**	**7.1**	**12.9**	**23.4**	**108.0**

Table 5B

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by age group – males – Canada and provinces/territories: 2004

Age group		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.
<1	Cases	**5**	0	0	0	0	0	0	2	2	0	0	0	0	1
	Rate	**2.9**	0.0	0.0	0.0	0.0	0.0	0.0	28.1	32.5	0.0	0.0	0.0	0.0	263.2
1 – 4	Cases	**22**	0	0	0	0	0	6	2	9	1	1	1	0	2
	Rate	**3.1**	0.0	0.0	0.0	0.0	0.0	2.1	6.9	36.6	1.3	1.2	152.0	0.0	135.5
5 – 14	Cases	**23**	0	0	0	0	3	8	4	3	0	4	0	0	1
	Rate	**1.1**	0.0	0.0	0.0	0.0	0.6	1.0	4.8	4.2	0.0	1.6	0.0	0.0	28.7
15 – 24	Cases	**85**	1	0	3	2	6	34	14	6	7	10	0	0	2
	Rate	**3.8**	2.8	0.0	4.7	3.8	1.2	4.0	16.4	7.7	2.8	3.4	0.0	0.0	72.2
25 – 34	Cases	**146**	0	0	0	1	22	70	15	6	9	21	0	0	2
	Rate	**6.6**	0.0	0.0	0.0	2.0	4.2	8.0	18.9	9.8	3.6	7.4	0.0	0.0	77.3
35 – 44	Cases	**147**	0	0	0	0	21	70	13	1	6	31	0	0	5
	Rate	**5.7**	0.0	0.0	0.0	0.0	3.4	6.8	14.6	1.4	2.3	9.3	0.0	0.0	239.8
45 – 54	Cases	**104**	0	0	1	0	15	47	8	4	10	16	0	1	2
	Rate	**4.4**	0.0	0.0	1.4	0.0	2.5	5.3	9.6	5.6	4.1	4.9	0.0	34.2	143.5
55 – 64	Cases	**99**	0	0	0	0	14	40	8	3	10	21	1	0	2
	Rate	**5.9**	0.0	0.0	0.0	0.0	3.3	6.4	13.9	6.4	6.8	9.2	54.8	0.0	267.4
65 – 74	Cases	**110**	2	1	1	1	23	43	2	2	3	30	0	1	1
	Rate	**10.5**	11.0	20.2	3.0	3.9	8.9	10.7	5.4	6.0	3.4	20.3	0.0	151.5	318.5
75 +	Cases	**107**	1	0	2	5	14	52	2	2	6	23	0	0	0
	Rate	**14.4**	8.6	0.0	8.4	26.8	8.3	18.2	6.5	6.5	9.9	20.7	0.0	0.0	0.0
TOTAL	**Cases**	**848**	**4**	**1**	**7**	**9**	**118**	**370**	**70**	**38**	**52**	**157**	**2**	**2**	**18**
	Rate	**5.4**	**1.6**	**1.5**	**1.5**	**2.4**	**3.2**	**6.0**	**12.0**	**7.7**	**3.2**	**7.5**	**12.8**	**9.1**	**117.2**

Table 5C

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by age group – females – Canada and provinces/territories: 2004

Age group		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.
<1	Cases	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
	Rate	**0.6**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	297.6
1 – 4	Cases	**11**	0	0	0	0	2	2	1	4	0	0	0	0	2
	Rate	**1.6**	0.0	0.0	0.0	0.0	1.4	0.7	3.6	17.2	0.0	0.0	0.0	0.0	143.2
5 – 14	Cases	**22**	0	0	0	0	1	4	8	4	0	1	0	0	4
	Rate	**1.1**	0.0	0.0	0.0	0.0	0.2	0.5	10.1	5.9	0.0	0.4	0.0	0.0	122.5
15 – 24	Cases	**113**	0	0	1	0	15	47	16	5	7	20	0	0	2
	Rate	**5.3**	0.0	0.0	1.6	0.0	3.2	5.7	19.7	6.8	3.0	7.1	0.0	0.0	74.1
25 – 34	Cases	**178**	0	0	0	0	24	84	23	5	14	24	1	1	2
	Rate	**8.2**	0.0	0.0	0.0	0.0	4.9	9.7	30.3	8.3	6.0	8.5	47.5	28.6	80.3
35 – 44	Cases	**125**	0	0	0	0	11	56	9	5	13	28	1	1	1
	Rate	**4.9**	0.0	0.0	0.0	0.0	1.9	5.4	10.5	7.2	5.1	8.3	35.0	26.9	54.9
45 – 54	Cases	**94**	1	0	0	0	13	41	8	5	6	18	0	2	0
	Rate	**3.9**	2.3	0.0	0.0	0.0	2.2	4.5	9.6	7.2	2.6	5.5	0.0	73.7	0.0
55 – 64	Cases	**68**	0	0	0	0	11	33	3	3	2	14	0	1	1
	Rate	**4.0**	0.0	0.0	0.0	0.0	2.5	5.1	5.1	6.3	1.4	6.0	0.0	75.5	130.2
65 – 74	Cases	**67**	2	0	0	0	7	29	1	1	6	18	0	2	1
	Rate	**5.8**	10.4	0.0	0.0	0.0	2.3	6.5	2.5	2.7	6.4	11.8	0.0	352.7	431.0
75 +	Cases	**86**	0	0	0	1	17	34	5	0	9	19	0	1	0
	Rate	**7.3**	0.0	0.0	0.0	3.2	5.8	7.6	10.0	0.0	9.9	11.7	0.0	304.9	0.0
TOTAL	**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**	**2.6**	**5.3**	**12.6**	**6.4**	**3.6**	**6.7**	**13.1**	**38.6**	**98.1**

Table 6

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by birthplace – Canada and provinces/territories: 2004

Birthplace			CANADA	Province/territory										
				N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	North
Canadian-born	Aboriginal													
	North American Indian	Cases	**221**	0	0	0	0	3	19	87	60	10	28	14
		Rate	**29.2**	0.0	0.0	0.0	0.0	4.1	11.2	81.1	60.0	9.5	20.1	69.4
	Status (registered) Indian	Cases	**202**	0	0	0	0	0	18	87	45	10	28	14
		Rate	**27.2**	0.0	0.0	0.0	0.0	0.0	10.6	72.7	38.0	10.5	23.5	57.2
	Non-status Indian	Cases	**19**	0	0	0	0	3	1	0	15	0	0	0
		Rate	-	-	-	-	-	-	-	-	-	-	-	-
	Inuit	Cases	**41**	0	0	0	0	10	0	0	0	0	0	31
		Rate	**80.4**	0.0	0.0	0.0	0.0	95.1	0.0	0.0	0.0	0.0	0.0	102.2
	Metis	Cases	**6**	0	0	0	0	0	0	4	0	2	0	0
		Rate	**1.9**	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	2.7	0.0	0.0
	Total Aboriginal	**Cases**	**268**	**0**	**0**	**0**	**0**	**13**	**19**	**91**	**60**	**12**	**28**	**45**
		Rate	**23.8**	**0.0**	**0.0**	**0.0**	**0.0**	**12.8**	**8.5**	**53.7**	**40.5**	**6.7**	**14.9**	**81.4**
	Non-Aboriginal	Cases	**214**	6	1	4	7	65	61	19	2	9	39	1
		Rate	**0.9**	1.2	0.8	0.5	1.0	1.0	0.7	2.3	0.3	0.4	1.4	2.5
	Total Canadian-born	**Cases**	**482**	**6**	**1**	**4**	**7**	**78**	**80**	**110**	**62**	**21**	**67**	**46**
		Rate	**1.9**	**1.2**	**0.8**	**0.5**	**1.0**	**1.2**	**0.9**	**10.9**	**6.6**	**0.8**	**2.2**	**48.0**
Foreign-born	Africa, High HIV Prevalence (AFR-High)	Cases	**87**	0	0	1	2	12	46	9	0	10	7	0
		Rate	**48.1**	0.0	0.0	77.4	224.5	48.3	48.8	186.0	0.0	46.2	23.7	0.0
	Africa, Low HIV Prevalence (AFR-Low)	Cases	**21**	0	0	0	1	10	4	2	0	2	2	0
		Rate	**23.7**	0.0	0.0	0.0	187.3	22.0	12.3	132.3	0.0	50.7	63.8	
	American Region - Latin American and Caribbean Countries (AMR)	Cases	**65**	0	0	0	0	30	26	1	2	3	3	0
		Rate	**8.7**	0.0	0.0	0.0	0.0	18.9	5.5	4.9	60.1	7.8	6.6	0.0

…cont'd

Table 6 *Cont'd*

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by birthplace – Canada and provinces/territories: 2004

Birthplace			CANADA	Province/territory										
				N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	North
Foreign-born *(cont'd)*	Established Market Economies and Central Europe (EME-CEUR)	Cases	**72**	0	0	1	0	7	46	0	0	5	13	0
		Rate	**2.7**	0.0	0.0	2.9	0.0	2.1	3.2	0.0	0.0	2.2	2.8	-
	Eastern Europe (EEUR)	Cases	**26**	0	0	0	0	7	11	0	0	5	3	0
		Rate	**8.6**	0.0	0.0	0.0	0.0	12.6	6.0	0.0	0.0	24.6	10.2	-
	Eastern Mediterranean (EMR)	Cases	**115**	0	0	0	0	17	79	0	4	9	6	0
		Rate	**19.0**	0.0	0.0	0.0	0.0	12.2	21.8	0.0	105.8	25.0	12.2	-
	South-East Asia (SEAR)	Cases	**268**	0	0	1	0	19	174	5	1	10	58	0
		Rate	**43.5**	0.0	0.0	44.9	0.0	43.5	44.5	60.8	41.4	26.0	45.2	-
	Western Pacific Region (WPR)	Cases	**446**	1	0	1	0	29	224	16	1	43	131	0
		Rate	**29.3**	73.7	0.0	17.6	0.0	26.5	30.4	40.7	8.7	30.9	27.5	-
	Unknown	Cases	**15**	0	0	0	0	2	9	1	0	1	2	0
		Rate	-	-	-	-	-	-	-	-	-	-	-	-
	Total foreign-born	**Cases**	**1,115**	**1**	**0**	**4**	**3**	**133**	**619**	**34**	**8**	**88**	**225**	**0**
		Rate	**16.6**	**8.5**	**0.0**	**7.2**	**9.8**	**14.7**	**16.7**	**21.5**	**13.8**	**16.7**	**18.4**	**0.0**
Unknown		Cases	**16**	0	0	0	0	8	1	0	0	0	7	0
		Rate												
TOTAL		**Cases**	**1,613**	**7**	**1**	**8**	**10**	**219**	**700**	**144**	**70**	**109**	**299**	**46**
		Rate	**5.0**	**1.4**	**0.7**	**0.9**	**1.3**	**2.9**	**5.6**	**12.3**	**7.0**	**3.4**	**7.1**	**44.5**

Note: Rates with small case numbers may be unstable.

Table 7

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by main diagnostic site – Canada and provinces/territories: 2004

Main diagnostic site			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.
Respiratory	Primary*	Cases	**94**	0	0	0	0	0	33	18	21	4	4	1	0	13
		Rate	**0.3**	0.0	0.0	0.0	0.0	0.0	0.3	1.5	2.1	0.1	0.1	3.2	0.0	43.9
	Pulmonary**	Cases	**935**	2	1	4	5	146	393	86	26	57	187	2	9	17
		Rate	**2.9**	0.4	0.7	0.4	0.7	1.9	3.2	7.3	2.6	1.8	4.4	6.5	21.0	57.4
	Other respiratory†	Cases	**98**	1	0	0	1	10	33	14	9	11	19	0	0	0
		Rate	**0.3**	0.2	0.0	0.0	0.1	0.1	0.3	1.2	0.9	0.3	0.5	0.0	0.0	0.0
Non-respiratory	Miliary	Cases	**30**	0	0	0	0	7	10	4	0	3	3	1	1	1
		Rate	**0.1**	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.0	0.1	0.1	3.2	2.3	3.4
	Meninges and CNS	Cases	**19**	0	0	1	0	0	10	1	0	1	5	0	0	1
		Rate	**0.1**	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	3.4
	Peripheral lymph node	Cases	**251**	0	0	1	1	34	132	12	4	25	42	0	0	0
		Rate	**0.8**	0.0	0.0	0.1	0.1	0.5	1.1	1.0	0.4	0.8	1.0	0.0	0.0	0.0
	Other‡	Cases	**185**	4	0	2	3	22	88	9	10	8	39	0	0	0
		Rate	**0.6**	0.8	0.0	0.2	0.4	0.3	0.7	0.8	1.0	0.2	0.9	0.0	0.0	0.0
Unknown		Cases	**1**	0	0	0	0	0	1	0	0	0	0	0	0	0
		Rate	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL		**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**	**7.1**	**12.9**	**23.4**	**108.0**

* 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); 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.

Table 8

Reported new active and relapsed tuberculosis cases by birthplace, sex and age group – Canada: 2004

Birthplace			TOTAL	Age group									
				< 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75 +
Canadian-born	Aboriginal												
	North American Indian	Male	**113**	4	12	8	19	20	11	14	16	5	4
		Female	**108**	0	5	12	15	18	18	17	13	7	3
		Total	**221**	4	17	20	34	38	29	31	29	12	7
	Status (registered) Indian	Male	**98**	3	11	8	18	18	9	10	14	4	3
		Female	**104**	0	4	12	14	18	17	16	13	7	3
		Total	**202**	3	15	20	32	36	26	26	27	11	6
	Non-status Indian	Male	**15**	1	1	0	1	2	2	4	2	1	1
		Female	**4**	0	1	0	1	0	1	1	0	0	0
		Total	**19**	1	2	0	2	2	3	5	2	1	1
	Metis	Male	**3**	0	0	0	0	0	0	2	1	0	0
		Female	**3**	0	0	0	0	1	1	1	0	0	0
		Total	**6**	0	0	0	0	1	1	3	1	0	0
	Inuit	Male	**24**	1	2	3	3	5	5	2	2	1	0
		Female	**17**	1	3	5	2	2	2	0	1	1	0
		Total	**41**	2	5	8	5	7	7	2	3	2	0
	Total Aboriginal	**Male**	**140**	**5**	**14**	**11**	**22**	**25**	**16**	**18**	**19**	**6**	**4**
		Female	**128**	**1**	**8**	**17**	**17**	**21**	**21**	**18**	**14**	**8**	**3**
		Total	**268**	**6**	**22**	**28**	**39**	**46**	**37**	**36**	**33**	**14**	**7**
	Non-Aboriginal	Male	**140**	0	4	3	8	13	15	21	16	29	31
		Female	**74**	0	2	4	9	4	5	15	8	11	16
		Total	**214**	0	6	7	17	17	20	36	24	40	47
	Total Canadian-born	**Male**	**280**	**5**	**18**	**14**	**30**	**38**	**31**	**39**	**35**	**35**	**35**
		Female	**202**	**1**	**10**	**21**	**26**	**25**	**26**	**33**	**22**	**19**	**19**
		Total	**482**	**6**	**28**	**35**	**56**	**63**	**57**	**72**	**57**	**54**	**54**

…cont'd

Table 8 *Cont'd*

Reported new active and relapsed tuberculosis cases by birthplace, sex and age group – Canada: 2004

Birthplace			TOTAL	Age group									
				< 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75 +
Foreign-born	Africa, High HIV Prevalence (AFR-High)	Male	**36**	0	0	0	10	11	9	3	1	1	1
		Female	**51**	0	0	0	13	22	13	3	0	0	0
		Total	**87**	0	0	0	23	33	22	6	1	1	1
	Africa, Low HIV Prevalence (AFR-Low)	Male	**11**	0	0	0	1	4	6	0	0	0	0
		Female	**10**	0	0	0	4	2	3	0	1	0	0
		Total	**21**	0	0	0	5	6	9	0	1	0	0
	American Region – Latin American and Caribbean Countries (AMR)	Male	**32**	0	2	1	0	5	9	3	5	5	2
		Female	**33**	0	1	0	5	9	4	7	4	2	1
		Total	**65**	0	3	1	5	14	13	10	9	7	3
	Established Market Economies and Central Europe (EME-CEUR)	Male	**50**	0	1	0	2	4	7	3	13	10	10
		Female	**22**	0	0	0	1	4	1	1	3	5	7
		Total	**72**	0	1	0	3	8	8	4	16	15	17
	Eastern Europe (EEUR)	Male	**17**	0	0	0	1	4	4	2	1	3	2
		Female	**9**	0	0	0	1	5	1	0	0	0	2
		Total	**26**	0	0	0	2	9	5	2	1	3	4
	Eastern Mediterranean (EMR)	Male	**60**	0	0	2	9	21	11	4	7	5	1
		Female	**55**	0	0	1	18	15	9	3	2	4	3
		Total	**115**	0	0	3	27	36	20	7	9	9	4
	South-East Asia (SEAR)	Male	**135**	0	0	3	15	32	27	14	14	19	11
		Female	**133**	0	0	0	22	39	12	9	12	17	22
		Total	**268**	0	0	3	37	71	39	23	26	36	33
	Western Pacific Region (WPR)	Male	**211**	0	1	2	17	24	42	34	22	28	41
		Female	**235**	0	0	0	22	53	55	35	22	19	29
		Total	**446**	0	1	2	39	77	97	69	44	47	70

…cont'd

Table 8 *Cont'd*

Reported new active and relapsed tuberculosis cases by birthplace, sex and age group – Canada: 2004

Birthplace			TOTAL	Age group									
				< 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75 +
Foreign-born *(cont'd)*	Unknown	Male	**7**	0	0	0	0	2	0	0	1	2	2
		Female	**8**	0	0	0	1	4	0	0	1	0	2
		Total	**15**	0	0	0	1	6	0	0	2	2	4
	Total foreign-born	**Male**	**559**	**0**	**4**	**8**	**55**	**107**	**115**	**63**	**64**	**73**	**70**
		Female	**556**	**0**	**1**	**1**	**87**	**153**	**98**	**58**	**45**	**47**	**66**
		Total	**1,115**	**0**	**5**	**9**	**142**	**260**	**213**	**121**	**109**	**120**	**136**
Unknown		Male	**9**	0	0	1	0	1	1	2	0	2	2
		Female	**7**	0	0	0	0	0	1	3	1	1	1
		Total	**16**	0	0	1	0	1	2	5	1	3	3
TOTAL		**Male**	**848**	**5**	**22**	**23**	**85**	**146**	**147**	**104**	**99**	**110**	**107**
		Female	**765**	**1**	**11**	**22**	**113**	**178**	**125**	**94**	**68**	**67**	**86**
		Total	**1,613**	**6**	**33**	**45**	**198**	**324**	**272**	**198**	**167**	**177**	**193**

Table 9

Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by age group and main diagnostic site – Canada: 2004

Age group		TOTAL	Main diagnostic site							
			Respiratory			Nonrespiratory				Unknown
			Primary	Pulmonary	Other respiratory	Miliary	CNS	Lymph	Other	
< 1	Cases	**6**	6	0	0	0	0	0	0	0
	Rate	**1.8**	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1 – 4	Cases	**33**	26	5	0	0	0	0	2	0
	Rate	**2.4**	1.9	0.4	0.0	0.0	0.0	0.0	0.1	0.0
5 – 14	Cases	**45**	26	9	1	1	1	3	4	0
	Rate	**1.1**	0.6	0.2	0.0	0.0	0.0	0.1	0.1	0.0
15 – 24	Cases	**198**	13	116	15	5	1	24	24	0
	Rate	**4.5**	0.3	2.7	0.3	0.1	0.0	0.6	0.6	0.0
25 – 34	Cases	**324**	7	188	18	1	4	75	30	1
	Rate	**7.4**	0.2	4.3	0.4	0.0	0.1	1.7	0.7	0.0
35 – 44	Cases	**272**	6	138	16	9	6	64	33	0
	Rate	**5.3**	0.1	2.7	0.3	0.2	0.1	1.2	0.6	0.0
45 – 54	Cases	**198**	5	116	13	2	3	34	25	0
	Rate	**4.1**	0.1	2.4	0.3	0.0	0.1	0.7	0.5	0.0
55 – 64	Cases	**167**	2	105	12	3	2	23	20	0
	Rate	**4.9**	0.1	3.1	0.4	0.1	0.1	0.7	0.6	0.0
65 – 74	Cases	**177**	3	116	11	7	2	12	26	0
	Rate	**8.0**	0.1	5.2	0.5	0.3	0.1	0.5	1.2	0.0
75 +	Cases	**193**	0	142	12	2	0	16	21	0
	Rate	**10.0**	0.0	7.4	0.6	0.1	0.0	0.8	1.1	0.0
TOTAL	**Cases**	**1,613**	**94**	**935**	**98**	**30**	**19**	**251**	**185**	**1**
	Rate	**5.0**	**0.3**	**2.9**	**0.3**	**0.1**	**0.1**	**0.8**	**0.6**	**0.0**

Table 10

Reported new active and relapsed tuberculosis cases by birthplace and main diagnostic site – Canada: 2004

Birthplace		TOTAL	Main diagnostic site							
			Respiratory			Nonrespiratory				Unknown
			Primary*	Pulmonary**	Other respiratory†	Miliary	CNS	Lymph	Other‡	
Canadian-born	Aboriginal									
	North American Indian	**221**	40	126	20	7	3	13	12	0
	Status (registered) Indian	**202**	37	114	19	7	3	13	9	0
	Non-status Indian	**19**	3	12	1	0	0	0	3	0
	Metis	**6**	0	4	1	0	0	1	0	0
	Inuit	**41**	13	25	0	1	1	0	1	0
	Total Aboriginal	**268**	**53**	**155**	**21**	**8**	**4**	**14**	**13**	**0**
	Non-Aboriginal	**214**	11	141	17	2	0	11	31	1
	Total Canadian-born	**482**	**64**	**296**	**38**	**10**	**4**	**25**	**44**	**1**
Foreign-born	Africa, High HIV Prevalence (AFR-High)	**87**	8	49	2	1	1	13	13	0
	Africa, Low HIV Prevalence (AFR-Low)	**21**	0	10	2	2	0	4	3	0
	American Region – Latin American and Caribbean Countries (AMR)	**65**	1	36	1	4	2	10	11	0
	Established Market Economies and Central Europe (EME-CEUR)	**72**	4	45	7	3	3	4	6	0
	Eastern Europe (EEUR)	**26**	0	21	1	1	1	2	0	0
	Eastern Mediterranean (EMR)	**115**	3	53	7	3	0	22	27	0

…cont'd

Table 10 *Cont'd*

Reported new active and relapsed tuberculosis cases by birthplace and main diagnostic site – Canada: 2004

Birthplace		TOTAL	Main diagnostic site							
			Respiratory			Nonrespiratory				Unknown
			Primary*	Pulmonary**	Other respiratory†	Miliary	CNS	Lymph	Other‡	
Foreign-born *(cont'd)*	South-East Asia (SEAR)	**268**	5	143	17	4	6	62	31	0
	Western Pacific Region (WPR)	**446**	8	264	21	2	2	103	46	0
	Unknown	**15**	1	11	0	0	0	2	1	0
	Total foreign-born	**1,115**	**30**	**632**	**58**	**20**	**15**	**222**	**138**	**0**
Unknown		**16**	0	7	2	0	0	4	3	0
TOTAL		**1,613**	**94**	**935**	**98**	**30**	**19**	**251**	**185**	**1**

* 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); 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.

Table 11

Reported new active and relapsed tuberculosis cases by birthplace and activity status – Canada: 2004

Birthplace		TOTAL	Activity status		
			New active cases	Relapsed cases	Unknown status
Canadian-born	Aboriginal				
	North American Indian	**221**	190	21	10
	Status (registered) Indian	**202**	177	15	10
	Non-status Indian	**19**	13	6	0
	Metis	**6**	4	2	0
	Inuit	**41**	32	9	0
	Total Aboriginal	**268**	**226**	**32**	**10**
	Non-Aboriginal	**214**	191	17	6
	Total Canadian-born	**482**	**417**	**49**	**16**
Foreign-born	Africa, High HIV Prevalence (AFR-High)	**87**	84	2	1
	Africa, Low HIV Prevalence (AFR-Low)	**21**	20	1	0
	American Region - Latin American and Caribbean Countries (AMR)	**65**	58	7	0
	Established Market Economies and Central Europe (EME-CEUR)	**72**	66	5	1
	Eastern Europe (EEUR)	**26**	21	5	0
	Eastern Mediterranean (EMR)	**115**	106	8	1
	South-East Asia (SEAR)	**268**	253	14	1
	Western Pacific Region (WPR)	**446**	413	29	4
	Unknown	**15**	14	1	0
	Total foreign-born	**1,115**	**1,035**	**72**	**8**
Unknown		**16**	16	-	-
TOTAL		**1,613**	**1,468**	**121**	**24**

Table 12

Reported new active and relapsed tuberculosis cases by bacterial status – Canada and provinces/territories: 2004

Bacterial status	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.
1. Culture positive														
a. Microscopy positive	**344**	1	1	5	6	83	0	48	24	39	123	1	6	7
b. Microscopy negative	**312**	5	0	3	3	75	0	61	14	21	114	1	4	11
c. Microscopy unknown	**609**	0	0	0	1	19	527	1	11	37	13	0	0	0
Total	**1,265**	**6**	**1**	**8**	**10**	**177**	**527**	**110**	**49**	**97**	**250**	**2**	**10**	**18**
2. Culture negative														
a. Microscopy positive	**6**	0	0	0	0	2	0	1	2	0	1	0	0	0
b. Microscopy negative	**63**	0	0	0	0	13	0	6	12	0	27	0	0	5
c. Microscopy unknown	**122**	0	0	0	0	1	120	0	0	0	1	0	0	0
Total	**191**	**0**	**0**	**0**	**0**	**16**	**120**	**7**	**14**	**0**	**29**	**0**	**0**	**5**
3. Culture unknown														
a. Microscopy positive	**19**	1	0	0	0	3	0	12	0	0	2	1	0	0
b. Microscopy negative	**5**	0	0	0	0	3	0	2	0	0	0	0	0	0
c. Microscopy unknown	**133**	0	0	0	0	20	53	13	7	12	18	1	0	9
Total	**157**	**1**	**0**	**0**	**0**	**26**	**53**	**27**	**7**	**12**	**20**	**2**	**0**	**9**
TOTAL	**1,613**	**7**	**1**	**8**	**10**	**219**	**700**	**144**	**70**	**109**	**299**	**4**	**10**	**32**

Table 13

Reported new active and relapsed tuberculosis cases by bacterial status and birthplace – Canada: 2004

Bacterial status	TOTAL	Birthplace			
		Canadian-born Aboriginal	Canadian-born non-Aboriginal	Foreign-born	Unknown birthplace
1. Culture positive					
a. Microscopy positive	**344**	86	62	192	4
b. Microscopy negative	**312**	84	45	179	4
c. Microscopy unknown	**609**	33	45	527	4
Total	**1,265**	**203**	**152**	**898**	**12**
2. Culture negative					
a. Microscopy positive	**6**	3	1	2	0
b. Microscopy negative	**63**	24	6	32	1
c. Microscopy unknown	**122**	1	16	105	0
Total	**191**	**28**	**23**	**139**	**1**
3. Culture unknown					
a. Microscopy positive	**19**	4	7	8	0
b. Microscopy negative	**5**	1	2	1	1
c. Microscopy unknown	**133**	32	30	69	2
Total	**157**	**37**	**39**	**78**	**3**
TOTAL	**1,613**	**268**	**214**	**1,115**	**16**

Table 14

Reported new active and relapsed tuberculosis cases by bacterial status and main diagnostic site – Canada: 2004

Bacterial status	TOTAL	Main diagnostic site							
		Respiratory			Nonrespiratory				Unknown
		Primary	Pulmonary	Other respiratory	Miliary	CNS	Lymph	Other	
1. Culture positive									
a. Microscopy positive	**344**	1	289	5	8	0	13	28	0
b. Microscopy negative	**312**	10	199	25	5	1	43	29	0
c. Microscopy unknown	**609**	28	331	29	10	8	134	69	0
Total	**1,265**	**39**	**819**	**59**	**23**	**9**	**190**	**126**	**0**
2. Culture negative									
a. Microscopy positive	**6**	2	1	1	0	0	2	0	0
b. Microscopy negative	**63**	13	19	12	2	4	8	5	0
c. Microscopy unknown	**122**	7	45	9	3	3	29	25	1
Total	**191**	**22**	**65**	**22**	**5**	**7**	**39**	**30**	**1**
3. Culture unknown									
a. Microscopy positive	**19**	0	8	3	1	0	5	2	0
b. Microscopy negative	**5**	1	1	2	1	0	0	0	0
c. Microscopy unknown	**133**	32	42	12	0	3	17	27	0
Total	**157**	**33**	**51**	**17**	**2**	**3**	**22**	**29**	**0**
TOTAL	**1,613**	**94**	**935**	**98**	**30**	**19**	**251**	**185**	**1**

Table 15

Pattern of reported drug resistance to first-line anti-tuberculosis drugs at time of reporting by birthplace – Canada: 2004

Drug pattern	TOTAL	Origin			
		Canadian-born		Foreign-born	Unknown
		Aboriginal	Non-Aboriginal		
Total positive culture	**1,265**	**203**	**152**	**898**	**12**
Resistance pattern unknown	**93**	30	17	46	0
No resistance	**1,024**	167	127	718	12
Resistance to one or more drugs	**148**	**6**	**8**	**134**	**0**
Monoresistance					
INH	**49**	3	1	45	0
EMB	**4**	1	1	2	0
RMP	**2**	0	1	1	0
PZA	**10**	1	2	7	0
SM	**42**	1	2	39	0
Total monoresistance	**107**	**6**	**7**	**94**	**0**
Multi-drug resistance (MDR-TB)					
INH & RMP	**2**	0	0	2	0
INH & RMP & EMB	**2**	0	0	2	0
INH & RMP & SM	**2**	0	0	2	0
INH & SM & EMB & RMP	**1**	0	0	1	0
INH & SM & EMB & RMP & PZA	**1**	0	0	1	0
Total MDR-TB	**8**	**0**	**0**	**8**	**0**
Other patterns					
INH & SM	**28**	0	1	27	0
INH & EMB	**3**	0	0	3	0
INH & EMB & SM	**1**	0	0	1	0
INH & SM & PZA	**1**	0	0	1	0
Total other patterns	**33**	**0**	**1**	**32**	**0**

Table 16

Reported new active and relapsed tuberculosis cases by method of detection – Canada and provinces/territories: 2004

Case finding	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.
Immigration	**62**	0	0	0	0	0	42	0	0	5	15	0	0	0
Symptoms/incidental findings	**1,224**	7	1	8	7	156	539	80	52	94	258	1	5	16
Contact investigation	**102**	0	0	0	1	6	21	27	12	6	9	3	3	14
Post-mortem	**21**	0	0	0	0	1	5	4	0	2	8	0	0	1
Screening	**77**	0	0	0	0	20	31	8	5	1	9	0	2	1
Other	**77**	0	0	0	2	28	21	25	0	1	0	0	0	0
Unknown	**50**	0	0	0	0	8	41	0	1	0	0	0	0	0
TOTAL	**1,613**	**7**	**1**	**8**	**10**	**219**	**700**	**144**	**70**	**109**	**299**	**4**	**10**	**32**

Table 17

Reported new active and relapsed tuberculosis cases by method of detection and birthplace – Canada: 2004

Case finding	TOTAL	Birthplace						
		Canadian-born					Foreign-born	Unknown birthplace
		Status (registered) Indian	Non-status Indian	Metis	Inuit	Non-Aboriginal		
Immigration	**62**	0	0	0	0	0	62	0
Symptoms/incidental findings	**1,224**	117	16	5	21	150	908	7
Post-mortem	**21**	5	0	0	1	5	7	3
Contact-investigation	**102**	47	2	0	18	18	17	0
Screening	**77**	17	0	0	1	8	51	0
Other	**77**	13	1	1	0	25	36	1
Unknown	**50**	3	0	0	0	8	34	5
TOTAL	**1,613**	**202**	**19**	**6**	**41**	**214**	**1,115**	**16**

Table 18

Reported new active and relapsed foreign-born tuberculosis cases by birthplace and year of arrival in Canada: 2004

Birthplace (WHO region)	TOTAL	Year of arrival																
		≤ 1962	1963-1972	1973-1982	1983-1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Unk.
Africa, High HIV Prevalence (AFR-High)	**87**	0	0	2	9	1	1	1	2	3	3	1	2	14	7	14	17	10
Africa, Low HIV Prevalence (AFR-Low)	**21**	0	0	0	0	0	0	2	0	0	0	3	3	2	3	2	5	1
American Region - Latin American and Caribbean Countries (AMR)	**65**	0	5	6	14	1	3	1	2	1	1	2	0	2	2	7	9	9
Established Market Economies and Central Europe (EME-CEUR)	**72**	22	13	3	5	0	1	1	0	1	3	3	1	1	0	4	2	12
Eastern Europe (EEUR)	**26**	4	0	0	2	0	2	0	0	1	0	2	1	2	0	9	1	2
Eastern Mediterranean (EMR)	**115**	0	3	2	17	2	1	1	2	4	5	4	6	12	10	16	18	12
South-East Asia (SEAR)	**268**	1	13	18	37	6	6	7	7	8	8	6	19	24	23	28	29	28
Western Pacific Region (WPR)	**446**	6	11	53	125	16	34	12	13	7	11	10	13	15	19	32	25	44
Unknown	**15**	2	1	0	2	0	0	0	0	0	0	0	1	0	1	1	1	6
TOTAL	**1,115**	**35**	**46**	**84**	**211**	**26**	**48**	**25**	**26**	**25**	**31**	**31**	**46**	**72**	**65**	**113**	**107**	**124**

Table 19

Reported new active and relapsed foreign-born tuberculosis cases by immigration status – Canada and provinces/territories: 2004

Immigration status	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.
Canadian citizen or landed immigrant	**310**	0	0	0	0	1	0	34	5	71	199	0	0	0
Refugee claimant	**6**	0	0	0	0	0	0	0	1	4	1	0	0	0
Other temporary resident (visitor, student, foreign nationals in Canada illegally)	**8**	0	0	0	0	0	0	0	0	8	0	0	0	0
Other	**23**	1	0	4	2	0	0	0	2	0	14	0	0	0
Unknown	**768**	0	0	0	1	132	619	0	0	5	11	0	0	0
TOTAL	**1,115**	**1**	**0**	**4**	**3**	**133**	**619**	**34**	**8**	**88**	**225**	**0**	**0**	**0**

Table 20

Reported relapsed tuberculosis cases by length of inactive interval – Canada and provinces/territories: 2004

Interval	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.
< 2 years	**5**	0	0	0	0	2	0	1	0	0	2	0	0	0
2-5 years	**9**	0	0	0	0	0	0	3	2	0	4	0	0	0
6-9 years	**8**	0	0	0	0	1	0	2	1	3	1	0	0	0
10-19 years	**11**	0	0	0	0	1	0	2	2	1	3	0	0	2
20+ years	**37**	0	0	0	1	6	0	4	2	5	12	0	1	6
Unknown	**50**	3	0	0	0	5	40	1	0	0	1	0	0	0
TOTAL	**120**	**3**	**0**	**0**	**1**	**15**	**40**	**13**	**7**	**9**	**23**	**0**	**1**	**8**

Table 21

Reported new active and relapsed tuberculosis cases who died in 2004, by cause of death – Canada and provinces/territories: 2004

Cause of death	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.
Cases reported in 2003														
TB contributed to death but was not the underlying cause	**7**	0	0	0	1	4	0	0	0	1	1	0	0	0
TB did not contribute to death but was an incidental finding	**5**	0	0	0	0	0	0	0	0	0	5	0	0	0
TB was the cause of death	**2**	2	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	**15**	0	0	1	0	0	14	0	0	0	0	0	0	0
TOTAL	**29**	**2**	**0**	**1**	**1**	**4**	**14**	**0**	**0**	**1**	**6**	**0**	**0**	**0**
Cases reported in 2004														
TB contributed to death but was not the underlying cause	**44**	0	0	1	1	7	10	5	2	7	11	0	0	0
TB did not contribute to death but was an incidental finding	**28**	0	0	0	1	4	10	4	1	2	6	0	0	0
TB was the cause of death	**24**	0	1	0	0	1	14	1	0	0	6	0	0	1
Unknown	**9**	0	0	0	0	3	6	0	0	0	0	0	0	0
TOTAL	**105**	**0**	**1**	**1**	**2**	**15**	**40**	**10**	**3**	**9**	**23**	**0**	**0**	**1**

Table 22

Reported new active and relapsed tuberculosis cases reported in 2004 who died in 2004, by age group and sex – Canada: 2004

Sex	TOTAL	Age group									
		< 1	1 – 4	5 – 14	15 – 24	25 – 34	35 – 44	45 – 54	55 – 64	65 – 74	75 +
Male	**72**	0	0	0	0	1	7	7	5	16	36
Female	**33**	0	0	0	0	1	3	2	5	9	13
TOTAL	**105**	**0**	**0**	**0**	**0**	**2**	**10**	**9**	**10**	**25**	**49**

Table 23

Reported new active and relapsed tuberculosis cases by HIV status – Canada and provinces/territories: 2004

HIV status	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.
Positive	**40**	0	0	0	0	5	9	9	0	2	15	0	0	0
Negative	**338**	0	0	2	5	40	4	42	0	89	128	2	10	16
Unknown	**1,235**	7	1	6	5	174	687	93	70	18	156	2	0	16
TOTAL	**1,613**	**7**	**1**	**8**	**10**	**219**	**700**	**144**	**70**	**109**	**299**	**4**	**10**	**32**

Table 24

Treatment outcome status – Canada and provinces/territories: 2003

	TOTAL	Treatment outcome							
		Cure	Treatment completed without culture	Death during treatment	Trans-ferred	Absconded	Treatment ongoing	Other	Unknown
CANADA	**1,629**	**165**	**1,038**	**124**	**19**	**24**	**101**	**32**	**126**
Province/territory									
Newfoundland	**7**	1	2	4	0	0	0	0	0
Prince Edward Island	**3**	0	0	2	1	0	0	0	0
Nova Scotia	**6**	1	4	1	0	0	0	0	0
New Brunswick	**12**	4	5	2	0	0	0	1	0
Quebec	**255**	28	100	12	1	3	0	6	105
Ontario	**693**	0	501	52	0	8	100	15	17
Manitoba	**127**	0	106	13	2	3	0	3	0
Saskatchewan	**91**	79	2	5	0	1	0	0	4
Alberta	**110**	28	70	5	4	1	1	1	0
British Columbia	**305**	13	240	27	11	8	0	6	0
Yukon	**1**	0	1	0	0	0	0	0	0
Northwest Territories	**12**	9	3	0	0	0	0	0	0
Nunavut	**7**	2	4	1	0	0	0	0	0

Table 25

Treatment outcome status by treatment regimen – Canada: 2003

Treatment regimen	TOTAL	Treatment outcome							
		Cure	Treatment completed without culture	Death during treatment	Trans-ferred	Absconded	Treatment ongoing	Other	Unknown
TOTAL	**1,629**	**165**	**1,038**	**124**	**19**	**24**	**101**	**32**	**126**
EMB	**1**	1	0	0	0	0	0	0	0
RMP, PZA	**1**	0	1	0	0	0	0	0	0
RMP, EMB	**5**	1	4	0	0	0	0	0	0
RMP, EMB, PZA	**3**	1	2	0	0	0	0	0	0
RMP, EMB, PZA, SM	**1**	0	1	0	0	0	0	0	0
INH	**1**	0	1	0	0	0	0	0	0
INH, PZA	**1**	0	1	0	0	0	0	0	0
INH, EMB	**2**	0	2	0	0	0	0	0	0
INH, EMB, PZA	**5**	1	4	0	0	0	0	0	0
INH, RMP	**76**	57	11	4	0	1	0	1	2
INH, RMP, SM	**1**	0	0	0	0	1	0	0	0
INH, RMP, PZA	**117**	19	85	8	1	2	0	2	0
INH, RMP, PZA, SM	**6**	1	1	3	0	1	0	0	0
INH, RMP, EMB	**37**	12	21	1	0	0	0	1	2
INH, RMP, EMB, SM	**2**	0	1	1	0	0	0	0	0
INH, RMP, EMB, PZA	**374**	44	289	16	12	8	1	4	0
INH, RMP, EMB, PZA, SM	**15**	0	13	1	1	0	0	0	0
No Drugs Prescibed	**22**	0	0	19	1	0	0	2	0
Unknown	**959**	28	601	71	4	11	100	22	122

Table 26

Treatment outcome status by major mode of treatment – Canada: 2003

Major mode of treatment	TOTAL	Treatment outcome							
		Cure	Treatment completed without culture	Death during treatment	Transferred	Absconded	Treatment ongoing	Other	Unknown
DOT (daily/intermittent)	**432**	129	259	22	5	5	1	6	5
Daily – self administered	**320**	27	261	11	9	9	0	3	0
Other	**55**	9	16	22	2	0	0	6	0
Unknown	**822**	0	502	69	3	10	100	17	121
TOTAL	**1,629**	**165**	**1,038**	**124**	**19**	**24**	**101**	**32**	**126**

Table 27

Treatment outcome status by compliance estimate – Canada: 2003

Compliance estimate	TOTAL	Treatment outcome							
		Cure	Treatment completed without culture	Death during treatment	Transferred	Absconded	Treatment ongoing	Other	Unknown
< 50%	**9**	1	0	1	0	2	0	4	1
50–79%	**23**	1	10	2	0	5	0	2	3
≥ 80%	**692**	155	491	23	15	3	1	4	0
Unknown	**905**	8	537	98	4	14	100	22	122
TOTAL	**1,629**	**165**	**1,038**	**124**	**19**	**24**	**101**	**32**	**126**

Appendix II
Technical Notes

CONCEPTS, METHODS AND DATA QUALITY

The following information describes the strengths and limitations of the data in this report and how this data can be effectively used and interpreted. This information may be of particular importance when making comparisons with data from previous *TB in Canada* reports or other sources of TB information.

Data sources

The Canadian Tuberculosis Reporting System (CTBRS) is maintained by Tuberculosis Prevention and Control (TBPC), Public Health Agency of Canada. This surveillance system is derived from records of provincial/territorial tuberculosis registries that capture information on every new active and relapsed case of tuberculosis and on the treatment outcome for these cases.

All provinces/territories voluntarily submit their case and outcome data to TBPC. Data for four of the thirteen provinces/territories are submitted electronically. The remaining provinces/territories submit paper reporting forms (*See Appendix VII*).

Reference period

The information contained in this report reflects the number of new and relapsed cases diagnosed between January 1, 2004 to December 31, 2004. Outcomes are reported on patients diagnosed between January 1, 2003 to December 31, 2003. Tables 1 through 4 present historical counts and rates for the years 1994 to 2004 inclusive.

Data quality and validation

Prior to analysis and publication, all data are reviewed for errors, inconsistencies and incomplete reporting. Follow-up is done with the reporting jurisdiction identifying any concerns or problems with the reported data. Previously reported data are also subject to revision in the event of late reporting or when revised information from the provinces/territories is received. Revisions are disseminated in subsequent reports.

Prior to the publication of *TB in Canada*, a pre-release containing selected tables is produced. The pre-release is sent to the provinces/territories for verification and is subsequently posted to the Public Health Agency of Canada website, http://www.phac-aspc.gc.ca/tbpc-latb/index.html.

Data accuracy

The methods used to collect and analyse the data in this report have been designed to minimize error. However, surveillance data are subject to certain types of error (e.g., coverage, measurement and processing error).

The accuracy of the data (including completeness and coverage of the population of interest) is partially a function of timely reporting/updates to TBPC from the provinces/territories. Some degree of lag does occur (i.e., reporting delay), almost exclusively affecting preliminary data and rarely the final data.

In general, the majority of data elements for case and outcome reports submitted to TBPC are complete. Reporting is less complete for some of the data elements introduced in 1997 such as HIV status. Historically, Ontario and Quebec have not had the capacity to report individual treaatment outcomes. However, some aggregate outcome data is now being provided.

Provinces/territories that consistently report outcomes do not always report outcomes for all cases. However reporting is improving and the percentage of outcomes reported in 2004 for 2003 was 92% of all cases. Ongoing work with the provinces/territories will ensure that the data reported in the *TB in Canada* reports correspond with those reported at the provincial/territorial level.

The data reported may be subject to coding, reporting and processing errors that cannot be detected and are not corrected at the source. Not all provinces/territories use ICD 9 or ICD 10 coding systems for disease, which are used to classify patients according to the main diagnostic site (see Table 4). Efforts are made to work with those provinces/territories using alternate coding systems to ensure that diagnostic reporting is as accurate as possible.

Rates

Rates are expressed as the number of cases reported each calendar year per 100,000 population. The denominators used to calculate rates for total Canadian, provincial/territorial, total Canadian-born Aboriginal, Inuit and Métis were derived from official and custom census products from Statistics Canada, Demography Division.[10]

The rates presented for the total Aboriginal population including Métis, Inuit and North American Indian (combining Status (registered) Indian and non-status Indian counts) were derived from the 2001 Census data published in the *Projections of the Aboriginal populations, Canada, provinces and territories, 2001 to 2017.*[11]

Current and historical incidence rates for the Status (registered) Indian population are based on population estimates from Indian Affairs and Northern Affairs Canada. These estimates are considered a more accurate reflection of the true counts of the Status Indian population.[12] However, using different sources does introduce possibility of conflicting numbers. As a result, caution should be observed when drawing comparative conclusions between the Status (registered) Indian and other origin groups.

Incidence rates in the foreign-born population from 2001 forward, are based on population estimates from the 2001 census, a Statistics Canada, Demography Division customized product.

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[10] Statistics Canada, Demography Division, Demographic, Estimates Section, Population estimates 0-90+ July Canada - Provinces 1971-2005, updated November 22 2005.

[11] Projections of the Aboriginal populations, Canada, provinces and territories 2001 to 2017 Demography Division, Statistics Canada Catalogue No. 91-547-XIE.

[12] IINAC, R*egistered Indian Population by Sex and Residence 2003.* Available at: http://www.ainc-inac.gc.ca/pr/sts/rip/rip03_e.pdf.

Incidence rates in the foreign-born population are presented according to the eight Stop-TB / WHO TB Epidemiological Regions described in the *Actions for Life: Towards a World Free of Tuberculosis, The Global Plan to Stop TB, 2006 – 2015*. The eight TB epidemiological regions include: the Established Market Economies (EME) and the Central European countries (CEUR); African countries with high HIV prevalence (AFR High HIV); African countries with low HIV prevalence (AFR Low HIV); the American Region (AMR) – Latin America Countries (LAC); Eastern Europe Region (EEUR); -Eastern Mediterranean Region (EMR); South-East Asia Region (SEAR); and the Western Pacific Region (WP). Because EME and CEUR have similarly high per capita income level and low tuberculosis incidence rates the results for these two regions are combined.

Population denominators for the Canadian-born non-Aboriginal population are derived using the following formula:

Canadian-born non-Aboriginal
=
Total Canadian Population (Statistics Canada)
– Foreign Born (Statistics Canada)
– Total Aboriginal persons (Statistics Canada)

Finally, the historical rates, presented in this and subsequent reports are updated periodically as new estimates become available, which may explain inconsistencies between rates in this report and in previous *TB in Canada* reports.

Privacy and confidentiality

Tables reporting on provincial/territorial case counts and rates have been expanded to report on each province and territory as opposed to aggregate data for the four Atlantic provinces and three territories. However, to avoid any potential issues with confidentiality and privacy, tables where population counts become too small may be collapsed in regions (e.g. for the three territories into "North"). In general, data will be suppressed in all instances where population denominators fall below 40.

VARIABLES MEASURED

The statistical data presented in this report refer to cases and rates of new active or relapsed tuberculosis and treatment outcomes.

Case definitions in effect in 2004

I TB case definition in the Canadian Tuberculosis Reporting System (CTBRS)

a. Cases with *Mycobacterium tuberculosis* complex (i.e. *M. tuberculosis*, *M. bovis* [excluding BCG strain] or *M. africanum)* demonstrated on culture

OR

b. In the absence of bacteriological proof, cases clinically compatible with active tuberculosis that have, for example:

i chest x-ray changes compatible with active tuberculosis including idiopathic pleurisy with effusion

ii active extrapulmonary tuberculosis (meningeal, bone, kidney, peripheral lymph nodes etc.)

iii pathologic or post-mortem evidence of active tuberculosis

Note: Molecular biological techniques are research tools and are not included in the definition.

II Cases of tuberculosis diagnosed in Canada include all cases: Canadian born, immigrants, refugees, refugee claimants, students, visitors, migrant workers and illegal aliens.

Visitors = those non-Canadians traveling with or without a visa, stopping in Canada en route.

III New and relapsed (reactivated) cases of tuberculosis

a. **New case:** no documented evidence or history of previously active tuberculosis.

b. **Relapsed (reactivated) case:** documented evidence or history of previously active tuberculosis which became inactive.

c. **Inactive tuberculosis:**

i Cultures for *M. tuberculosis* negative for at least 6 months

OR

ii In the absence of cultures, chest (or other) x-rays, stable for a minimum of 6 months.

IV Treatment outcomes

Cure – Negative culture at completion of treatment.

Treatment completed – Patient who has completed treatment without culture at the end of treatment.

Died – Death during treatment

a. TB was the cause of death;

b. TB contributed to death but was not the underlying cause; or

c. TB did not contribute to death.

Transfer – Patient transferred to new jurisdiction and the outcome of treatment is unknown.

Failure – Culture positive at 5 months or more

Absconded – Patient was lost to follow-up before completion of 80% of doses, 8 months after treatment started

Treatment ongoing – Treatment is ongoing at the time of the treatment outcome report

Other

Unknown

Diagnostic classification

The diagnostic classification of tuberculosis (TB) in Canada is based upon the International Classification of Diseases, 9th and 10th Editions. For each case of TB, up to 5 individual diagnoses are captured for reporting purposes. The main diagnostic sites were divided into two broad categories: respiratory and non-respiratory. Respiratory is further subdivided into primary, pulmonary and other respiratory.

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: 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); 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).

Nonrespiratory tuberculosis includes miliary, central nervous system, lymph and other sites.

Cases are reported based on the following hierarchy:

1. primary respiratory TB;
2. pulmonary;
3. other respiratory TB;
4. miliary/disseminated;
5. meninges/central nervous system;
6. peripheral lymph node; and
7. other sites (includes tuberculosis of intestines, peritoneum and mesenteric glands, bones and joints, genitourinary system, skin, eye, ear, thyroid, adrenal and spleen).

For cases with multiple diagnostic sites, the placement of the case into a disease group is determined using the hierarchy above. As an example, a case may have been diagnosed with TB of the *peripheral lymph nodes (scrofula, scrofulous abscess, tuberculous adenitis)* (ICD-9 17.2) and *tuberculosis of lung, infiltrative* (ICD-9 11.0). Because pulmonary TB is above peripheral lymph TB in the hierarchy, this case would be classified as pulmonary TB.

CODE TABLE LISTING BY ICD-9 CODE FOR DIAGNOSIS

010 Primary Tuberculosis

- 010.0 Primary tuberculous complex
- 010.1 Tuberculous pleurisy in primary progressive tuberculosis

  This disease state is characterized by pleuritis and pleural effusion, usually in an adolescent or young adult, but possibly in any age group, due to recent (within the preceding 24 months) infection with *Mycobacterium tuberculosis* complex. If another site of tuberculosis disease, such as CNS or disseminated/miliary disease, is believed to have occurred as a consequence of recent infection (within the preceding 24 months), it ought to be referred to as primary CNS (etc.) disease.
- 010.8 Other primary progressive tuberculosis (excl. tuberculous erythema nodosum {017.1})

  This is usually, but not always, in a child, and is due to infection within the preceding 24 months with *Mycobacterium tuberculosis* complex. It includes pulmonary (lung parenchyma) tuberculosis, as well as tuberculosis of the intrathoracic lymph nodes, larynx, trachea, bronchus, or nasopharyngeal sinuses
- 010.9 Unspecified

011 Pulmonary Tuberculosis (with associated silicosis use code 502)

- 011.0 Tuberculosis of lung, infiltrative
- 011.1 Tuberculosis of lung, nodular
- 011.2 Tuberculosis of lung with cavitation
- 011.3 Tuberculosis of bronchus (excl. isolated bronchial TB {012.2})
- 011.4 Tuberculous fibrosis of lung
- 011.5 Tuberculous bronchiectasis
- 011.6 Tuberculous pneumonia (any form)
- 011.7 Tuberculous pneumothorax

011.8 Other pulmonary tuberculosis

011.9 Unspecified (respiratory tuberculosis NOS, tuberculosis of lung NOS)

012 Other Respiratory Tuberculosis (excl. respiratory tuberculosis, unspecified {011.9})

012.0 Tuberculous pleurisy

012.1 Tuberculosis of intrathoracic lymph nodes

012.2 Isolated tracheal or bronchial tuberculosis

012.3 Tuberculous laryngitis

012.8 Other (incl. tuberculosis of: mediastinum, nasopharynx, nose (septum), sinus (any nasal)

013 Tuberculosis of Meninges and Central Nervous System

013.0 Tuberculous meningitis (320.4) (excl. tuberculoma of meninges {013.1})

013.1 Tuberculoma of meninges (349.2)

013.8 Other (tuberculoma/tuberculosis of brain {348.8}, tuberculous abscess of brain {324.0}, tuberculous myelitis {323.4})

013.9 Unspecified (tuberculosis of central nervous system NOS)

014 Tuberculosis of Intestines, Peritoneum and Mesenteric Glands

Tuberculosis of: anus, intestine (large, small), rectum, retroperitoneal (lymph nodes)

Tuberculous: ascites, enteritis, peritonitis (567.0)

015 Tuberculosis of Bones and Joints

Incl. tuberculous: arthritis (711.4), necrosis of bone (730.–), osteitis (730.–), osteomyelitis (730.–), synovitis (727.0), tenosynovitis (727.0).

015.0 Vertebral column
Pott's: curvature (737.4), disease (730.4)
Tuberculous: kyphosis (737.4), spondylitis (720.8)

015.1 Hip

015.2 Knee

015.7 Other bone (tuberculous dactylitis, mastoiditis {383.1})

015.8 Other joint

015.9 Unspecified

016 Tuberculosis of Genitourinary System

016.0 Kidney (tuberculous pyelitis {590.8}, tuberculous pyelonephritis {590.8})

016.1 Other urinary organs (tuberculosis of bladder {595.4}, tuberculosis of ureter {593.8})

016.2 Epididymis (604.9)

016.3 Other male genital organs (tuberculosis of: prostate {601.4}, seminal vesicle {608.8}, testis {608.8})

016.4 Female genital organs (tuberculous: oophoritis {614.2}, salpingitis {614.2})

016.9 Unspecified

017 Tuberculosis of Other Organs

017.0 Skin and subcutaneous cellular tissue
Lupus: NOS, exedens, vulgaris, Scrofuloderma
(excl. lupus erythrematosus {695.4}, disseminated {710.0})
Tuberculosis: colliquativa, cutis, lichenoides, papulonecrotica, verrucosa cutis

017.1 Erythema nodosum with hpersensitivity reaction in tuberculosis
Bazin's disease, Tuberculosis indurativa
Erythema: induratum, nodosum (tuberculous)
Excl. erythema nodosum NOS (695.2)

017.2 Peripheral lymph nodes (scrofula, scrofulous abscess, tuberculous adenitis)

017.3 Eye
Tuberculous: chorioretinitis, disseminated (363.1), episcleritis (379.0), interstitial keratitis (370.5), iridocyclitis (chronic) (364.1), keratoconjunctivitis (phlyctenular) (370.3)

017.4 Ear
Tuberculosis of ear (382.3), otitis media (382.3) (excl. Tuberculous mastoiditis {015.7})

017.5 Thyroid gland

017.6 Adrenal glands (255.4), Addison's disease (tuberculous)

017.7 Spleen

017.8 Other
Tuberculosis of: endocardium [any valve] (424.–), oesophagus (530.1), myocardium (422.0), pericardium (420.0)

018 Miliary Tuberculosis

Incl.: tuberculosis: disseminated, generalized, miliary (whether of a single specified site, multiple sites or unspecified site), polyserositis

018.0 Acute

018.8 Other

018.9 Unspecified

137 Late Effects of Tuberculosis

137.0 Late effects of respiratory or unspecified tuberculosis

137.1 Late effects of central nervous system tuberculosis

137.2 Late effects of genitourinary tuberculosis

137.3 Late effects of tuberculosis of bones and joints

137.4 Late effects of tuberculosis of other specified organs

502 Pneumoconiosis due to other silica or silicates (see Pulmonary Tuberculosis {011})

Pneumoconiosis due to talc
Silicotic fibrosis (massive) of lung
Silicosis (simple) (complicated)

Source: ICD–10 CA/CCI Tabular List – CIHI, 2003

A15 Respiratory tuberculosis, bacteriologically and histologically confirmed

Includes: infections due to Mycobacterium tuberculosis and Mycobacterium bovis

Excludes: congenital tuberculosis (P37.0)
pneumoconiosis associated with tuberculosis (J65)
sequelae of tuberculosis (B90–)
silicotuberculosis (J65)

A15.0 Tuberculous of lung, confirmed by sputum microscopy with or without culture

Includes:

Tuberculous:
- bronchiectasis
- fibrosis of lung
- pneumonia
- pneumothorax

A15.1 Tuberculosis of lung, confirmed by culture only

Includes: Conditions listed in A15.0, confirmed by culture only

A15.2 Tuberculosis of lung, confirmed histologically

Includes: Conditions listed in A15.0, confirmed histologically

A15.3 Tuberculosis of lung, confirmed by unspecified means

Includes: Conditions listed in A15.0, confirmed but unspecified whether bacteriologically or histologically

A15.4 Tuberculosis of intrathoracic lymph nodes, confirmed bacteriologically and histologically

Includes:

Tuberculosis of lymph nodes:
- hilar
- mediastinal
- tracheobronchial

Excludes: specified as primary (A15.7)

A15.5 Tuberculosis of larynx, trachea and bronchus confirmed bacteriologically and histologically

Includes:

Tuberculosis of:
- bronchus
- glottis
- larynx
- trachea

A15.6 Tuberculosis pleurisy, confirmed bacteriologically and histologically

Includes:

This disease state is characterized by pleuritis and pleural effusion, usually in an adolescent or young adult, but possibly in any age group, due to recent (within the preceding 24 months) infection with *Mycobacterium tuberculosis* complex. If another site of tuberculosis disease, such as CNS or disseminated/miliary disease, is believed to have occurred as a consequence of recent infection (within the preceding 24 months), it ought to be referred to as primary CNS (etc.) disease.

A15.7 Primary respiratory tuberculosis, confirmed bacteriologically and histologically

This is usually, but not always, in a child, and is due to infection within the preceding 24 months with *Mycobacterium tuberculosis* complex. It includes pulmonary (lung parenchyma) tuberculosis, as well as tuberculosis of the intrathoracic lymph nodes, larynx, trachea, bronchus, or nasopharyngeal sinuses.

A15.8 Other respiratory tuberculosis, confirmed bacteriologically and histologically

Includes: Mediastinal tuberculosis

Nasopharyngeal tuberculosis

Tuberculosis of:

nose

sinus [any nasal]

A15.9 Respiratory tuberculosis, unspecified, confirmed bacteriologically and histologically

A16 Respiratory tuberculosis, not confirmed bacteriologically or histologically

A16.0 Tuberculosis of lung, bacteriologically and histologically negative

Includes:

Tuberculous:

bronchiectasis

fibrosis of lung

pneumonia

pneumothorax

A16.1 Tuberculosis of lung, bacteriological and histological examination not done

Includes: Conditions listed in A16.0, bacteriological and histological examination not done

A16.2 Tuberculosis of lung, without mention of bacteriological or histological confirmation

Tuberculosis of lung

Tuberculous:

bronchiectasis
fibrosis of lung
pneumonia
pneumothorax

} NOS (without mention of bacteriological or histological confirmation)

A16.3 Tuberculosis of intrathoracic lymph nodes, without mention of bacteriological or histological confirmation

Includes:

Tuberculosis of lymph nodes:

- hilar
- intrathoracic
- mediastinal
- tracheobronchial

} NOS (without mention of bacteriological or histological confirmation)

Excludes: when specified as primary (A16.7)

A16.4 Tuberculosis of larynx, trachea and bronchus, without mention of bacteriological or histological confirmation

Includes:

Tuberculosis of:

- bronchus
- glottis
- larynx
- trachea

} NOS (without mention of bacteriological or histological confirmation)

A16.5 Tuberculous pleurisy, without mention of bacteriological or histological confirmation

This disease state is characterized by pleuritis and pleural effusion, usually in an adolescent or young adult, but possibly in any age group, due to recent (within the preceding 24 months) infection with *Mycobacterium tuberculosis* complex. If another site of tuberculosis disease, such as CNS or disseminated/miliary disease, is believed to have occurred as a consequence of recent infection (within the preceding 24 months), it ought to be referred to as primary CNS (etc) disease. *Excludes:* Primary respiratory tuberculosis, without mention of bacteriological or histological confirmation (A16.7)

A16.7 Primary respiratory tuberculosis without mention of bacteriological or histological confirmation

This is usually, but not always, in a child, and is due to infection within the preceding 24 months with *Mycobacterium tuberculosis* complex. It includes pulmonary (lung parenchyma) tuberculosis, as well as tuberculosis of the intrathoracic lymph nodes, larynx, trachea, bronchus, or nasopharyngeal sinuses. *Excludes:* Tuberculous pleurisy, without mention of bacteriological or histological confirmation (A16.5)

A16.8 Other respiratory tuberculosis, without mention of bacteriological or histological confirmation

- Mediastinal tuberculosis
- Nasopharyngeal tuberculosis
- **Tuberculosis of:**
  - nose
  - sinus [any part]

} NOS (without mention of bacteriological or histological confirmation)

A16.9 Respiratory tuberculosis unspecified, *w*ithout mention of bacteriological or histological confirmation

Includes: Respiratory tuberculosis NOS
Tuberculosis NOS

A17† Tuberculosis of nervous system

A17.0† Tuberculous meningitis (G01*)

Includes: Tuberculosis of meninges (cerebral) (spinal)
Tuberculous leptomeningitis

A17.1† Meningeal tuberculoma (G07*)

Includes: Tuberculoma of meninges

A17.8† Other tuberculosis of nervous system

Includes:

Tuberculoma of:
brain (G07*)
spinal cord (G07*)

Tuberculosis of:
brain (G07*)
spinal cord (G07*)

Tuberculous:
abscess of brain (G07*)
meningoencephalitis (G05.0*)
myelitis (G05.0*)
polyneuropathy (G63.0*)

A17.9† Tuberculosis of nervous system, unspecified (G99.8*)

A18 Tuberculosis of other organs

A18.0† Tuberculosis of bones and joints

Includes:

Tuberculosis of:
hip (M01.1*)
knee (M01.1*)
vertebral column (M49.0*)

Tuberculous:
arthritis (M01.1*)
mastoiditis (H75.0*)
necrosis of bone (M90.0*)
osteitis (M90.0*)
osteomyelitis (M90.0*)
synovitis (M68.0*)
tenosynovitis (M68.0*)

A18.1 Tuberculosis of genitourinary system

Includes:

Tuberculosis of:

bladder† (N33.0*)
cervix† (N74.0*)
kidney† (N29.1*)
male genital organs† (N51.–*)
ureter† (N29.1*)
Tuberculous female pelvic inflammatory disease (N74.1*)

A18.2 Tuberculous peripheral lymphadenopathy

Includes: Tuberculous adenitis

Excludes:

Tuberculosis of lymph nodes:

intrathoracic (A15.4, A16.3)
mesenteric and retroperitoneal (A18.3)
Tuberculous tracheobronchial adenopathy (A15.4, A16.3)

A18.3 Tuberculosis of intestines, peritoneum and mesenteric lymph nodes

Includes:

Tuberculosis (of):

anus and rectum† (K93.0*)
intestine (large) (small)† (K93.0*)
retroperitoneal (lymph nodes)

Tuberculous:

ascites
enteritis† (K93.0*)
peritonitis† (K67.3*)

A18.4 Tuberculosis of skin and subcutaneous tissue

Includes: Erythema induratum, tuberculous
Lupus:
exedens
vulgaris:
NOS
of eyelid† (H03.1*)
Scrofuloderma

Excludes: lupus erythematosus (L93.–)
systemic (M32.–)

A18.5 Tuberculosis of eye

Includes:

Tuberculous:

chorioretinitis† (H32.0*)
episcleritis† (H19.0*)
interstitial keratitis† (H19.2)
iridocyclitis† (H22.0*)
keratoconjunctivitis (interstitial) (phlyctenular)† (H19.2*)

Excludes: lupus vulgaris of eyelid (A18.4)

A18.6 Tuberculosis of ear

Includes: Tuberculosis otitis media† (H67.0*)

Excludes: Tuberculous mastoiditis (A18.0†)

A18.7† Tuberculosis of adrenal glands (E35.1*)

Includes: Addison's disease, tuberculous

A18.8 Tuberculosis of other specified organs

Includes:

Tuberculosis of:

endocardium† (I39.8*)
myocardium† (I41.0*)
oesophagus† (K23.0*)
pericardium† (I32.0*)
thyroid gland† (E35.0*)
Tuberculous cerebral arteritis† (I68.1*)

A19 Miliary Tuberculosis

Includes:

Tuberculosis:

disseminated
generalized

Tuberculous polyserositits

A19.0 Acute miliary tuberculosis of a single specified site

A19.1 Acute miliary tuberculosis of multiple sites

A19.2 Acute miliary tuberculosis, unspecified

A19.8 Other miliary tuberculosis

A19.9 Miliary Tuberculosis, unspecified

Appendix III
Population Estimates: 2004

Population estimates by gender and age group, Canada and provinces/territories: 2004

Male

	CANADA	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Y.T.	N.W.T.	Nvt.
< 1	**172,985**	2,348	688	4,403	3,553	38,125	68,286	7,114	6,150	20,843	20,553	186	356	380
1 – 4	**699,698**	9,793	2,787	18,412	14,901	152,443	280,012	28,813	24,591	79,029	85,522	658	1,261	1,476
5 – 14	**2,069,874**	30,404	9,308	56,769	45,287	463,029	825,396	83,671	71,222	220,935	254,479	2,114	3,776	3,484
15 – 24	**2,230,355**	36,150	9,981	64,298	52,158	496,120	856,831	85,233	78,283	247,406	295,100	2,428	3,596	2,771
25 – 34	**2,220,407**	31,722	8,206	58,642	49,605	517,965	870,057	79,323	61,410	251,522	283,665	1,881	3,823	2,586
35 – 44	**2,595,690**	40,840	9,930	74,116	59,456	611,151	1,034,651	88,743	70,046	264,857	333,569	2,608	3,638	2,085
45 – 54	**2,387,242**	42,261	10,012	71,765	58,877	590,203	888,076	83,043	71,453	241,029	323,349	2,854	2,926	1,394
55 – 64	**1,669,245**	31,086	7,889	54,199	43,390	428,816	620,299	57,607	47,041	146,177	228,453	1,825	1,715	748
65 – 74	**1,052,550**	18,105	4,946	33,134	25,476	259,288	403,363	36,807	33,538	88,084	148,081	754	660	314
75 +	**744,741**	11,591	3,371	23,683	18,624	168,082	285,761	30,725	30,602	60,682	110,891	301	307	121
TOTAL	**15,842,787**	**254,300**	**67,118**	**459,421**	**371,327**	**3,725,222**	**6,132,732**	**581,079**	**494,336**	**1,620,564**	**2,083,662**	**15,609**	**22,058**	**15,359**

Female

< 1	**163,977**	2,253	698	4,265	3,503	36,149	64,315	6,820	5,910	19,607	19,597	186	338	336
1 – 4	**668,828**	9,507	2,881	17,718	14,186	144,589	269,013	27,670	23,213	75,976	80,678	610	1,390	1,397
5 – 14	**1,971,134**	28,640	8,687	54,474	42,737	441,177	791,143	79,362	67,297	207,942	240,761	2,108	3,542	3,264
15 – 24	**2,124,167**	35,410	9,913	62,081	48,740	471,777	820,083	81,044	73,425	232,875	280,552	2,238	3,329	2,700
25 – 34	**2,169,563**	33,039	8,710	60,559	49,180	493,826	864,247	75,866	60,117	232,399	283,531	2,104	3,493	2,492
35 – 44	**2,567,739**	42,524	10,333	74,627	59,597	593,397	1,030,401	85,818	69,783	254,694	338,169	2,860	3,714	1,822
45 – 54	**2,418,278**	43,244	10,528	73,764	59,826	599,001	909,373	82,984	69,853	233,380	329,685	2,732	2,715	1,193
55 – 64	**1,715,547**	31,463	8,033	55,604	43,783	448,529	642,090	58,815	47,491	144,730	231,461	1,456	1,324	768
65 – 74	**1,163,885**	19,151	5,262	36,525	28,326	302,183	446,989	40,798	36,774	93,603	152,842	633	567	232
75 +	**1,183,549**	17,678	5,713	38,955	30,875	292,739	446,363	50,219	46,689	91,183	162,377	360	328	70
TOTAL	**16,146,667**	**262,909**	**70,758**	**478,572**	**380,753**	**3,823,367**	**6,284,017**	**589,396**	**500,552**	**1,586,389**	**2,119,653**	**15,287**	**20,740**	**14,274**

TOTAL

< 1	**336,962**	4,601	1,386	8,668	7,056	74,274	132,601	13,934	12,060	40,450	40,150	372	694	716
1 – 4	**1,368,526**	19,300	5,668	36,130	29,087	297,032	549,025	56,483	47,804	155,005	166,200	1,268	2,651	2,873
5 – 14	**4,041,008**	59,044	17,995	111,243	88,024	904,206	1,616,539	163,033	138,519	428,877	495,240	4,222	7,318	6,748
15 – 24	**4,354,522**	71,560	19,894	126,379	100,898	967,897	1,676,914	166,277	151,708	480,281	575,652	4,666	6,925	5,471
25 – 34	**4,389,970**	64,761	16,916	119,201	98,785	1,011,791	1,734,304	155,189	121,527	483,921	567,196	3,985	7,316	5,078
35 – 44	**5,163,429**	83,364	20,263	148,743	119,053	1,204,548	2,065,052	174,561	139,829	519,551	671,738	5,468	7,352	3,907
45 – 54	**4,805,520**	85,505	20,540	145,529	118,703	1,189,204	1,797,449	166,027	141,306	474,409	653,034	5,586	5,641	2,587
55 – 64	**3,384,792**	62,549	15,922	109,803	87,173	877,345	1,262,389	116,422	94,532	290,907	459,914	3,281	3,039	1,516
65 – 74	**2,216,435**	37,256	10,208	69,659	53,802	561,471	850,352	77,605	70,312	181,687	300,923	1,387	1,227	546
75 +	**1,928,290**	29,269	9,084	62,638	49,499	460,821	732,124	80,944	77,291	151,865	273,268	661	635	191
TOTAL	**31,989,454**	**517,209**	**137,876**	**937,993**	**752,080**	**7,548,589**	**12,416,749**	**1,170,475**	**994,888**	**3,206,953**	**4,203,315**	**30,896**	**42,798**	**29,633**

Source: Statistics Canada

Population estimates by Canadian-born origin and foreign-born birthplace – Canada and provinces/territories: 2004

	CANADA	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	North	Y.T.	N.W.T.	Nvt.
Canadian-born															
North American Indian	**756,099**	9,900	1,412	15,746	14,062	73,709	169,463	107,258	99,922	104,962	139,493	20,172	6,872	13,197	103
Status Indian*	**743,737**				**28,483**	68,146	169,842	119,675	118,538	95,362	119,226	24,465	8,080	16,385	
Non-status															
Inuit	**51,003**	5,024	31	416	176	10,511	1,724	398	263	1,196	942	30,322	192	4,712	25,418
Metis	**319,717**	5,986	242	3,317	4,572	16,963	53,305	61,880	47,913	72,900	47,879	4,760	595	4,133	32
Total Aboriginal**	**1,126,819**	20,910	1,685	19,479	18,810	101,183	224,492	169,536	148,098	179,058	188,314		7,659	22,042	25,553
Non-Aboriginal†**	**24,163,852**	484,570	131,078	862,763	702,720	6,543,708	8,475,526	842,573	789,016	2,499,369	2,791,964	95,819	19,575	17,482	3,508
Total Canadian-born	**25,290,671**	**505,480**	**132,763**	**882,242**	**721,530**	**6,644,891**	**8,700,018**	**1,012,109**	**937,114**	**2,678,427**	**2,980,278**	**95,819**	**27,234**	**39,524**	**29,061**
Foreign-born‡**															
AFR High	**180,792**	450	74	1,292	891	24,863	94,308	4,838	2,686	21,625	29,501	264	83	148	33
AFR Low	**88,528**	114	46	419	534	45,503	32,548	1,512	693	3,941	3,133	85	15	60	10
AMR	**743,976**	366	200	3,210	1,446	158,483	471,940	20,581	3,327	38,244	45,768	411	194	163	54
EEUR	**302,852**	429	39	1,202	388	55,425	182,407	9,745	3,254	20,362	29,380	221	79	132	10
EMR	**605,234**	757	291	6,822	1,528	138,811	362,275	5,402	3,779	36,011	49,353	205	45	141	19
EME + CEUR	**2,636,894**	7,370	4,140	34,886	21,741	327,611	1,444,954	68,765	30,106	230,734	461,845	4,742	2,694	1,687	361
SEAR	**616,636**	887	79	2,229	1,063	43,713	391,065	8,220	2,414	38,396	128,303	267	137	119	11
WPR	**1,523,871**	1,356	244	5,691	2,959	109,289	737,234	39,303	11,515	139,213	475,754	1,313	415	824	74
Total foreign-born	**6,698,783**	**11,729**	**5,113**	**55,751**	**30,550**	**903,698**	**3,716,731**	**158,366**	**57,774**	**528,526**	**1,223,037**	**7,508**	**3,662**	**3,274**	**572**
Total population§	**31,989,454**	**517,209**	**137,876**	**937,993**	**752,080**	**7,548,589**	**12,416,749**	**1,170,475**	**994,888**	**3,206,953**	**4,203,315**	**103,327**	**30,896**	**42,798**	**29,633**

* Source: INAC, Registered Indian Population by Sex and Residence 2004. Available at: http://www.ainc-inac.gc.ca/pr/sts/rip/rip04_e.pdf

** Source: Statistics Canada: Projections of the Aboriginal populations, Canada, provinces and territories 2001 to 2017 Demography Division, Statistics Canada Catalogue No. 91-547-XIE

† Calculated: Non-Aboriginal = Total population – Total Aboriginal – Total Foreign-born

‡ Source: Statistics Canada: Demography Division, Custom Product

§ Source: Statistics Canada, Demography Division, Demographic, Estimates Section, Population estimates 0-90+ July Canada – Provinces 1971-2005, updated November 22 2005.

Appendix IV
WHO Estimated incidence of TB, 22 high-burden countries: 2004

COUNTRY	POPULATION (1000s)	NUMBER ESTIMATED				CUMULATIVE INCIDENCE (%) (REGIONAL PROPORTION OF GLOBAL TOTAL)
		ALL CASES		SMEAR-POSITIVE CASES		
		NUMBER (1000s)	RATE PER 100,000	NUMBER (1000s)	RATE PER 100,000	
1 India	**1,087,124**	1,824	168	815	75	20.5
2 China	**1,307,989**	1,325	101	595	46	35.3
3 Indonesia	**220,077**	539	245	242	110	41.4
4 Nigeria	**128,709**	374	290	161	125	45.5
5 South Africa	**47,208**	339	718	138	293	49.3
6 Bangladesh	**139,215**	319	229	144	103	52.9
7 Pakistan	**154,794**	281	181	126	81	56.1
8 Ethiopia	**75,600**	267	353	116	154	59.1
9 Philippines	**81,617**	239	293	108	132	61.8
10 Kenya	**33,467**	207	619	89	266	64.1
11 DR Congo	**55,853**	204	366	89	159	66.4
12 Russian Federation	**143,899**	166	115	74	51	68.2
13 Viet Nam	**83,123**	147	176	66	79	69.9
14 UR Tanzania	**37,627**	131	347	55	147	71.3
15 Uganda	**27,821**	112	402	49	175	72.6
16 Brazil	**183,913**	110	60	48	26	73.8
17 Afghanistan	**28,574**	95	333	43	150	74.9
18 Thailand	**63,694**	91	142	40	63	75.9
19 Mozambique	**19,424**	89	460	37	191	76.9
20 Zimbabwe	**12,936**	87	674	35	271	77.9
21 Myanmar	**50,004**	85	171	38	76	78.8
22 Cambodia	**13,798**	70	510	31	226	79.6
Total, high-burden countries	**3,996,465**	**7,102**	**178**	**3,140**	**79**	
Africa	**721,955**	2,573	356	1,098	152	28.9
Americas	**880,036**	363	41	161	18	4.1
East Mediterranean	**530,359**	645	122	289	55	7.2
Europe	**881,211**	445	50	199	23	5.0
South East Asia	**1,632,982**	2,967	182	1,327	81	33.3
Western Pacific	**1,740,099**	1,925	111	865	50	21.6
Global total	**6,386,642**	**8,918**	**140**	**3,939**	**62**	**100.0**

Source: *Global tuberculosis control: surveillance, planning, financing, WHO report 2006.* Geneva, World Health Organization (WHO/HTM/TB/2006.362).

Appendix V
STOP-TB partnership
TB epidemiological regions
and member countries[13]

Africa, High HIV Prevalence (AFR-High)	Africa, Low HIV Prevalence (AFR-Low)
Botswana	Algeria
Burundi	Angola
Cameroon	Benin
Central African Republic	Burkina Faso
Congo	Cape Verde
Côte d'Ivoire	Chad
Democratic Republic of Congo	Comoros
Ethiopia	Equatorial Guinea
Gabon	Eritrea
Kenya	Gambia
Malawi	Ghana
Mozambique	Guinea
Namibia	Guinea-Bissau
Nigeria	Liberia
Lesotho	Madagascar
Rwanda	Mali
South Africa	Mauritania
Swaziland	Mauritius
Uganda	Niger
United Republic of Tanzania	Sao Tome & Principe
Zambia	Senegal
Zimbabwe	Seychelles
	Sierra Leone
	Togo

[13] *Stop TB Partnership and World Health Organization. Global Plan to Stop TB 2006–2015*. Geneva, World Health Organization, 2006 (WHO/HTM/STB/2006.35).

American region (AMR) – Latin American countries (LAC)	
Anguilla	Haiti
Antigua & Barbuda	Honduras
Argentina	Jamaica
Bahamas	Mexico
Barbados	Montserrat
Belize	Netherlands Antillies
Bermuda	Nicaragua
Bolivia	Panama
Brazil	Paraguay
British Virgin Islands	Peru
Cayman Islands	Puerto Rico
Chile	Saint Kitts and Nevis
Colombia	Saint Lucia
Costa Rica	St Vincent and the Grenadines
Cuba	Suriname
Dominica	Trinidad and Tobago
Dominican Republic	Turks & Caicos Islands
Ecuador	Uruguay
El Salvador	US Virgin Islands
Grenada	Venezuela
Guatemala	

Eastern Europe (EEUR)
Armenia
Azerbaijan
Belarus
Bulgaria
Estonia
Georgia
Kazakhstan
Kyrgyzstan
Latvia
Lithuania
Republic of Moldova
Romania
Russian Federation
Tajikistan
Turkey
Turkmenistan
Ukraine
Uzbekistan

Eastern Mediterranean (EMR)
Afghanistan
Bahrain
Djibouti
Egypt
Islamic Republic of Iran
Iraq
Jordan
Kuwait
Lebanon
Libyan Arab Jamahiriya
Morocco
Oman
Pakistan
Qatar
Saudi Arabia
Somalia
Sudan
Syrian Arab Republic
Tunisia
United Arab Emirates
West Bank & Gaza Strip
Yemen

Established Market Economies (EME)	
Andorra	Japan
Australia	Luxembourg
Austria	Malta
Belgium	Monaco
Canada	Netherlands
Czech Republic	New Zealand
Denmark	Norway
Finland	Portugal
France	San Marino
Germany	Singapore
Greece	Spain
Iceland	Sweden
Ireland	Switzerland
Israel	United Kingdom
Italy	USA

Central Europe (CEUR)
Albania
Bosnia and Herzegovina
Croatia
Cyprus
Hungary
Poland
Serbia and Montenegro
Slovakia
Slovenia
The Former Yugoslav Republic of Macedonia

South-East Asia (SEAR)
Bangladesh
Bhutan
Democratic People's Republic of Korea
India
Indonesia
Maldives
Myanmar
Nepal
Sri Lanka
Thailand
Timor-Leste

Western Pacific (WPR)	
American Samoa	Nauru
Brunei Darussalam	New Caledonia
Cambodia	Niue
China	Northern Mariana Islands
China, Hong Kong SAR	Palau
China, Macao SAR	Papua New Guinea
Cook Islands	Philippines
Fiji	Republic of Korea
French Polynesia	Samoa
Guam	Solomon Islands
Kiribati	Tokelau
Lao People's Democratic Republic	Tonga
Malaysia	Tuvalu
Marshall Islands	Vanuatu
Micronesia	Viet Nam
Mongolia	Wallis & Futuna Islands

Appendix VI
WHO reporting form for 2004 cases and 2003 outcomes

WHO TB data collection form for strategies and notifications in 2004, treatment outcomes of cases registered in 2003, and financial information for fiscal years 2004-2006.

1. Identification (please update as necessary)

A	**Country**		
B	**Date**		
		National TB control programme manager or equivalent:	*Person filling out this form (if different from name at left)*
C	**Name**		
D	**Functional Title**		
E	**Address**		
F	**Telephone**		
G	**Fax**		
H	**E-mail**		

Please send your completed form to your local/regional WHO office.

This form allows WHO to collect data from >200 diverse countries. It is NOT a recommended data collection format for national programmes. (See WHO documents for such recommendations/guidelines: www.who.int/tb/publications).

WHO TB data collection form for strategies and notifications in 2004, treatment outcomes of cases registered in 2003, and financial information for fiscal years 2004-2006.

2. Components of TB control in 2004

Responses for questions A-C: Circle/enter one (No or Yes; No or Some or All).

A	**Did you have a national TB control manual (or guidelines for TB diagnosis and treatment) in 2004? (If Yes, please provide a copy to WHO, if you have not already done so.)**	**No Yes**
B	**Do you have any guidelines on TB management for medical practitioners working outside the public health clinics?**	**No Yes**

C **Were the following institutions notifying cases to you, directly or indirectly, in 2004?**

Private hospitals/clinics	**No**	**Some**	**All**	**Public hospitals**	**No**	**Some**	**All**	**Military**	**No**	**Some**	**All**
Private practitioners	**No**	**Some**	**All**	**Prisons**	**No**	**Some**	**All**	**Insurance**	**No**	**Some**	**All**

Coverage. *Responses for questions D, E: absolute numbers; Question F: percentage.*

D	**How many TB basic management units were there in 2004?**	
E	**How many of these units (2.D) were considered as "DOTS" units at the end of 2004?**	
F	**What proportion of the country's population was attributed to basic management units defined as DOTS units in your country in 2004?** (Note: Only this rough administrative apportioning is needed. It may not equate with true "access" to DOTS. If you have additional information on "access" to DOTS, you may share these data under 'Remarks' in addition to answering this question. If a unit became a DOTS unit in October of 2004, then use only 1/4 of its population in your calculation; if in July, then use 1/2 of its population, etc.	%

Technical components of DOTS in 2004

Responses for questions G-J: Enter/circle one response (SOME means "in some units", ALL means "in all units")

		DOTS units	Non-DOTS units
G	**Was sputum microscopy routinely used to diagnosis suspected pulmonary cases?**	**No Some All**	**No Some All**
H	**Was standardized, short-course chemotherapy (less than 9 months) used routinely to treat sputum smear-positive cases?**	**No Some All**	**No Some All**
I	**Was direct observation of treatment used routinely -- at least during the initial phase (2-3 months) of treatment?**	**No Some All**	**No Some All**
J	**Were TREATMENT outcomes of ALL smear-positive patients monitored, analyzed by cohort, and reported to the next supervisory level?**	**No Some All**	**No Some All**

WHO TB data collection form for strategies and notifications in 2004, treatment outcomes of cases registered in 2003, and financial information for fiscal years 2004-2006.

3(A). Drug resistance in 2004

Response for question A-E: enter a number.

A	**How many laboratory-confirmed cases of MDR* were identified among TB patients diagnosed in 2004?**	
B	**How many patients registered as NEW in 2004 received DST* at start of treatment?**	
C	**How many of these patients (3.B) were identified as MDR cases based on DST at start of treatment?**	
D	**How many patients registered as RETREATMENT in 2004 received DST at start of treatment?**	
E	**How many of these patients (3.D) were identified as MDR TB?**	
	Note: MDR = multidrug resistance. DST = drug sensitivity testing.	

3(B). HIV-related activities among TB patients

Responses for questions G-K: enter a number. For questions F and L, type or circle one response.

F	**Did you implement (even if only in part of your country) a national policy of offering HIV testing and counseling to all TB patients in 2004?**	**No Yes Partially**
G	**How many "basic administrative units" (out of those defined in question 2D) had TB diagnostic or treatment facilities that routinely offered HIV testing and counseling to all TB patients in 2004?**	
H	**How many TB patients were tested for HIV in 2003?** (If none, skip to question I)	
I	**How many TB patients tested HIV positive in 2003?**	
J	**How many HIV positive TB patients were given co-trimoxazole preventive therapy in 2003?**	
K	**How many HIV positive TB patients were started on (or continued on) antiretroviral therapy during their TB treatment in 2003?** (Only those patients treated during 2003 should be reported here.)	
L	**Do you have a national system for HIV surveillance among TB patients?** If yes, please provide, under "Remarks", the most recent results, including year and methodology used (e.g., sentinel surveillance, 100% sampling of TB patients in selected metropolitan TB clinics)	**No Yes**

WHO TB data collection form for strategies and notifications in 2004, treatment outcomes of cases registered in 2003, and financial information for fiscal years 2004-2006.

4. TB Notifications for 2004 (absolute numbers)

REMINDER: This form allows WHO to collect data from >200 diverse countries. It is **NOT** a recommended data collection format for national programmes. (See WHO documents for such recommendations/guidelines.).

A	**Number of TB cases in 2004**	

	*Number of these cases, by **strategy**, that are*	**DOTS**	**Non-DOTS**
B	**New pulmonary smear-positive**		
C	**New pulmonary smear-negative**		
D	**New pulmonary smear-unknown**		
E	**New extra-pulmonary**		
F	**Other NEW cases not in lines B-E**		
G	**Relapse pulmonary**		
H	**Treatment after Failure (pulmonary)**		
I	**Treatment after Default (pulmonary)**		
J	**Other RETREATMENT cases not in lines G-I.**		
K	**Other, not in lines B-J (i.e., history unknown)**		
L	**New pulmonary lab-confirmed cases**		

Strategy applies to basic management units, not individual patients. If a unit is a "DOTS" unit, then all cases from that unit are reported as DOTS cases.

Please specify what these cases are, under "Remarks."

Lab-confirmed includes smear-positive cases plus any cases confirmed by additional laboratory methods.

5. Notifications for 2004, continued (absolute numbers):

Age and sex of new pulmonary smear-positive TB cases

		0-14	15-24	25-34	35-44	45-54	55-64	65+
DOTS								
A	**Male**							
B	**Female**							
Non-DOTS								
C	**Male**							
D	**Female**							

If totals do not correpond to page 4, please explain in 'Remarks.'

If data are based on less than a full year's data, please note this in 'Remarks.'

If you have data by age and sex that do not fit this framework (e.g., different age groups or data based on all new cases, not just smear-positive), then you can provide the data that you have on the "Remarks" page.

WHO TB data collection form for strategies and notifications in 2004, treatment outcomes of cases registered in 2003, and financial information for fiscal years 2004-2006.

6. Treatment outcomes for cases registered in 2003 (absolute numbers)

		DOTS				non-DOTS
		New	Retreatment (pulmonary)			New
		Pulmonary smear-positive	**Relapse**	**Treat-after-Failure**	**Treat-after-Default**	**Pulmonary smear-positive**
Z	**Cases included in cohort**					
	If line Z different from the number of cases notified to WHO last year, please please explain reasons, or indicate need to update WHO database, under 'Remarks'.					
A	**Cured**					
B	**Completed**					
C	**Died**					
D	**Failed**					
E	**Defaulted**					
F	**Transferred out ***					

If sum of lines A-F does not equal line Z, please explain under 'Remarks'.

Notes

If culture is routinely available throughout the country, then you should instead use these columns to report outcomes of the cohort of laboratory-confirmed cases, where the outcome is determined by the best laboratory evidence available for each case. Indicate this in Remarks.

If treatment outcomes for retreatment cases are compiled together and cannot be separated, then please provide these outcome results under 'Remarks'.

If non-DOTS treatment outcomes are available but not for new smear-positive cases specifically, please provide what data are available and make a note about the types of cases included.

** "Transferred out" means transferred out and not evaluated. It is s sub-set of transfer patients for whom the outcome was not evaluated.*

WHO TB data collection form for strategies and notifications in 2004, treatment outcomes of cases registered in 2003, and financial information for fiscal years 2004-2006.

7. Financial information - budget data

FISCAL YEAR 2005
(your fiscal year starting during the calendar year 2005)

1. Beginning of your fiscal year 2005 (day, month, year)
2. Expected number of new smear-positive patients to be treated in 2005
3. Expected number of new smear-negative/extra-pulmonary patients to be treated in 2005

Please give amounts for budget, funding, and gap in ABSOLUTE US dollars

	BUDGET REQUIRED[a]	EXPECTED Funding Your data from last year (if any) appear here. Please update as necessary. Government[b]	Loans[c]	GFATM[d]	Other Grants[e]	GAP[f]
4. TB drugs: first-line						
5. TB drugs: second-line (for MDR-TB)						
6. Staff working exclusively for TB control (central unit staff and subnational TB coordinators)						
7. Initiatives to increase case detection and cure rates						
8. TB/HIV collaborative activities						
9. Buildings, vehicles, equipment (lab / office equip. etc.)						
10. All other budget lines for TB (e.g., training, fuel for supervision, supplies, recording and reporting)						
11. TOTAL						

FISCAL YEAR 2006
(your fiscal year starting during the calendar year 2006)

Red color indicates that your numbers do not add up to calculated totals. Please re-check.

1. Beginning of your fiscal year 2006 (day, month, year)
2. Expected number of new smear-positive patients to be treated in 2006
3. Expected number of new smear negative/extra-pulmonary patients to be treated in 2006

Please give amounts for budget, funding, and gap in ABSOLUTE US dollars

	BUDGET REQUIRED[a]	EXPECTED Funding (if available) Government[b]	Loans[c]	GFATM[d]	Other Grants[e]	GAP[f]
4. TB drugs: first-line						
5. TB drugs: second-line (for MDR-TB)						
6. Staff working exclusively for TB control (central unit staff and subnational TB coordinators)						
7. Initiatives to increase case detection and cure rates						
8. TB/HIV collaborative activities						
9. Buildings, vehicles, equipment (lab / office equip. etc.)						
10. All other budget lines for TB (e.g., training, fuel for supervision, supplies, recording and reporting)						
11. TOTAL						

PLEASE SEE EXPLANATORY NOTES ON PAGE 9. Contact the following people for assistance if required
Pilar Ramon-Pardo, ramonpp@paho.org (for AMRO); Katherine Floyd, floydk@who.int (for EURO, SEARO, WPRO); Andrea Pantoja, pantojaa@who.int (for AFR, EMRO).

WHO TB data collection form for strategies and notifications in 2004, treatment outcomes of cases registered in 2003, and financial information for fiscal years 2004-2006.

8. Financial information - utilization of health services and expenditure data

12. Typical number of visits to a health facility required for one new smear-positive patient after diagnosis is made
13. Typical number of visits to a health facility required for a new smear negative/extra-pulmonary patient after diagnosis is made
14. Estimated percentage of new smear-positive patients that are hospitalized (%)
15. Estimated percentage of new smear negative/extra-pulmonary patients that are hospitalized
16. Estimated average duration of stay for new smear-positive patients if hospitalized (days)
17. Estimated average duration of stay for new smear negative/extra-pulmonary patients if hospitalized (days)
18. Number of hospital beds used exclusively for TB (including beds in sanatoria, where these exist)

FISCAL YEAR 2004
(your fiscal year starting during the calendar year 2004)

Red color indicates that your numbers do not add up to calculated totals. Please re-check.

Please give amounts spent and received in ABSOLUTE US dollars

	ACTUAL EXPENDITURE[g]	RECEIVED Funding Government[h]	Loans[i]	GFATM[d]	Other Grants[e]
19. TB drugs: first-line					
20. TB drugs: second-line (for MDR-TB)					
21. Staff working exclusively for TB control (central unit staff and subnational TB coordinators)					
22. Initiatives to increase case detection and cure rates					
23. TB/HIV collaborative activities					
24. Buildings, vehicles, equipment (lab / office equip. etc.)					
25. All other budget lines for TB (e.g., training, fuel for supervision, supplies, recording and reporting)					
26. TOTAL					

PLEASE SEE EXPLANATORY NOTES ON PAGE 9. Contact the following people for assistance if required:
Pilar Ramon-Pardo, ramonpp@paho.org (for AMRO); Katherine Floyd, floydk@who.int (for EURO, SEARO, WPRO); Andrea Pantoja, pantojaa@who.int (for AFR, EMRO).

9. Explanations for financial information

Please remember that funding for TB control can only be improved if some attempt to describe the financial situation is made, even if data availability is limited. If the central NTP office has no information on the exact amounts that peripheral governments make available for TB control, please try to estimate.

For all questions, please indicate "NA" or "not applicable" if the intervention asked for (e.g., hospitalization) is not used in your country, and indicate "DK" or "Don't know" if you do not have the information required to answer the question. Please do not leave any field blank.

1	The date of the beginning of your fiscal year (between 1 January and 31 December of the year indicated)
2	The number of patients you expect to detect and treat -- new smear-positive cases in all areas (DOTS and non-DOTS). It does NOT mean the total estimated number of cases in your country.
3	The number of patients that you expect to detect and treat -- new smear-negative and extra-pulmonary cases in all areas (DOTS and non-DOTS). It does NOT mean the total estimated number of cases in your country.
4	Budget for anti-TB drugs, excluding drugs to treat multi-drug resistant (MDR) TB. If drugs are provided by the Global Drug Facility (GDF), please include an estimate of the value of these drugs.
5	Budget for anti-TB drugs for multi-drug resistant (MDR) TB only, including drugs procured through the Green Light Committee (GLC).
6	Staff cost for staff working ONLY on TB activities at central and peripheral levels (for example provincial TB coordinators, district TB coordinators, etc). Do NOT include, for example, primary health care nurses working on several diseases, including TB. The total per category can be estimated as the average annual salary for each staff category x number of staff in that category. Please report the total for ALL categories.
7	Refers to activities that aim to increase case detection and cure rates in areas where DOTS is already being implemented (i.e., activities to expand DOTS coverage to new geographic areas should NOT be included). Possible examples are social mobilization campaigns, activities to engage the private sector (for example PPM-DOTS projects), incentives/enablers for providers or patients, community TB care, strengthening of diagnostic services and supervision, etc. Include any staff not already covered in number 6.
8	Activities involving collaboration between TB and HIV programmes aimed at reducing the impact of HIV-related TB. These include TB/HIV coordinating bodies, joint TB/HIV training and planning, HIV testing for TB patients, HIV surveillance among TB patients, TB screening for people living with HIV AIDS, isoniazid preventive therapy, joint TB/HIV information/education/communication, antiretroviral treatment for TB patients, etc. Does NOT include staff dedicated to TB and partially managing TB/HIV activities already accounted for under number 6. For clarifications, please see the WHO TB/HIV interim policy or the Monitoring and Evaluation guide.
9	Refers to all equipment, such as vehicles, microscopes, office equipment, etc. It does NOT refer to consumables (such as laboratory supplies), nor to investments related to and already accounted for in numbers 7 and 8.
12	The average number of visits per smear-positive patient to any health facility during TB treatment, for example for observed treatment, collection of drugs, smear monitoring, etc. after the patient has been diagnosed with TB, in view of your treatment guidelines. For example, if directly observed treatment is provided daily in the intensive phase at clinics and, in the continuation phase 4 visits are required (one per month for collection of drugs), the total would be 60+4=64
13	The average number of visits per smear-negative and extra-pulmonary TB patient to any health facility during TB treatment, for example for DOT, collection of drugs, smear monitoring, etc. after the patient has been diagnosed with TB, in view of your treatment guidelines.
14	The approximate percentage of smear-positive patients hospitalised for TB treatment (for any duration of stay), in view of your treatment guidelines. For example, if your policy is to admit all TB patients for 2 months, the figure will be 100%. If unsure, please give a range.
15	The approximate percentage of smear negative or extra-pulmonary patients hospitalised for TB treatment (for any duration of stay), in view of your treatment guidelines. If unsure, please give a range.
16	If a smear-positive patient is hospitalized for TB treatment, the average number of days he/she spends in hospital.
17	If a smear-negative or extra-pulmonary patient is hospitalized for TB treatment, the average number of days he/she spends in hospital. Include sanatoria beds if these exist.
18	Estimated number of beds in TB hospitals and in TB wards of other hospitals.
19-24	See explanations for items 4-9. above.
a	The total budget required should be in line with your annual plan of activity. Indicate the total amount required to carry out all activities and NOT the amount you expect to receive.
b	Include funding from both the central and peripheral government sources (provinces, districts, etc.).
c	All loans for TB or amount for TB in an overall health sector-wide loan.
d	Grants awarded by the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM). The amount for the relevant fiscal year only and NOT the total amount of the grant.
e	All grants, excluding GFATM grants. The amount should be for the relevant fiscal year and not the total amount of the grant.
f	The amount in this column should equal the "Total budget required" column MINUS the total of all expected funding columns (i.e. government, loans, grants excluding GFATM, GFATM grants, other).
g	During your last fiscal year, the funds that were actually received and spent. The total in this column should equal h+i+j+k.

WHO TB data collection form for strategies and notifications in 2004, treatment outcomes of cases registered in 2003, and financial information for fiscal years 2004-2006.

8. Remarks

Remarks may include: information on completeness of data, explanations for inconsistencies in data, more detailed data, revision of data reported in previous years, and further explanation of financial data.

Thank you for completing the WHO annual data collection form. Please return to your local/regional WHO office.

Appendix VII
Canada – Case and treatment outcome reporting forms

Active Tuberculosis Report Form – New and Relapsed Cases

Serial No. _____

For Internal Use Only
Date received at TBPC — Year / Month / Day
TBPC Number

CONFIDENTIAL WHEN COMPLETED

Date Form Completed — Year / Month / Day

Province/Territory/Patient ID

1. Reporting province/territory
2. Register case number
3. Unique Identifier *(if name not provided)*
4. Date of birth — Year / Month / Day
5. Sex — 1 M 2 F

Patient Initials and Usual Residence

6. First Middle Last
7. City/Town/Village — County and Health Unit — Postal Code — Geo Codes (PR CD / PR HU/SC)

Origin

8.
1 Status Indian (registered) → Lives on reserve most of the time: 1 Yes; 2 No; 8 Not Applicable; 9 Unknown
2 Métis
3 Inuit
8 Other aboriginal *(specify)* _____
5 Canadian Born non-Aboriginal → If under age 20: country of birth of mother _____; country of birth of father _____
6 Foreign-Born: (a) Country of Birth; (b) Year of Arrival in Canada _____; (c) Immigration status: (current status)
1 Landed immigrant or Canadian citizen
2 Refugee claimant
3 Non-resident (migrant worker, visitor, student, illegal alien)
8 Other (specify) _____
9 Unknown

Diagnosis

9. Date of diagnosis — Year / Month / Day

10. Diagnosis
ICD - 9 ____.____ ____.____ ____.____ ____.____ ____.____
ICD - 10 ____.____ ____.____ ____.____ ____.____ ____.____

Bacillary Status

11. Check all that apply:

	Microscopy							Culture						
	Sputum	Bronchial Wash	GI Wash	Node biopsy	Urine	CSF	Other	Sputum	Bronchial Wash	GI Wash	Node biopsy	Urine	CSF	Other
Negative														
Positive														
Not Done/ Unknown														

12. Case Criteria
1 Positive culture
2 No positive culture, clinical diagnosis

13. Antibiotic resistance to initial positive culture
1 Yes → 1 INH 2 SM 3 EMB 4 RMP 5 PZA
2 No
8 Other *(specify)* _____
9 Unknown

14. Date Treatment Started — Year / Month / Day

15. Initial Drugs Prescribed *(check all boxes that apply)*
1 INH
2 SM
3 EMB
4 RMP
5 PZA
7 No drugs prescribed
8 Other *(specify)* _____
9 Unknown

16. Case Finding
1 Symptoms compatible with site of disease
2 Incidental findings
3 Post-mortem
4 Contact investigation
5 Post-landing surveillance
6 Pre-landing immigration evaluation (in Canada)
7 Occupational screening program
8 Other screening
9 Other *(specify)* _____
10 Unknown

17. First episode of TB
1 Yes 2 No →
If no: (a) Year of previous diagnosis _____
(b) Previous diagnosis occurred in: 1 Canada 2 Other Country: ___
(c) Previous treatment with *(check all antibiotics used)*:
1 INH
2 SM
3 EMB
4 RMP
5 PZA
8 Other *(specify)* _____

18. Patient died before completion of therapy
1 Yes
1 TB was the cause of death
2 TB contributed to death but was not the underlying cause
3 TB did not contribute to death
Date of death — Year / Month / Day
2 No 3 Not applicable 9 Unknown

19. HIV status
1 Positive 2 Negative 9 Unknown

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Health Canada / Santé Canada

CONFIDENTIAL WHEN COMPLETED

Serial No. _____

Treatment Outcome of a New Active or Relapsed Tuberculosis Case

See reverse for Guidelines for Completing the Treatment Outcome form.

For Internal Use Only
Date received at TBPC — Year / Month / Day
TBPC Number

Tuberculosis Prevention and Control (TBPC)
Centre for Infectious Disease Prevention and Control
Population and Public Health Branch
Room 0108B, Brooke Claxton Building
Internal Address Locator: 0900B1
Tunney's Pasture, Ottawa, ON K1A 0L2

Date Form Completed — Year / Month / Day

1. Reporting province / territory:

2. Register case number:

3. Unique Identifier: (if name not provided) _____

4. Date of birth: Year / Month / Day

5. Sex: 1 M 2 F

6. Patient Initials First / Middle / Last

7. Date of diagnosis: Year / Month / Day

8. Date initial treatment started: Year / Month / Day

9. Initial drugs prescribed (list all that apply):
1 INH 2 SM 3 EMB 4 RMP 5 PZA 7 No drugs prescribed 8 Other *(specify)* _____ 9 Unknown

10. If transfer from original reporting province/territory, please state treating province:

11. Register case number: (if different from 2 above)

12. Unique identifier: (if different from 3 above) _____

13. Date treatment started: Year / Month / Day

14. Last day of this treatment: Year / Month / Day

15. Did resistance develop during treatment?
1 Yes 2 No

If yes, please check drug(s) *(check all that apply):*
1 INH 2 SM 3 EMB 4 RMP 5 PZA 8 Other *(specify)* _____ 9 Unknown

16. What was the treatment outcome? ***(Check one only).***
1 Cure - negative culture at completion of treatment.
2 Treatment completed - without culture at end of treatment.
3 Death during treatment → 1 TB was the cause of death; 2 TB contributed to death but was not the underlying cause; 3 TB did not contribute to death
Date of Death: Year / Month / Day
4 Transferred to new jurisdiction - outcome of treatment unknown *(specify new jurisdiction)* _____
5 Failure - culture positive at 5 months or more.
6 Absconded (lost to follow-up before completion of 80% of doses, 8 months after treatment started).
7 Treatment Ongoing
8 Other *(specify)* _____ 9 Unknown

17. Treatment regimen ***(for drugs taken > 1 month) (check all that apply)***:
1 INH 2 SM 3 EMB 4 RMP 5 PZA
Duration (months)
8 Other *(specify)* _____ Duration (months)
8 Other *(specify)* _____
9 Unknown

18. Major mode of treatment:
1 DOT (daily or intermittent)
2 Daily, self-administered
8 Other (specify) _____
9 Unknown

19. Compliance estimate ***(% of medication received):***
1 80%+ 3 50-79% 4 <50% 9 Unknown

20. Last sputum smear (respiratory cases only):
1 Positive 2 Negative 3 Not done 9 Unknown
Date of last smear: Year / Month / Day

21. Last sputum culture (respiratory cases only):
1 Positive 2 Negative 3 Not done 9 Unknown
Date of last culture: Year / Month / Day

22. Most recent chest x-ray results (respiratory cases only):
1 Better than initial x-rays 2 Worse than initial x-rays 3 Stable 4 Not done 9 Unknown

23. Date of most recent x-ray: Year / Month / Day

HC/SC 9012E (01-2002) **Copy 1 (white) - TBPC (mailing address at top of form) Copy 2 (yellow) - Provincial / Territorial TB Registry**

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Appendix VIII
The Canadian Tuberculosis Committee
2007

PROVINCIAL/TERRITORIAL TB CONTROL PROGRAM REPRESENTATIVES

Alberta (Chair)
Dr. Richard Long

British Columbia
Dr. Kevin Elwood

Manitoba
Dr. Pamela Orr

New Brunswick
Dr. Holy Akwar

Newfoundland and Labrador
Dr. Faith Stratton

Nova Scotia
Dr. Assaad Al-Azem

Northwest Territories
Ms. Cheryl Case

Nunavut
Ms. Elaine Randall

Ontario
Ms. Joy Marshall

Prince Edward Island
Dr. Lamont Sweet

Québec
Dr. Paul Rivest

Saskatchewan
Dr. Vernon Hoeppner

Yukon
Ms. Colleen Hemsley

ASSOCIATION OF MEDICAL MICROBIOLOGY AND INFECTIOUS DISEASE
Liaison Member
Dr. Wendy Wobeser

CANADIAN LUNG ASSOCIATION/STOP TB CANADA
Dr. Brian Graham

CANADIAN PUBLIC HEALTH LABORATORY NETWORK
Dr. Fran Jamieson

CITIZENSHIP AND IMMIGRATION CANADA
Dr. Lise Scott

CORRECTIONAL SERVICE CANADA
Ms. Samar Sarkesh

FIRST NATIONS AND INUIT HEALTH BRANCH, HEALTH CANADA
Dr. Marcus Lem

NATIONAL REFERENCE CENTRE FOR MYCOBACTERIOLOGY, NATIONAL MICROBIOLOGY LABORATORY, PUBLIC HEALTH AGENCY OF CANADA
Ms. Joyce Wolfe

TUBERCULOSIS PREVENTION AND CONTROL, PUBLIC HEALTH AGENCY OF CANADA
Dr. Edward Ellis,
Melissa Phypers, MA