

Definition/Description:

Tuberculosis is a respiratory disease defined as either a confirmed case of *Mycobacterium tuberculosis* complex or a clinical case of suspected tuberculosis.¹ Transmission occurs person-to-person through inhalation of the bacterium. All positive cultures and all clinical and suspected cases of Tuberculosis are reportable to the Central Tuberculosis Registry at Health Sciences Centre. The registry reports all positive *M. tuberculosis* complex cultures, as well as all clinical cases of tuberculosis to the Director of Communicable Disease Control at Manitoba Health. Both confirmed and clinical cases are counted and monitored for surveillance purposes.

Source:

- *Case Event (Numerator) Data*: Communicable Disease Control Unit, Public Health Branch, Manitoba Health
- *Population (Denominator) Data*: Decision Support Services, Health Information Management Branch, Manitoba Health
- *Tabulations*: Population Health and Health Systems Analysis Unit, Quality and Decision Support, Winnipeg Regional Health Authority

Findings:

Incidence

Since 1996, the number of cases of tuberculosis in the Winnipeg Health Region (WHR) has fluctuated between 53 and 78 (Table TB1). In 2002, 55 cases were reported among residents of the WHR – an infection rate of 0.09 per 1000 population (Table TB1; Figure TB1). In 2002, the national rate of infection was 0.05 per 1000 population; the provincial rate was 0.09 per 1000 population.²

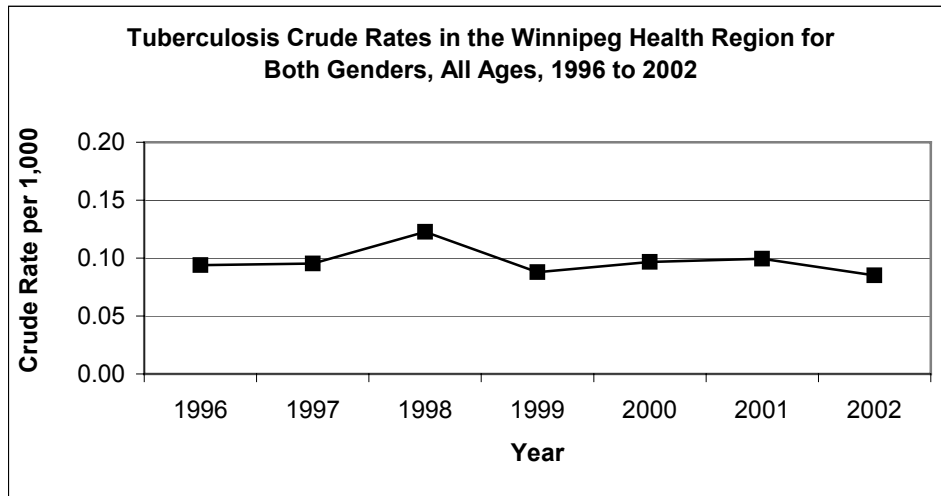
Table TB1
Tuberculosis: Counts, Crude and Age-Adjusted Rates, Winnipeg Health Region, 1996-2002

Year	Frequency	Crude Rate per 1000	Age-adjusted Rate per 1000
1996	60	0.09	0.09
1997	61	0.10	0.10
1998	78	0.12	0.12
1999	56	0.09	0.09
2000	62	0.10	0.10
2001	64	0.10	0.10
2002	55	0.09	0.09

¹Tuberculosis is also included within Indicator #56 – Vaccine Preventable Diseases.

²Tuberculosis in Canada (Pre-Release), 2002; Tuberculosis Prevention and Control, Centre for Infectious Disease Prevention and Control, Health Canada, 2003.

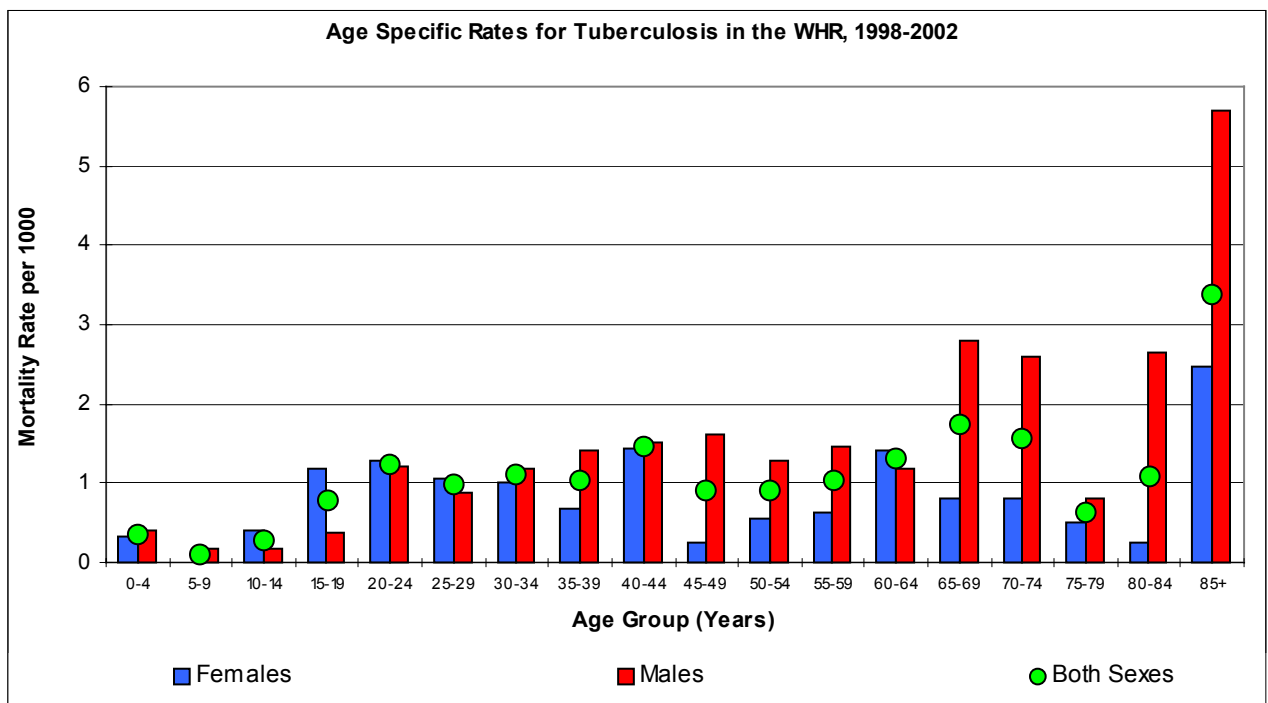
Figure TB1



Age and Gender

From 1998 to 2002, 315 cases of tuberculosis were reported among residents in the Winnipeg Health Region. Of this number, 183 (58%) cases occurred among males (Table TB2). Age-specific rates are illustrated in Figure TB2. For the majority of age groups, rates of infection for males exceed that of females, and rates increase among the older age groups (Figure TB2).

Figure TB2



Geographical Variation

Cases, crude rates and age-adjusted rates of infection are summarized by Community Area for 1998-2002 and are presented in Table TB2. Across Community Areas, the highest number of reported cases was in Downtown (135 cases; 42.9%).

Crude rates of infection are greatest in Downtown (0.39 cases per 1,000), Point Douglas (0.24 per 1,000) and Inkster (0.24 per 1000). Rates of infection ranged from 0.01 and 0.07 per 1000 for the remaining Community Areas. Similar patterns across Community Areas are evident for both males and females (Table TB2). Age-adjusted rates are similar to crude rates.

Table TB2

Tuberculosis: Crude and Age-Adjusted Rates per 1000 Population in the Winnipeg Health Region by Community Area, 1998-2002.

Community Area	Both Genders			Females			Male		
	Cases	Crude Rate	Age-Adjusted Rate	Cases	Crude Rate	Age-Adjusted Rate	Cases	Crude Rate	Age-Adjusted Rate
St. James Assiniboia	5	0.02	0.01	2	0.01	0.01	3	0.02	0.02
Assiniboine South	5	0.03	0.03	2	0.02	0.02	3	0.03	0.03
Fort Garry	10	0.03	0.04	6	0.04	0.04	4	0.03	0.05
St. Vital	7	0.02	0.02	3	0.02	0.02	4	0.03	0.04
St. Boniface	10	0.04	0.04	3	0.02	0.02	7	0.06	0.06
Transcona	2	0.01	0.01	0	0.00	0.00	2	0.03	0.03
River East	21	0.05	0.05	12	0.05	0.05	9	0.04	0.05
Seven Oaks	21	0.07	0.07	6	0.04	0.04	15	0.11	0.11
Inkster	37	0.24	0.26	18	0.23	0.23	19	0.25	0.31
Point Douglas	49	0.24	0.25	21	0.21	0.22	28	0.28	0.29
Downtown	135	0.39	0.39	55	0.32	0.32	80	0.45	0.47
River Heights	13	0.05	0.04	4	0.03	0.02	9	0.07	0.07
Winnipeg Health Region	315	0.10	0.10	132	0.08	0.08	183	0.12	0.12

Relative Ratios and Rate Differences

Relative ratios and rate differences were generated at the Neighbourhood Cluster level to identify the magnitude of variability in infection rates across the WHR (Table TB3; Figure TB4). Point Douglas South 10B, Downtown East 11B, Downtown West 11A, Inkster West 09A, Inkster East 09B, and Seven Oaks 08A experience rates of infection between 1.2 and 7.4 times greater than the remainder of the WHR.

Differences in disease rates between Neighbourhood Clusters (NC) reflect the actual number of cases per 1000 population (Table TB3; Figure TB5). For example, the NC Downtown 11B shows a rate difference of 0.5, which translates into almost 1 more person with tuberculosis per 1000 population than the rest of the region. Conversely, Seven Oaks 08C has a rate difference of -0.1, which translates into less than 1 (fewer) cases per 1000 population than the rest of the region. Geographical variation across the WHR is further illustrated in Figure TB3.

Figure TB3
Tuberculosis: Rates per 1000 population in the Winnipeg Health Region by Neighbourhood Cluster, 1998-2002

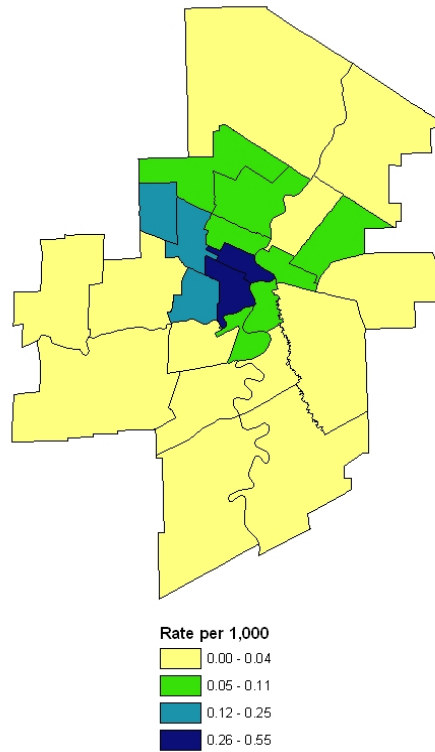


Table TB3
Tuberculosis: Rate Ratios and Rate Differences in the Winnipeg Health Region by
Community Area, 1998-2002

Community Area	Neighbourhood Cluster	Both Sexes		Females		Males	
		*Relative Ratio of each NC compared to the rest of the WHR	** Difference in Rate per 1000 between each NC and the rest of the WHR	*Relative Ratio of each NC compared to the rest of the WHR	** Difference in Rate per 1000 between each NC and the rest of the WHR	*Relative Ratio of each NC compared to the rest of the WHR	** Difference in Rate per 1000 between each NC and the rest of the WHR
St. James-Assiniboia	01A	0.1	-0.1	0.0	-0.1	0.1	-0.1
	01B	0.3	-0.1	0.3	-0.1	0.3	-0.1
Assiniboine South	002	0.3	-0.1	0.3	-0.1	0.3	-0.1
Fort Garry	03A	0.3	-0.1	0.4	-0.1	0.3	-0.1
	03B	0.3	-0.1	0.6	0.0	0.2	-0.1
St. Vital	04A	0.2	-0.1	0.2	-0.1	0.3	-0.1
	04B	0.2	-0.1	0.3	-0.1	0.2	-0.1
St. Boniface	05A	0.6	0.0	0.6	0.0	0.7	0.0
	05B	0.3	-0.1	0.2	-0.1	0.4	-0.1
Transcona	006	0.1	-0.1	0.0	-0.1	0.2	-0.1
River East	07A	0.9	0.0	1.4	0.0	0.6	-0.1
	07B	0.3	-0.1	0.1	-0.1	0.5	-0.1
	07C	0.5	0.0	1.1	0.0	0.1	-0.1
	07D	0.0	-0.1	0.0	-0.1	0.0	-0.1
Seven Oaks	08A	1.2	0.0	0.7	0.0	1.5	0.1
	08B	0.6	0.0	0.4	0.0	0.7	0.0
	08C	0.0	-0.1	0.0	-0.1	0.0	-0.1
Inkster	09A	2.7	0.2	2.7	0.1	2.7	0.2
	09B	2.3	0.1	3.4	0.2	1.5	0.1
Point Douglas	10A	0.9	0.0	0.9	0.0	0.9	0.0
	10B	6.0	0.4	6.6	0.4	5.4	0.5
Downtown	11A	2.8	0.2	2.9	0.1	2.7	0.2
	11B	7.4	0.5	7.5	0.4	7.2	0.5
River Heights	12A	0.4	-0.1	0.1	-0.1	0.6	0.0
	12B	0.6	0.0	0.7	0.0	0.5	-0.1

Figure TB4

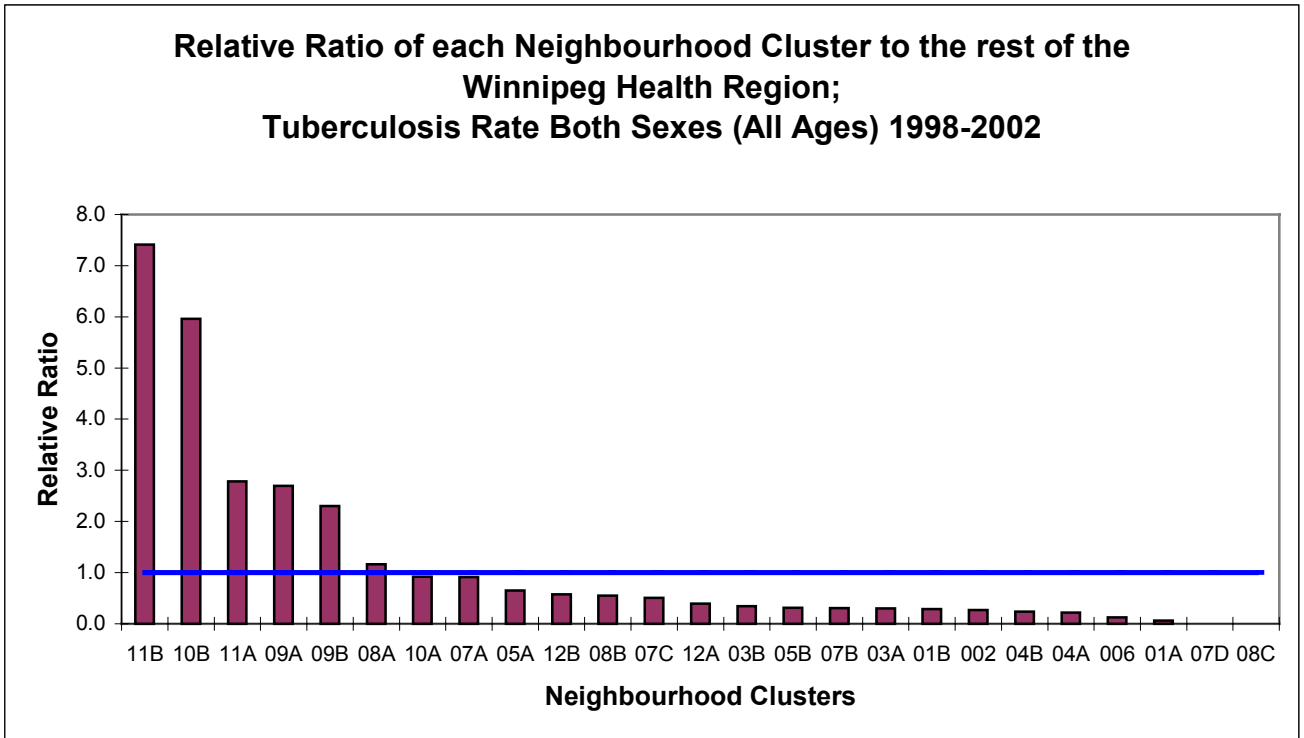
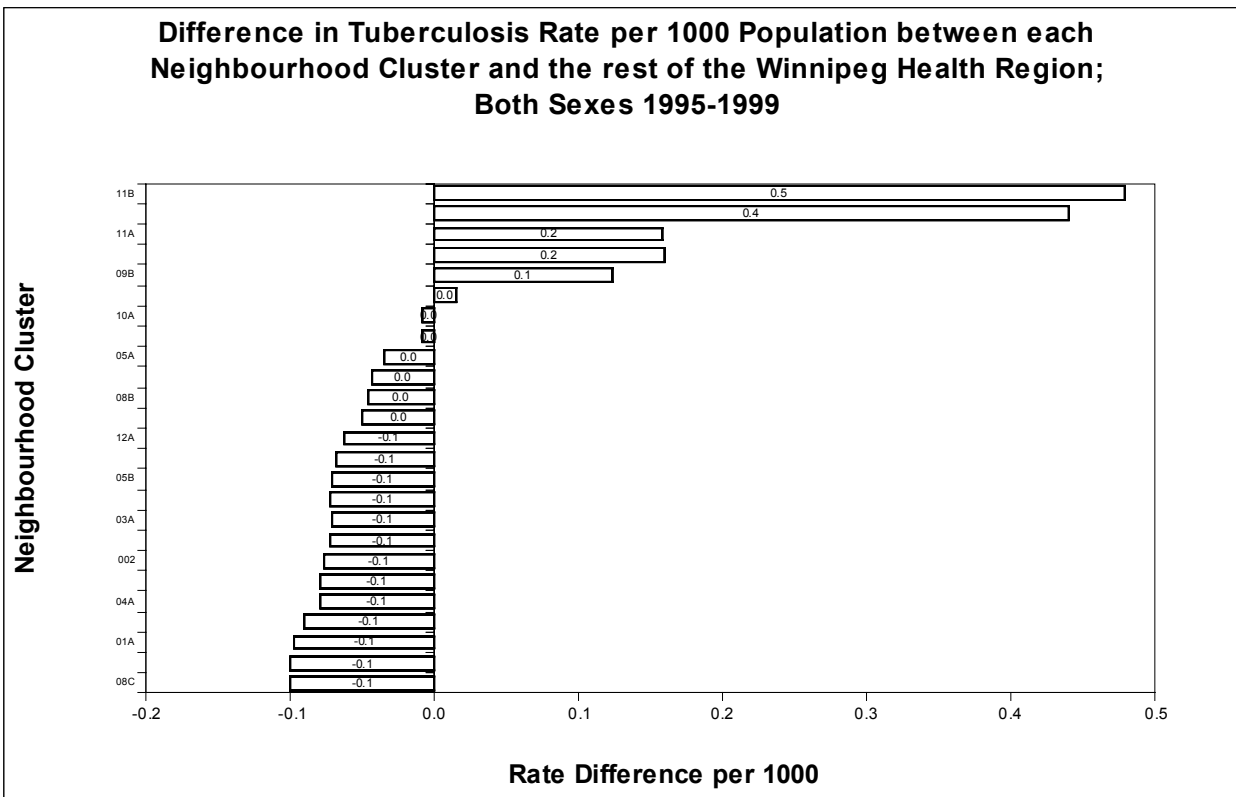


Figure TB5



Highlights:

- Since 1996, the number of cases of tuberculosis in the Winnipeg Health Region (WHR) has fluctuated between 53 and 78 (Table TB1). In 2002, 55 cases were reported among residents of the WHR – an *infection rate of 0.09 per 1000 population*.
- The number of cases and crude rate of infection is greatest in *Downtown* (135 cases; 0.39 per 1,000).

ⁱ Additional information describing communicable diseases (including sexually transmitted and blood-borne infections) and immunization in the Winnipeg Health Region is available in ***Report on Communicable Diseases and Immunization in the Winnipeg Health Region, 2004*** [available fall 2004].