Definition/Description:

Stroke Treatment Prevalence
This is the combined number of hospitalizations for strokes experienced per thousand residents aged 20 or older averaged over the five-year period to give an annual rate. It is not a percentage as an individual may suffer more than one stroke in the five-year period. Therefore, each stroke is counted as a separate event.

Stroke
A stroke occurs when there is a sudden death of brain cells due to a lack of oxygen when the blood flow to the brain is impaired by blockage or rupture of an artery to the brain. Symptoms of a stroke depend on the area of the brain affected. The most common symptom is weakness or paralysis of one side of the body with partial or complete loss of voluntary movement or sensation in a leg or arm. Other common symptoms include speech problems, weak face muscles, numbness and tingling. A stroke involving the base of the brain can affect balance, vision, swallowing, breathing and consciousness. For this report, stroke was defined as any of ICD-9-CM 431, 434, or 436 present in the diagnosis field.
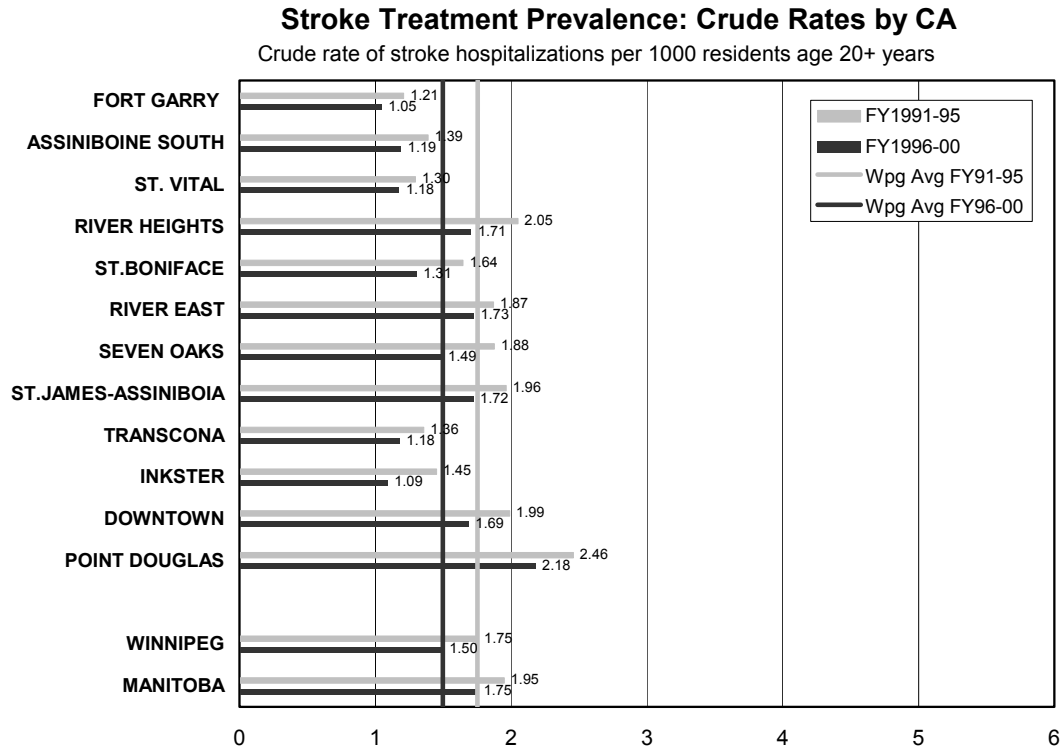
Method
Five years of data were used (1991/92-1995/96 and 1996/97-2000/01), with the denominator being the population age 20 and up from the same years. Eligibility was restricted to those aged 20 or older. Age was calculated as of December 31 of each year. Region of residence was assigned as of the most frequently occurring record. The age groups for standardization were 20-44, 45-64, 65-74, 75+. All data were adjusted for age and sex.
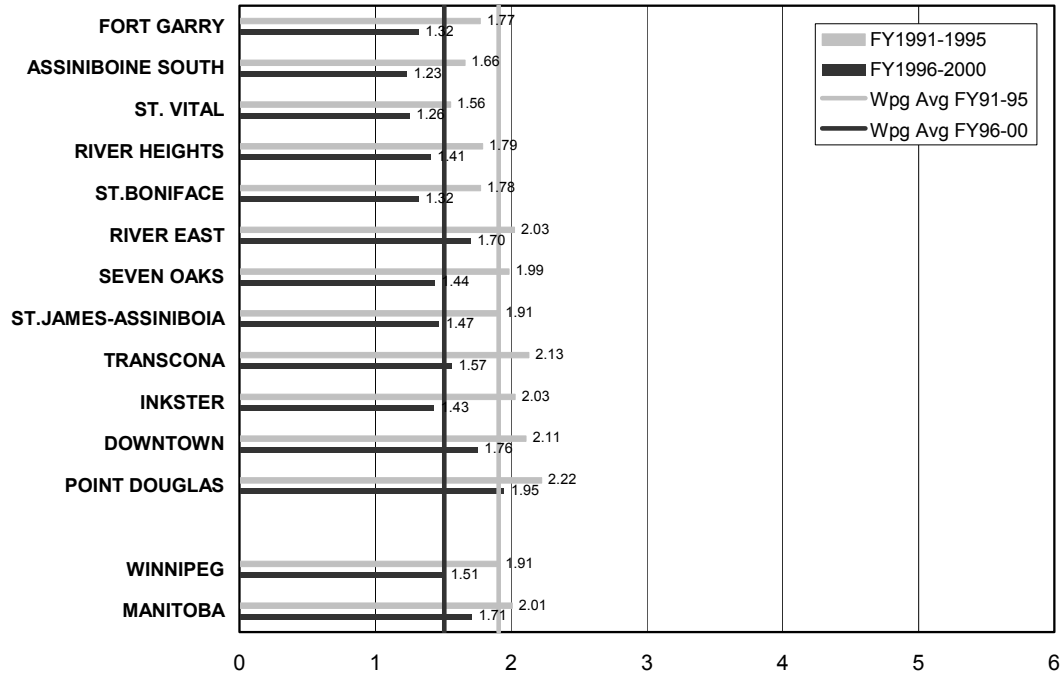
Source:

The Need to Know Project, Manitoba Centre for Health Policy, 2003. All numerical values, tables, and figures (including spatial analyses) were generated by the Population Health and Health System Analysis Unit, Winnipeg Regional Health Authority.

Findings:

Stroke Treatment Prevalence: Crude Rates by CA

Crude rate of stroke hospitalizations per 1000 residents age 20+ years

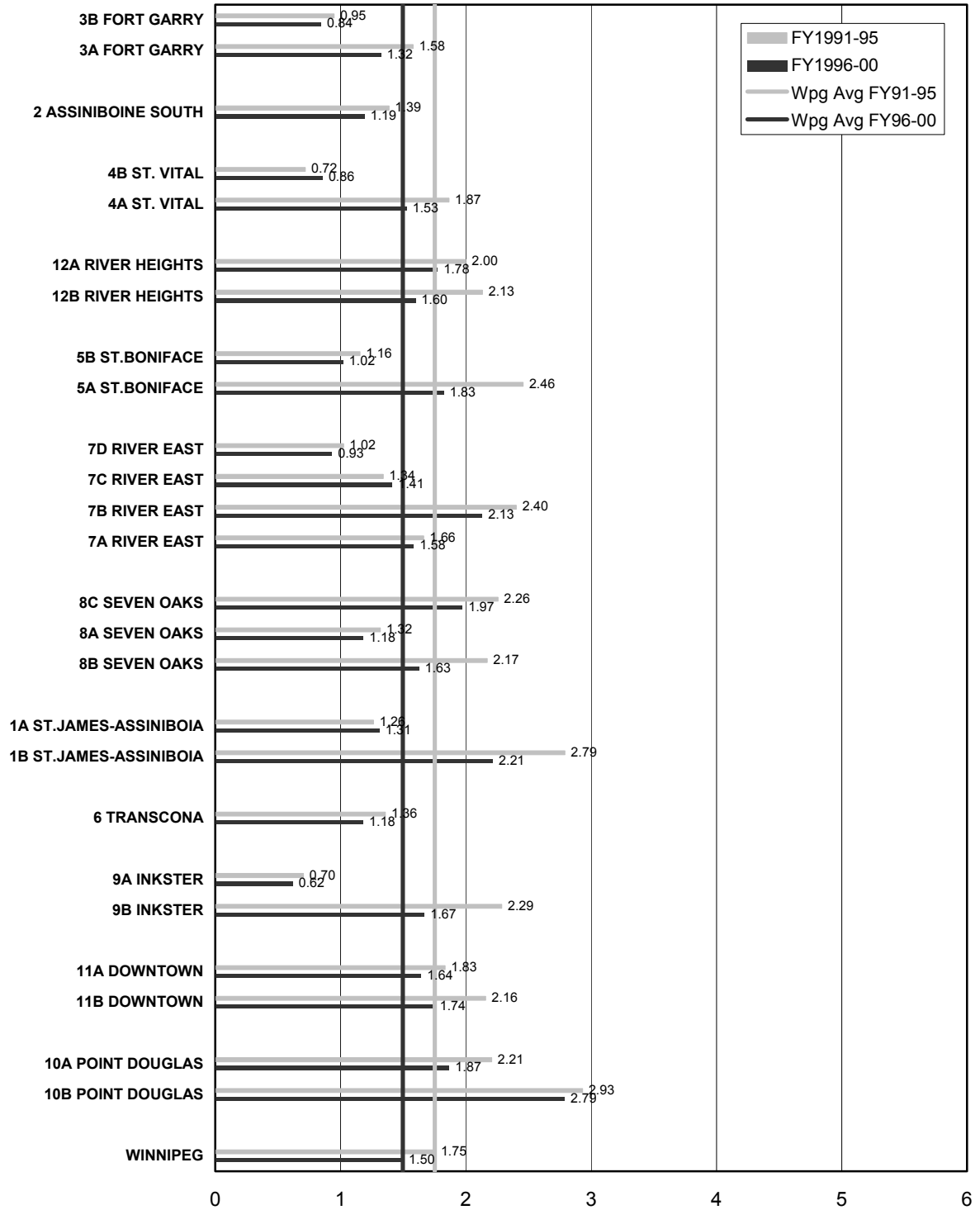| Community Area	FY1991-95	FY1996-00
FORT GARRY	1.21	1.05
ASSINIBOINE SOUTH	1.39	1.19
ST. VITAL	1.30	1.18
RIVER HEIGHTS	2.05	1.71
ST.BONIFACE	1.64	1.31
RIVER EAST	1.87	1.73
SEVEN OAKS	1.88	1.49
ST.JAMES-ASSINIBOIA	1.96	1.72
TRANSCONA	1.36	1.18
INKSTER	1.45	1.09
DOWNTOWN	1.99	1.69
POINT DOUGLAS	2.46	2.18
WINNIPEG	1.75	1.50
MANITOBA	1.95	1.75

Legend: FY1991-95, FY1996-00, Wpg Avg FY91-95, Wpg Avg FY96-00

Stroke Treatment Prevalence: Age-Adjusted Rates by CA

Age- & sex-adjusted rate of stroke per 1000 residents, age 20+ years

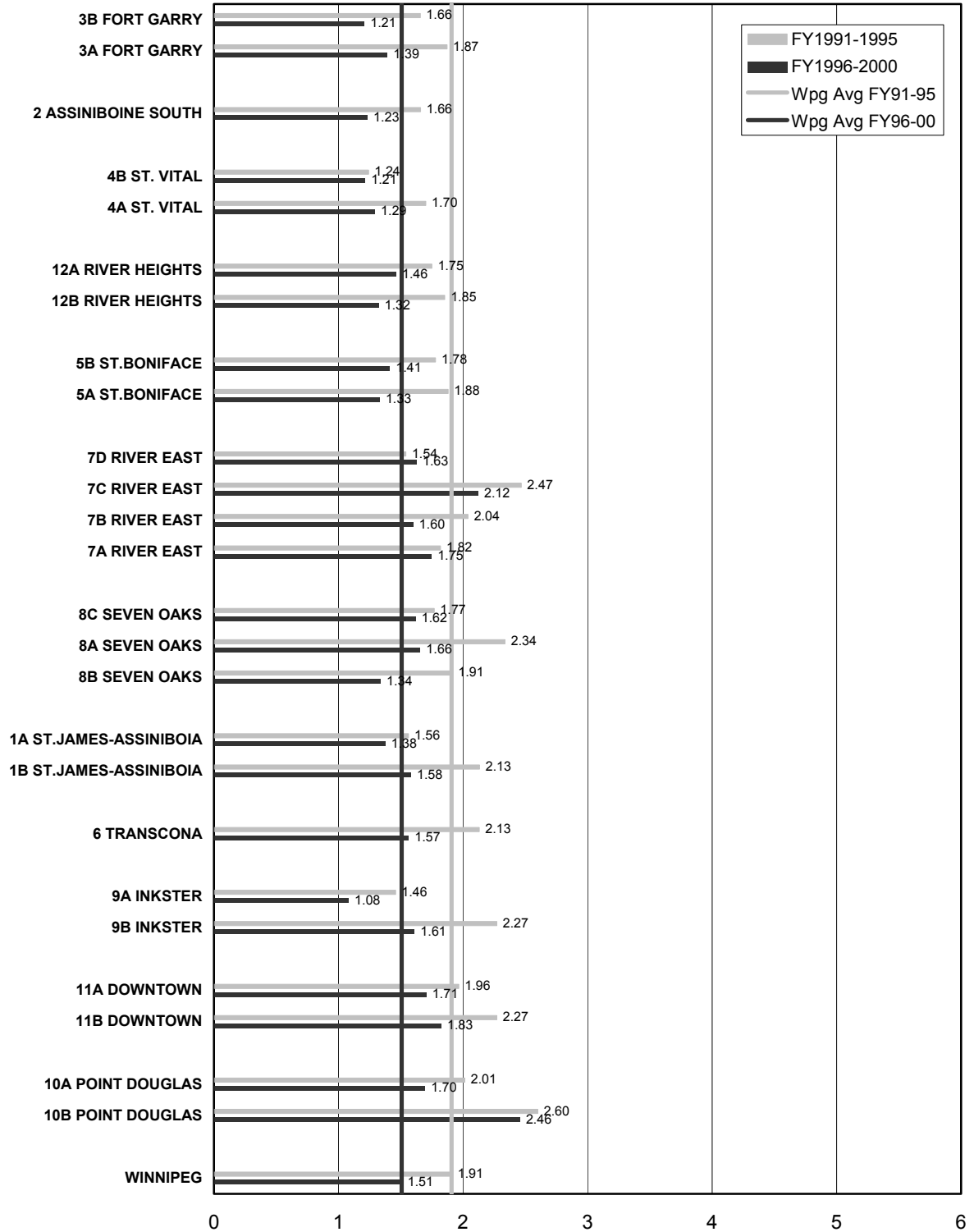| CA	FY1991-1995	FY1996-2000
FORT GARRY	1.77	1.32
ASSINIBOINE SOUTH	1.66	1.23
ST. VITAL	1.56	1.26
RIVER HEIGHTS	1.79	1.41
ST.BONIFACE	1.78	1.32
RIVER EAST	2.03	1.70
SEVEN OAKS	1.99	.44
ST.JAMES-ASSINIBOIA	1.91	1.47
TRANSCONA	2.13	1.57
INKSTER	2.03	.43
DOWNTOWN	2.11	1.76
POINT DOUGLAS	2.22	1.95
WINNIPEG	1.91	1.51
MANITOBA	2.01	1.71

Legend:
- FY1991-1995
- FY1996-2000
- Wpg Avg FY91-95
- Wpg Avg FY96-00

Stroke Treatment Prevalence: Crude Rates by NC

Crude rate of stroke hospitalizations per 1000 residents age 20+ years

Legend:
- FY1991-95
- FY1996-00
- Wpg Avg FY91-95
- Wpg Avg FY96-00

NC	FY1991-95	FY1996-00
3B FORT GARRY	0.95	0.84
3A FORT GARRY	1.58	1.32
2 ASSINIBOINE SOUTH	1.39	1.19
4B ST. VITAL	0.86	0.72
4A ST. VITAL	1.87	1.53
12A RIVER HEIGHTS	2.00	1.78
12B RIVER HEIGHTS	2.13	1.60
5B ST.BONIFACE	1.16	1.02
5A ST.BONIFACE	2.46	1.83
7D RIVER EAST	1.02	0.93
7C RIVER EAST	1.34	1.41
7B RIVER EAST	2.40	2.13
7A RIVER EAST	1.66	1.58
8C SEVEN OAKS	2.26	1.97
8A SEVEN OAKS	1.32	1.18
8B SEVEN OAKS	2.17	1.63
1A ST.JAMES-ASSINIBOIA	1.25	1.31
1B ST.JAMES-ASSINIBOIA	2.79	2.21
6 TRANSCONA	1.36	1.18
9A INKSTER	0.70	0.62
9B INKSTER	2.29	1.67
11A DOWNTOWN	1.83	1.64
11B DOWNTOWN	2.16	1.74
10A POINT DOUGLAS	2.21	1.87
10B POINT DOUGLAS	2.93	2.79
WINNIPEG	1.75	1.50

Stroke Treatment Prevalence: Age-Adjusted Rates by NC

Age- & sex-adjusted rate of stroke per 1000 residents, age 20+ years

	FY1991-1995
	FY1996-2000
	Wpg Avg FY91-95
	Wpg Avg FY96-00

NC	FY1991-1995	FY1996-2000
3B FORT GARRY	1.66	1.21
3A FORT GARRY	1.87	1.39
2 ASSINIBOINE SOUTH	1.66	1.23
4B ST. VITAL	1.24	1.21
4A ST. VITAL	1.70	1.29
12A RIVER HEIGHTS	1.75	1.46
12B RIVER HEIGHTS	1.85	1.32
5B ST.BONIFACE	1.78	1.41
5A ST.BONIFACE	1.88	1.33
7D RIVER EAST	1.54	1.63
7C RIVER EAST	2.47	2.12
7B RIVER EAST	2.04	1.60
7A RIVER EAST	1.82	1.75
8C SEVEN OAKS	1.77	1.62
8A SEVEN OAKS	2.34	1.66
8B SEVEN OAKS	1.91	1.34
1A ST.JAMES-ASSINIBOIA	1.56	1.38
1B ST.JAMES-ASSINIBOIA	2.13	1.58
6 TRANSCONA	2.13	1.57
9A INKSTER	1.46	1.08
9B INKSTER	2.27	1.61
11A DOWNTOWN	1.96	1.71
11B DOWNTOWN	2.27	1.83
10A POINT DOUGLAS	2.01	1.70
10B POINT DOUGLAS	2.60	2.46
WINNIPEG	1.91	1.51

Highlights:

Note: The crude rates are referred to in this narrative (unless otherwise stated).

Regional Rates:
- There was an overall decrease in the stroke treatment prevalence rate for the WHR between the time periods of 1991-1995 (t_1) and 1996-2000 (t_2).
- The WHR rate decreased from 1.75 cases per 1,000 population to 1.50 cases per 1,000 population (crude rates); these rates were slightly lower than those for Manitoba for the same time periods.
- There were minimal differences between the age-& sex-standardized rates and crude rates at the regional level.

Community Area Rates:
- The lowest rates of stroke treatment prevalence were seen in Fort Garry community area for both time periods.
- The highest rates of stroke treatment prevalence were found in Point Douglas community area for both time periods; this rate was also substantially higher than the WHR rate in both time periods.
- Every community areas experienced a decrease in the rate of stroke between the two time periods.
- The following community areas had rates that were lower than that of the WHR (both time periods): Fort Garry, Assiniboine South, St. Vital, Transcona, and Inkster.
- The following community areas had rates that were higher than that of the WHR (both time periods): River Heights, River East, St. James-Assiniboia, Downtown and Point Douglas.
- Seven Oaks community area had a higher rate than that of the WHR for t_1; its rate in t_2 was about the same as that for the WHR.
- Adjusting the rates for age and sex of the population had the overall effect of minimizing the differences seen among the community areas in the crude rates. However, the values in Point Douglas community area and Downtown community area, remained the highest after adjustment, indicating that the age and sex distribution of the underlying population is less likely to account for differences seen in the crude rates.

Neighbourhood Cluster Rates:
- The lowest rates of stroke treatment prevalence were found in St. Vital 4B and Inkster 9A for both time periods.
- The highest rates of stroke treatment prevalence were found in St. James-Assiniboia 1A and Point Douglas 10B for both time periods.
- Almost every neighbourhood cluster experienced a decrease in their rate between the two time periods, the exceptions were in St. Vital 4B, River East 7C, and St. James-Assiniboia 1A. In these neighbourhood clusters the increases were slight, however the rates were still lower than that of the WHR.
- The following neighbourhood clusters had rates that were higher than the WHR rate in t_1: St. Vital 4A, River Heights 12A & 12B, St. Boniface 5A, River East 7B, St. James-Assiniboia 1B, Inkster 9B, Downtown 11A & 11B, and Point Douglas 10A & 10B.
- The following neighbourhood clusters had rates that were higher than the WHR rate in t_2: River Heights 12A&B, St. Boniface 5A, River East 7A & 7B, Seven Oaks 8B & 8C, St. James-Assiniboia 1B, Inkster 9B, Downtown 11A & 11B, and Point Douglas 10A & 10B.
- Adjusting the rates for age and sex of the population had the overall effect of minimizing the differences seen among the neighbourhood clusters in the crude rates. However, the values in the neighbourhood clusters of Point Douglas community area and Downtown community area, remained the highest after adjustment, indicating that the age and sex distribution of the underlying population is less likely to account for differences seen in the crude rates.