Cardiac Catheterization

CHA REPORT 2004

Definition/Description:

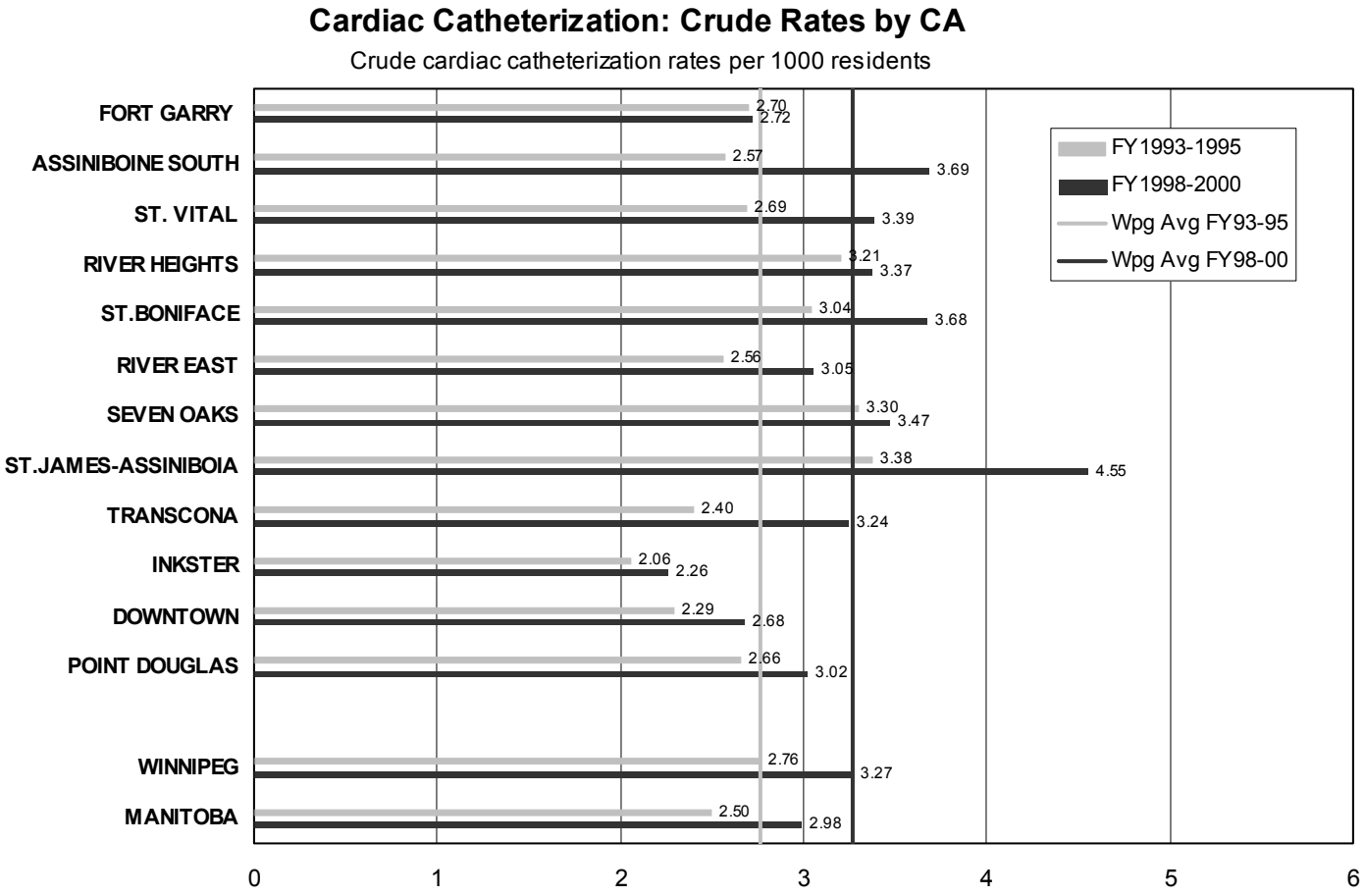
The most accurate method (the "gold standard") for evaluating and defining coronary artery disease (CAD), cardiac catheterization is used to identify the exact location and severity of CAD. During cardiac catheterization, a small catheter (a thin hollow tube with a diameter of 2-3 mm) is inserted through the skin into an artery in the groin or the arm. Guided with the assistance of a fluoroscope (a special x-ray viewing instrument), the catheter is then advanced to the opening of the coronary arteries, the blood vessels supplying blood to the heart. When the catheter is used to inject radiographic contrast (a solution containing iodine, which is easily visualized with x-ray images) into each coronary artery, the cardiac catheterization is termed coronary angiography. Coronary angiography is usually performed in conjunction with cardiac catheterization. The images that are produced are called the angiogram. Angiographic images accurately reveal the extent and severity of all coronary arterial blockages. For this report, cardiac catheterization was defined as any hospitalization occurring in a teaching hospital with ICD-9-CM codes of 37.22, 37.23, or 88.53 - 88.57 present in any procedure field.

Method
Three years of hospital data (1993/94-1995/96 and 1998/99-2000/01) were used. The denominator was the WHR population from the same years. Only teaching hospitals were included in the analysis. Age was calculated as of December 31 for each year, and region of residence was assigned as of the first-occurring record. Data were adjusted for age and sex. Age groups for standardization were 0-19, 20-39, 40-59, 60-74, 75+. This indicator reflects those services provided only to residents living in the WHR. It does not account for those services provided in the region regardless of where people live.

Source:

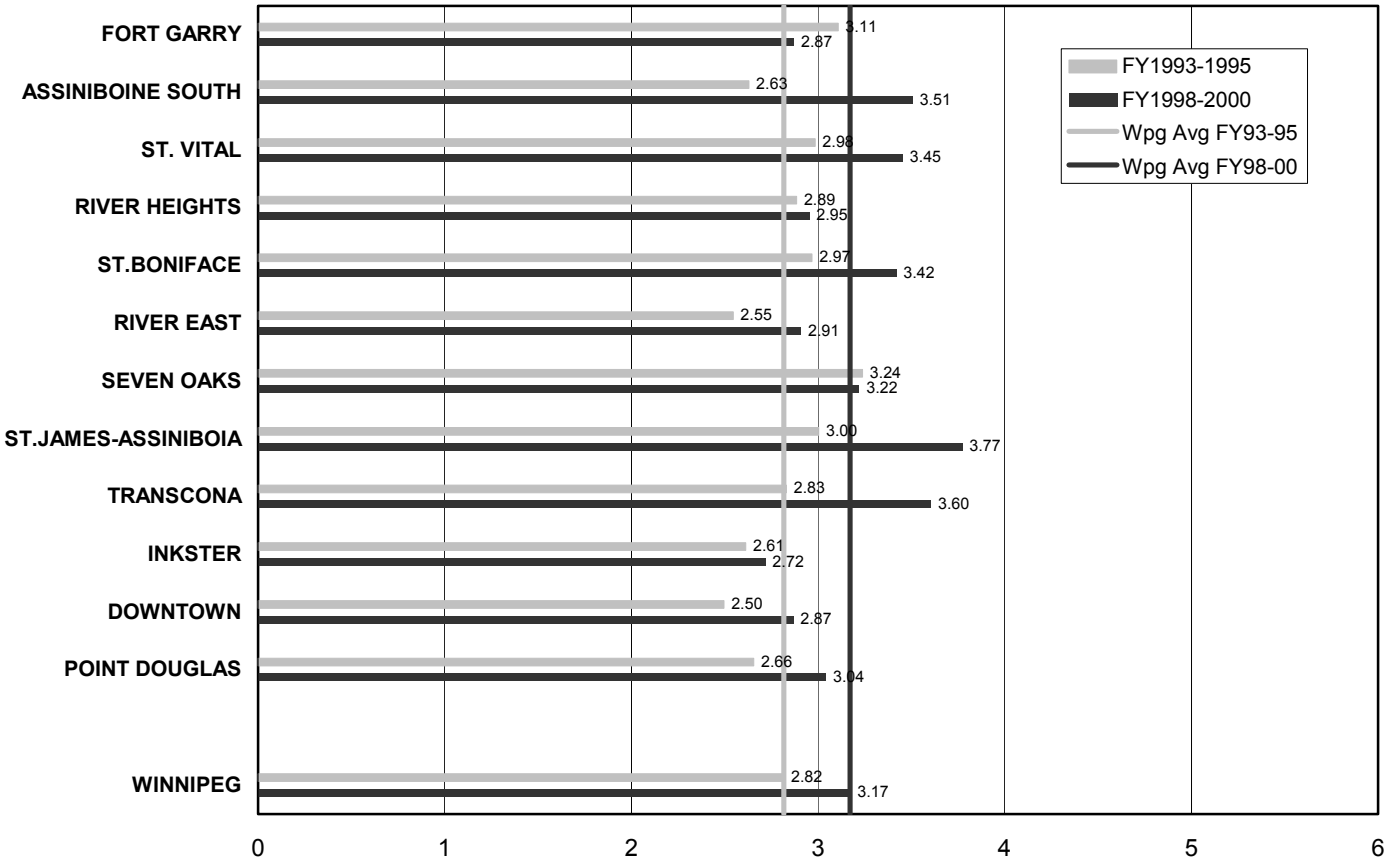
Need to Know Project, Manitoba Centre for Health Policy, 2003

Findings:


Cardiac Catheterization: Crude Rates by CA
Crude cardiac catheterization rates per 1000 residents
FORT GARRY
ASSINIBOINE SOUTH
ST. VITAL
RIVER HEIGHTS
ST.BONIFACE
RIVER EAST
SEVEN OAKS
ST.JAMES-ASSINIBOIA
TRANSCONA
INKSTER
DOWNTOWN
POINT DOUGLAS
WINNIPEG
MANITOBA
2.70
2.72
2.57
3.69
2.69
3.39
3.21
3.37
3.04
3.68
2.56
3.05
3.30
3.47
3.38
4.55
2.40
3.24
2.06
2.26
2.29
2.68
2.66
3.02
2.76
3.27
2.50
2.98
FY1993-1995
FY1998-2000
Wpg Avg FY93-95
Wpg Avg FY98-00
0
1
2
3
4
5
6

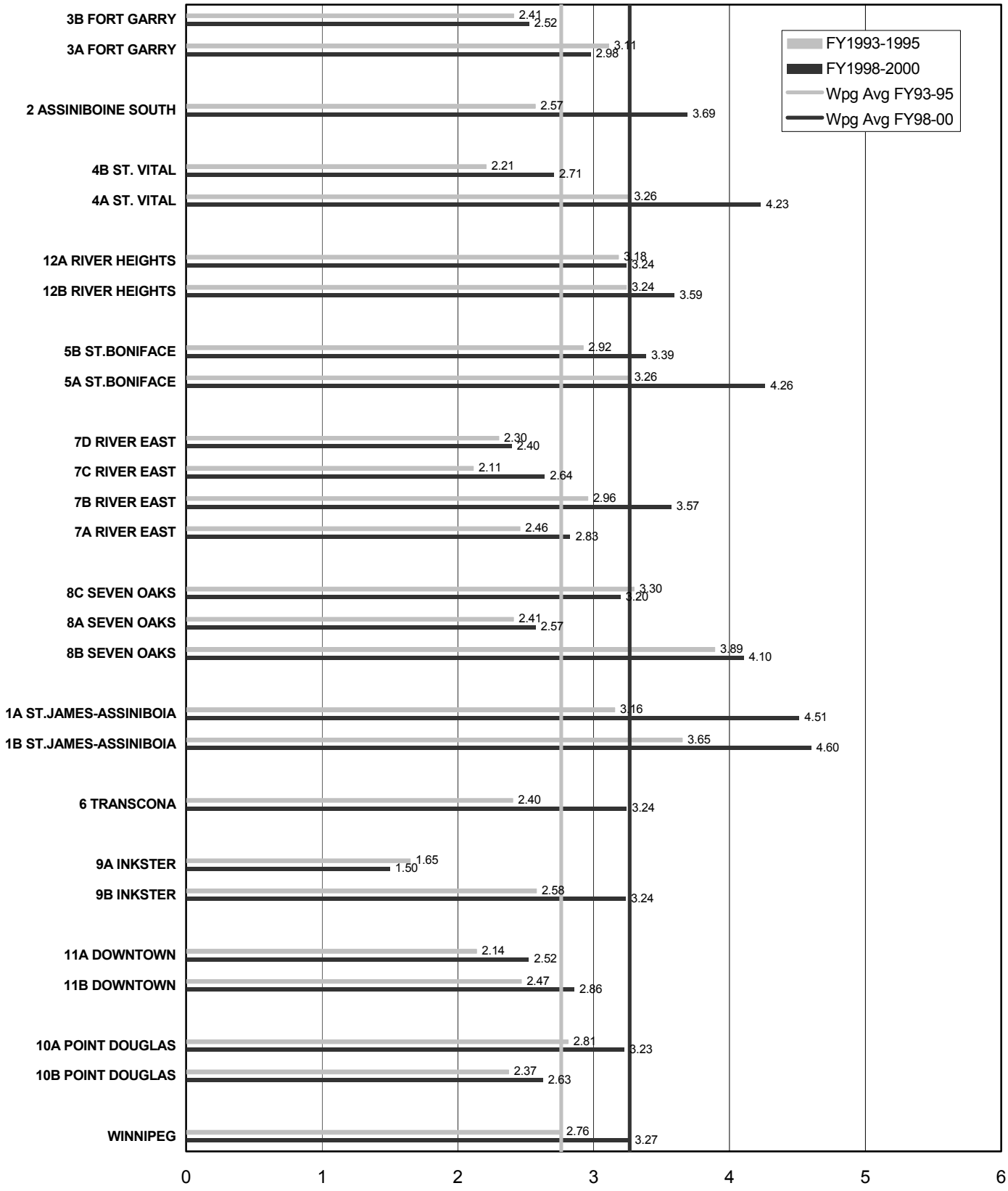
Cardiac Catheterization: Age-Adjusted Rates by CA

Age- & sex-adjusted cardiac catheterization rates per 1000 residents



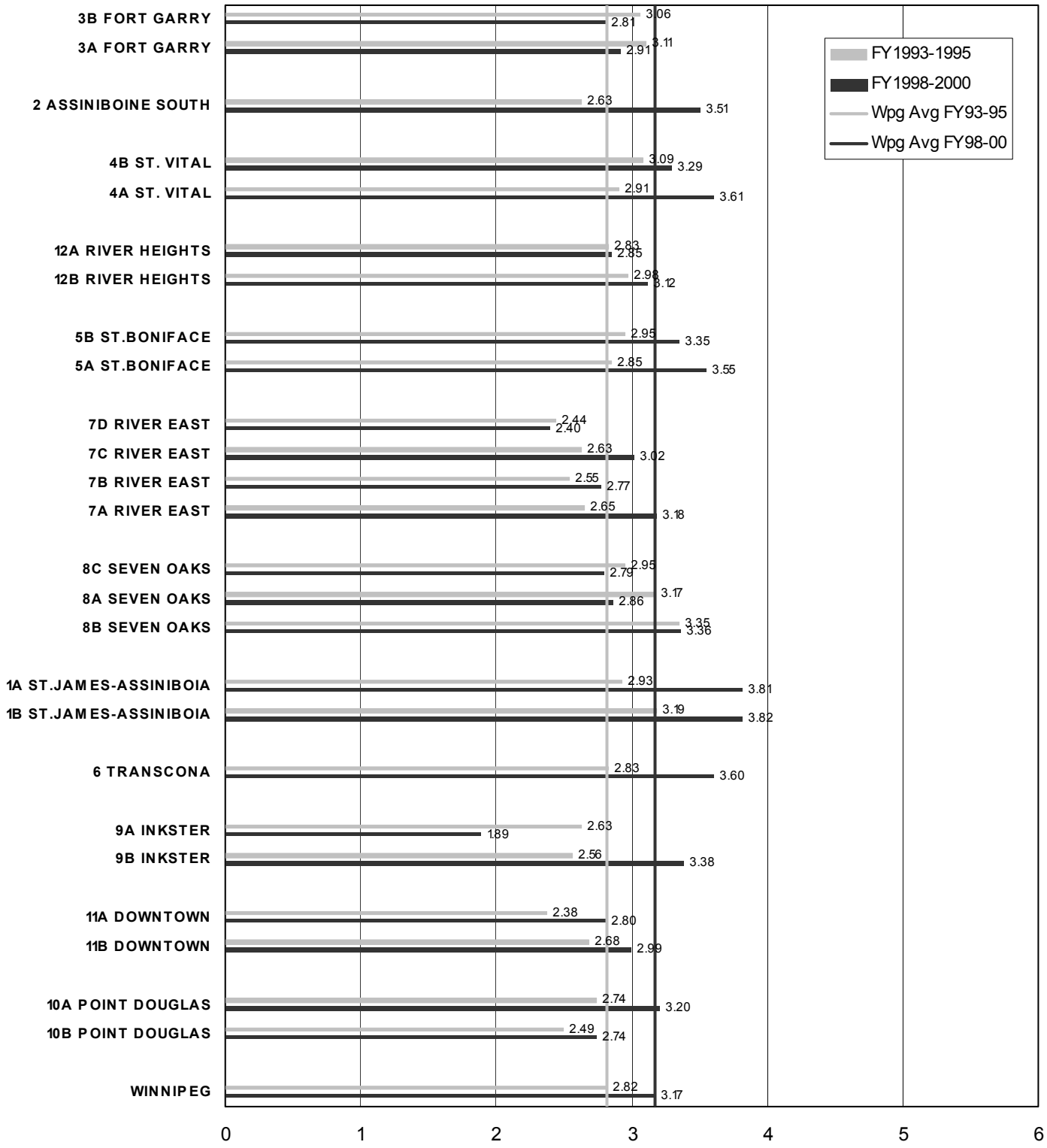
Cardiac Catheterization: Crude Rates by NC

Crude cardiac catheterization rates per 1000 residents



Cardiac Catheterization: Age-Adjusted Rates by NC

Age- & sex-adjusted cardiac catheterization rates per 1000 residents



Highlights:

Regional Rates:

- Overall, Winnipeg had experienced an increase in this procedure from 2.76 to 3.27 per 1000 across the periods.
- Winnipeg's rate is 0.29 per 1000 over that of the Manitoba rate.
- Overall, after standardizing for age and sex, there are minor changes in the rates. The Winnipeg region showed 2.82 and 3.17 per 1000 across the two periods.

Community Area Rates:

- All community areas had increases with St. James-Assiniboia and Assinboine South having the largest increases in crude rates of 1.17 and 1.12 per 1000 respectively. The Inkster area continues to be below the regional average at 2.26, which is half of the rate in St. James Assiniboia of 4.55.
- After adjusting for age and sex, Fort Garry and Seven Oaks both showed a slight decrease in rates in the last period. St. James-Assiniboia, Assinboine South and Transcona have the greatest adjusted rate increases of 0.77, 0.88 and 0.77 respectively. The Inkster area had the lowest adjusted rate at 2.72 and St. James Assiniboia had the highest adjusted rate of 3.77 in the last period.

Neighbourhood Cluster Rates:

- Fort Garry 3A, Seven Oaks 8C and Inkster 9A all showed small decreases in the crude rate. The Inkster 9A crude rate is the lowest at 1.5 per 1000 population and St. James-Assiniboia 1B is the highest at 4.60.
- Overall, after standardizing for age and sex, six of the 25 neighbourhood clusters showed small decreases in the adjusted rate in the last period. The Inkster 9A is the lowest at 1.89 per 1000 adjusted population and St. James-Assiniboia 1B is the highest at 3.82 per 1000 adjusted population.