

Health and Health Care in Winnipeg



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How healthy are people who live in Winnipeg? Do the residents of some Winnipeg communities use more health care than others? A new report by the Manitoba Centre for Health Policy and Evaluation (MCHPE) answers these questions. Moreover, it explores the relationship between the two—healthiness in a community and its use of health care.

One might expect that in an area where health is generally poor, people would need more health care. But do they in fact get more health care? In other words, we looked at whether people from areas with poorer health used more health care services, and whether people from healthier areas used fewer services. We examined a wide range of data, and focussed on whether the use of services was consistent with the general health of a community's residents.

How the areas of Winnipeg measured up to these expectations can provide important information for the Winnipeg Regional Health Authority (WRHA) which is responsible for the delivery of health care services in Winnipeg. The report describes current patterns of health and health care use and as such, provides baseline data. These baseline measures can be used by WRHA managers to plan changes and to monitor the effect of those changes in the delivery of health care services.

Methods

How do you measure a population's health status? Although no measure has

been found to be perfect, there is one that has been accepted by population health researchers as reasonably close: the *premature mortality rate* or PMR.

The premature mortality rate tells us how many people die before the age of 75. Although it appears that PMR has more to do with death than sickness, the two are closely related: areas with high PMR have high rates of chronic diseases like diabetes, high blood pressure and cancer. We assumed therefore, that premature mortality rates are a reasonable indicator of health status: areas with a higher PMR are on average less healthy, and areas with a lower PMR are more healthy. Based on this assumption, we organized our data on the use of health services according to an area's premature mortality rate.

For the purposes of this report we used the same divisions of Winnipeg as the WRHA. The city was divided into 12 communities, and most communities were further subdivided into neighbourhoods.

Most of the analyses for this report were based on information from 1998/99. However, for some analyses, we went back three years and five years to provide more reliable information, and to track trends.

We used data on a variety of health care services, including: physician visits, residence in nursing homes, use of hospitals, various diagnostic and surgical procedures, preventive services such as childhood immunization, and screening for breast and cervical cancer. For each indicator, we explored its relationship to PMR—hence to the general health status

of the communities and neighbourhoods in Winnipeg.

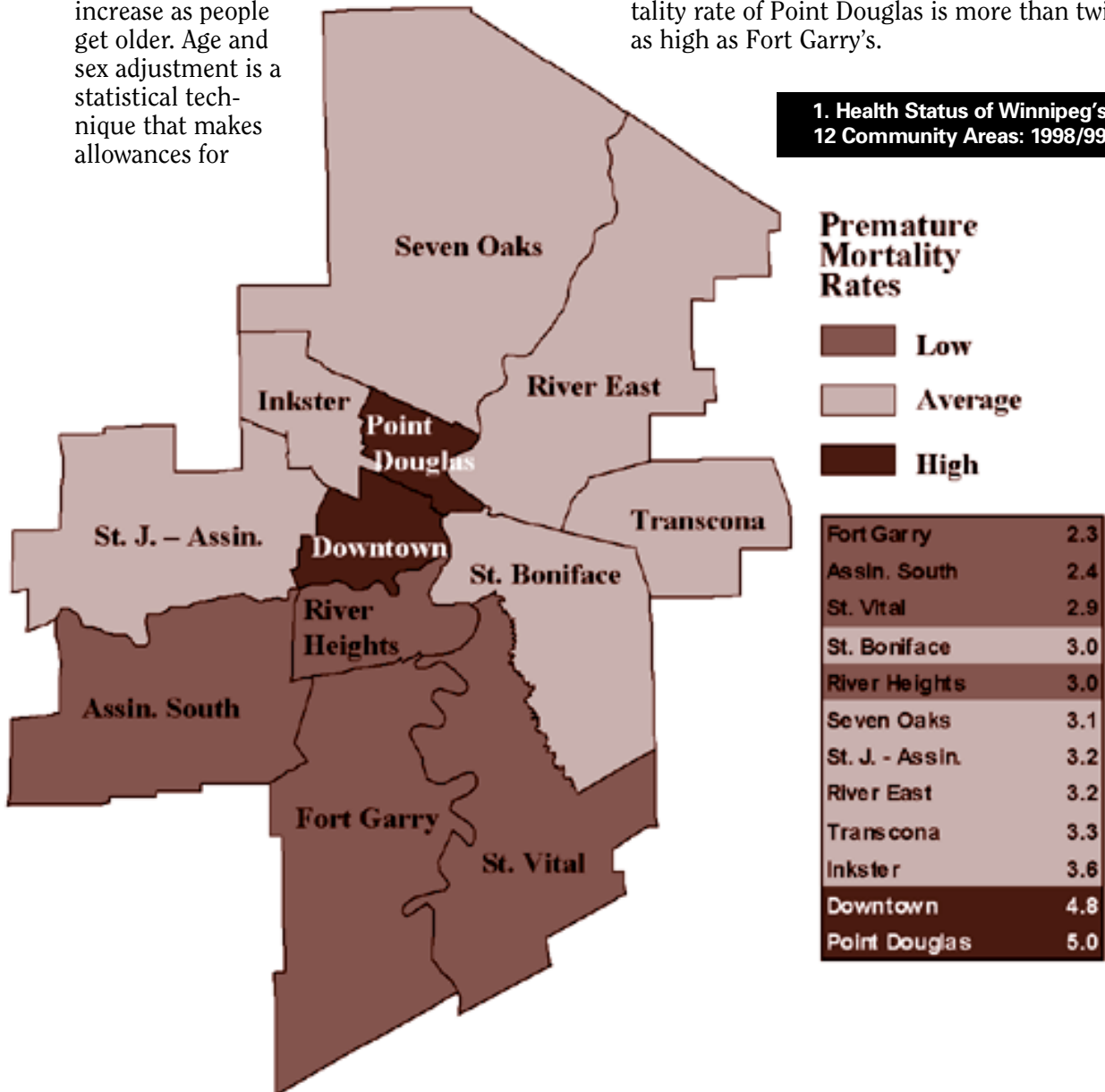
Although we've used averages to characterize the health of a community or neighbourhood, each area contains people with a range of health problems and various degrees of health care service use. Not everybody in a "poor health" area has poor health. Nonetheless, the averages reflect the overall health of residents in the area.

Our data on use of health services are age and sex adjusted. We expect that areas with, say, more women in the childbearing years will use more health care. We also expect that some procedures, like hip replacement, will increase as people get older. Age and sex adjustment is a statistical technique that makes allowances for

these differences. It "levels the playing field," permitting us to make fair comparisons between different areas and over time.

Findings

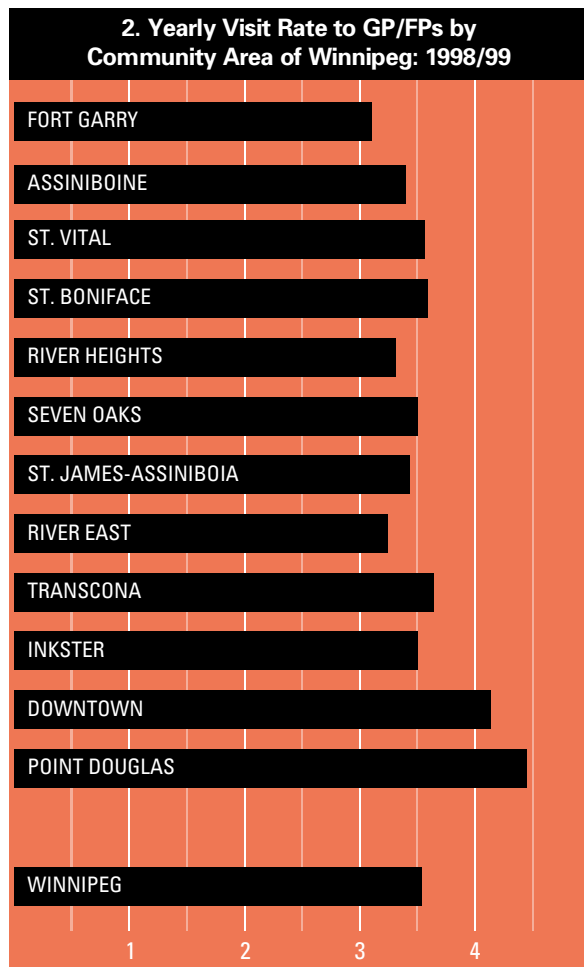
The WRHA provides health services to meet a wide variety of needs. We used the premature mortality rate to estimate the health status—and therefore the likely need for health care—for each of the 12 communities. PMR suggests that the communities vary considerably (Fig. 1). Point Douglas is the least healthy community in Winnipeg with 5 premature deaths per 1000 residents per year. Fort Garry is the healthiest community with a PMR of 2.3. These are big differences: the premature mortality rate of Point Douglas is more than twice as high as Fort Garry's.



We also assessed the health status for each of the 25 neighbourhoods and found, surprisingly, there are dramatic differences in health status *within the same community*. As a community, Inkster has the third highest PMR. When divided into Inkster East and West however, Inkster East has the third *highest* PMR among the 25 neighbourhood clusters, while Inkster West has the second *lowest* rate. In fact, 9 out of 25 neighbourhoods had a premature mortality rate that was markedly different from its larger community.

Using the premature mortality rate and health status to organize our data, we found the following:

- Our research confirmed that the use of most basic health care services is closely related to the need of a community. For example, Fig. 2 shows the rate of visits to general or family physicians. It lists communities in



Adjusted rate of physician visits per resident

order from the best health (Fort Garry) to the poorest (Point Douglas). The number of physician visits per resident is lowest in Fort Garry at 3.07 and highest in Point Douglas at 4.45. The bars generally get longer as you move down the graph, which shows that those areas with poorer health visit their physicians more often than those areas with better health. This is what we expected.

- Hospitalizations follow a similar pattern of increasing use with increasing PMR. Hospitalizations range from 117 per 1000 residents in Assiniboine South to 161 in Point Douglas. There is an even greater range at the neighbourhood level: 108 in Inkster West to 185 in Point Douglas South. These findings confirm our basic approach. People who live in high PMR areas are on average much sicker, so they need—and get—more health care: they see their doctors and get hospitalized more often.
- Visits to specialist physicians do not show the expected pattern of increasing use with increasing PMR. Put another way, the use of specialist physicians neither increases nor decreases along with our measure of health status. This puzzling pattern was also found for coronary angiography, cataract surgery, and cholecystectomy.
- Even more puzzling, we found that for some “high profile” procedures, like MRI scans, coronary angioplasties, coronary bypass surgery, and hip and knee replacements, rates are higher in areas with the healthiest residents. So while there seems to be a strong relationship between need and visits to a physician, the opposite appears to be true for many high profile procedures: areas with better health status have the higher rates for these procedures.
- Increasing the number of these high-profile procedures does not necessarily bring their use more in line with health status and need. In fact, as in the case of angioplasty, the gap is now even wider. In the low-need Assiniboine South the rate of angioplasties per 1000 residents rose to 1.1 in 1998/99

from the average 0.65 between 1994/95-98/99, whereas in the high-need Point Douglas area, the rate stayed close to the same for both study periods at around 0.65.

- ❑ The use of nursing homes also varies widely among the communities and neighbourhoods of Winnipeg. Areas with poorer health however, appear to make greater use of this service. As part of this analysis we looked at the number of people residing in nursing homes and where they lived before moving to a nursing home. Fort Garry had the lowest rate at 100 per 1000 residents aged 75 and over, and Inkster had the highest with 147. At the neighbourhood level, there was even more variation, and here too neighbourhoods within the same community varied widely. The lowest rate was for former residents of Inkster West with just 41 seniors per 1000, whereas in Seven Oaks North, it was 212.
- ❑ Preventive services like childhood immunization, and breast and cervical cancer screening were used less in areas with poorer health. For example, only 62% of two-year olds in Point Douglas were fully immunized, in contrast with 82% in St Vital. At the neighbourhood level the rates varied from 56% in Point Douglas South to 85% in River East North.

Conclusions

In many ways, the Winnipeg health care system is responding well to the needs of its residents. People who live in the areas identified as high need/poor health (higher PMR scores) were hospitalized much more frequently and had more visits to family physicians. Conversely, areas with better health—hence, less need—made less use of these services, as we would expect.

The number of visits to specialists, however, does not follow the expected pattern of higher use by areas with poorer health, but instead, neither increases nor decreases with health

status. This means that the number of visits to specialists does not follow the expected pattern of higher use by areas with poorer health. One might say that all Winnipeg residents made similar use of specialists. This does not necessarily make sense when residents of some areas are demonstrably sicker than those of other areas.

Even more surprising is that some “high profile” procedures show a pattern that is opposite to what we expected. The cause of this discrepancy may be explained, in part, by the visit rates to specialists: areas which have low visit rates to specialists will likely be referred less often for high-profile procedures which specialists order or provide. Analysis of data over several years indicates that simply increasing the volume of services isn't the solution to this problem.

The same observation applies to preventive services that also showed lower use among areas with poorer health status. Research has shown that outreach to targeted groups can improve services like childhood immunization rates. It is particularly concerning that these preventive services are underdelivered to high-need populations.

In this report, we have focussed on how health care is delivered to Winnipeg residents. Our objective was to provide information for health care planners and providers in the WRHA. We've emphasized the connection—or lack of one—between an area's overall health and its use of health care. Our assessment is mixed. In some areas the system is working very well, but in some areas, the WRHA may want to consider changes. This report provides another tool at the WRHA's disposal to help it serve all Winnipeggers well.

Summary written by Alison McLean and Carolyn DeCoster, based on the report: Indicators of Health Status and Health Service Use for the Winnipeg Regional Health Authority, by Norman Frohlich, Randy Fransoo and Noralou Roos

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