We have some good news and some not so good news. First the good news: the overall health of Manitobans is improving. The not so good news: if you are a northern Manitoban, or a low-income Winnipegger, your health isn’t improving at all. It isn’t getting worse, but it’s not getting better either. What’s more, the health-gap between the most and least healthy Manitobans is widening.

Now right away some of you are wondering how this can be. This is a pattern we would expect to see in the U.S. where private medicine inherently discriminates against the poor, many of whom cannot afford health care services. But in Canada, our universal health care system guarantees equal access to health care for all citizens. (In fact, earlier MCHP studies have shown that the poor, who tend to be the sickest, make the most use of hospitals and physicians.) Yet we have this growing disparity in health between our richer and poorer citizens. What’s going on?

That question arose out of an earlier report by MCHP (Roos et al., 2001). The authors noticed this widening gap in health status between northern Manitobans and the rest of the province and between residents of low income areas of Winnipeg and other areas of the city. A follow-up report was recommended to try to find out what was causing these growing discrepancies. Hence, this report.

Exploring possible causes
All residents of Manitoba were included in this study. Indicators we looked at included hospital information, physician visits, vital statistics and census data. We also obtained cancer-incidence data from CancerCare Manitoba. It is important to mention that data used by MCHP are always anonymized.

Our study looked at trends in health status across a 15-year period: 1985/86 through 1999/2000. Analyses were carried out separately for Winnipeg and Non-Winnipeg residents. Non-Winnipeg Regional Health Authorities (RHAs) were divided into three groups based on the health of their populations: least healthy; average health; most healthy. The assessment was based on premature mortality rates (PMRs), a widely used measure of health. Within Winnipeg, the same three groupings were created for what we call Neighbourhood Clusters (NCs).

We tracked changes in mortality and illness over the 15-year period, adjusting for differences in age and sex to make an essentially all-things-being-equal comparison. For mortality, we looked at some of the leading causes of death in Manitoba—cancer, heart disease, respiratory disease and injuries.

To track illness, we looked at treatment prevalence for five categories of illness— injury, heart attack, respiratory disease, diabetes and cancer. By treatment prevalence, we mean the person was treated in hospital or at a physician’s office a specific number of times (depending on the illness) over a given period (for example, diabetes: at least one hospitalization or two physician visits with a diabetes diagnosis within a three-year period). Our
focus was on the gap in health status between the least and most healthy groups.

After the release of our earlier report, it was suggested that migration might be a contributing factor in the widening health gap between populations. For instance, if healthier (or less healthy) people moved out of an area—say, to find work—the people staying behind might be less healthy (or more healthy) overall. Meanwhile, the area they moved to might become healthier (or less healthy) overall. This would have the effect of increasing the health gap, without any actual change in anyone's health. So we compared mortality rates (in the last five years of the study), first with the effects of migration excluded, then with migration effects included (boxed material). If the two methods generated noticeably different rates, then migration apparently was a contributing factor.

Public use census data were used to obtain measures of socioeconomic status thought to influence health—income, unemployment, education and single-parenthood. We looked at changes in these measures within each group to see if they related to changes in health status between groups.

We also looked at how often people were in hospital and for how long. We wondered if changes in use of hospitals were related to the increasing difference in health between groups.

### Assessing Migration Effects

To explain how we assessed migration, we’ll use northern Manitoba (Burntwood, Churchill, and Nor-Man RHAs) as an example.

1) We pretended that whoever lived in northern Manitoba in the first year of the study were the same people who lived there in the last year—nobody had moved in or out. So regardless of where you might have lived at the end of our study—southern Manitoba, Winnipeg, wherever—if you started out in northern Manitoba, your mortality data were included in the northern Manitoba data.

2) We looked at mortality data based on where people lived at the end of the study—regardless of where they started out. In other words, if you lived in northern Manitoba during the last year studied, you were included in their mortality data; if you lived outside of northern Manitoba at this time, even if you started out there, you were excluded.

Comparing #1 to #2 tells us whether migration had an effect on the mortality rates.

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### 1. Mortality Rates, Least Healthy vs. Most Healthy: Winnipeg, Manitoba

<table>
<thead>
<tr>
<th>Year</th>
<th>Least Healthy (%)</th>
<th>Most Healthy (%)</th>
<th>Gap in Health Status</th>
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<tbody>
<tr>
<td>1985</td>
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<td>1992</td>
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<td>1999</td>
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Mortality rates for the least healthy group stayed the same, but decreased for the most healthy group, widening the health gap.
What we found
- Between 1985/86 and 1999/2000, the gap in health status between the least healthy and most healthy populations widened, both inside and outside of Winnipeg. This widening appears to be due to improvements in health for people in the average health areas, and even greater improvement in the most healthy areas, whereas in the least healthy areas there was virtually no change.

- The gap in health status widened more for males than it did for females.

Mortality
- Overall mortality rates fell in Manitoba between 1985 and 1999. In Winnipeg, there was almost no change in rates in the least healthy group. For the average health group, rates dropped 7%, while for the most healthy group they dropped 13% (Fig. 1). Outside of Winnipeg, mortality rates in the least healthy group again changed little. For the average health group they dropped 6%, while for the most healthy group they dropped 7%.

- When we focused on specific causes of death, we found a repeating pattern: higher mortality rates for the least healthy populations, lower for the most healthy populations. Across the 15 years of the study, most of the health gaps were stable, but some widened. None narrowed.

- For disease-specific causes of death, most of the widening of the gap is due to the most healthy group getting even healthier over time. Meanwhile, the least healthy group showed little change (and sometimes declines) in their health.

- The health gap widened most for deaths due to heart disease and respiratory disease. But when we looked at different age groups, and men and women separately, there were signs the gap was increasing for all diseases studied. So the health gap between the least and most healthy populations is a general pattern, and not specific to one age group, males or females, or to a particular disease.

Illness and socioeconomic factors
- When specific causes of illness (as measured by treatment prevalence) were looked at we found a similar health gap for almost all categories: higher treatment prevalence rates for areas with the least healthy compared to the most healthy populations. None of these gaps narrowed over the 15 years. Some widened.

| 2. Diabetes Rates, Least Healthy vs. Most Healthy: Non-Winnipeg, Manitoba |

While diabetes rates rose for all groups, they rose most for the least healthy group, widening the health gap.
Judging by treatment prevalence, diabetes and respiratory disease rates went up across all regional groupings. However, they rose most for the least healthy group (Fig. 2).

Heart attack rates dropped across all regional groupings. But the decreases were smallest for the least healthy populations.

Based on our analysis of census data, the growing gap in health status seen between the least and most healthy populations appears to be related to socioeconomic factors—namely increasing differences in income and unemployment levels (but not education and single-parent status).

What’s it all mean?
This is a report where what we found seems less important than what we didn’t find. That is, we are not able to say what exactly is causing the widening gap in health between the least and most healthy Manitobans. But we are able to say what isn’t causing it.

Here’s what we do know: overall, Manitobans are healthier now than we were in 1985. But the gap between the most and least healthy residents is growing wider. This widening appears to be due to improvements in health for those already enjoying better health, with no corresponding improvements for those already in the poorest health.

That’s not to say that nothing improved health-wise for the least healthy groups. For example, their heart attack rates dropped. But the rates dropped even more for the most healthy group. Conversely, rates of diabetes and respiratory disease rose for all groups, but they rose most in the least healthy group. In short, the healthiest got healthier, while the least healthy stayed relatively the same overall.

What’s causing this widening gap was the question foremost in our minds during this study. The answer has proven elusive. At the outset, we targeted several possible causes. Most don’t appear to be a factor.

For example, we thought migration (healthy or unhealthy people moving in or out of an area) might have had an effect. But the health gap across the three groups was fairly constant regardless of whether migration was factored in or not. Nor do one or two specific diseases appear to be the cause. Age? Not a factor.

We also looked at hospitalization rates. We wondered if perhaps the growing gap in mortality rates could be attributed to a decrease in use of hospitals among those in the poorest health. But we found no relationship between the two.

All that being said, we did find a relationship between some socioeconomic factors and the increasing difference in health status. Specifically, income levels tend to be lower and unemployment rates higher among the least healthy compared to the most healthy Manitobans. These income/employment gaps widened over the study period and appear to be related to the growing health gap.

Now some of you reading this are probably wondering about lifestyle differences. It’s been well documented, for example, that lower income people have higher rates of smoking. Perhaps a lifestyle difference like that might be a contributing factor here?

 Probably not. Yes, rates of smoking, and also of being overweight (factors associated with poorer health), are higher in areas with the least healthy populations. But other research shows that health differences are still there even when these behavioural factors are taken into consideration.

All of which leads to a conclusion that is hardly new, but certainly bears repeating: Health care alone cannot guarantee good health. Nor, as is the case here, does equal or greater access to health care translate to equal or greater health. To begin narrowing the gap between the least and most healthy in our province, socioeconomic factors like income and employment will likely have an important part to play. For some Manitobans, improving quality of life may be the best medicine.