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What works? Linking health outcomes with promising programs and policies

MANITOBA CENTRE FOR HEALTH POLICY

Summary of the report:
What Works? A First Look at Evaluating Manitoba's Regional Health Programs and Policies at the Population Level
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- Every Regional Health Authority scores well on at least one indicator
- People with good continuity of care have better health outcomes
- Manitoba RHAs should continue to monitor these indicators, to assess the impact of new initiatives

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Decision-makers and planners in Manitoba have access to plenty of research describing the health of the population. What has been missing until now is information that starts to connect the dots between the health of residents and the programs and policies that may be contributing to good health outcomes.

What are the factors behind rates of child immunizations or cervical cancer screening? What effect do different programs and policies have on the health of a population? Which regions have programs or policies that other regions or districts may want to consider adopting? And where do we need to dig deeper, to learn more about what's going on?

The Need to Know Team in Manitoba identified the need for information about "what works," to help leaders reach better decisions at both the provincial and RHA level. The team brings together researchers from the Manitoba Centre for Health Policy (MCHP) and senior planners from each of the province's 11 Regional Health Authorities (RHAs) and the Department of Health, with the aim of creating research evidence that gets used to make decisions.

What we looked at

This report looks at long–term trends in rates for indicators of good or poor health outcomes—such as diabetes, teen pregnancy, and mammography (breast cancer) screening—and explores what factors may be influencing those rates. Table 1 lists the indicators. We have tried to determine whether a specific population's health status or health service use has changed positively over time, and if so, what programs or policies are related to this. We were able to track most of the indicators from the mid–1980s up to 2004. Specifically, we asked the following questions about each indicator:

- How does the rate for an RHA or district (i.e., subdivision of an RHA) compare with the Manitoba average?
- How have the rates changed over time?
- How does the trend in rates in an RHA compare to the provincial trend?
- What are the best predictors of a positive "score" on an indicator in the most recent years?

This report highlights a handful of programs and policies that appear to be contributing to improved health outcomes. Although we did not directly evaluate specific programs or services, the fact that our data are population-based (i.e., measured on the whole population of Manitoba) means our findings provide a strong indication of "what works." We used a statistical method called regression modeling to adjust for differences between regions—in the age, sex, income, and health of people living there—to ensure we were making apples–to–apples comparisons. As part of the project, we also looked at research literature from around the world on factors that have been shown to positively influence each health outcome.

Table 1. List of Indicators

Overall health status
- premature mortality (death before age 75)
- diabetes and lower limb amputations

Prevention and screening initiatives
- breastfeeding initiation
- childhood immunizations
- physical examinations
- mammography screening (breast cancer)
- cervical cancer screening (i.e., Pap tests)

Public health issues
- teen pregnancy
- injuries
- suicide

Health services procedures and practices
- polypharmacy among older adults
- Caesarean sections
- hysterectomy
- access to specialist care

What we found

This report presents a good news story—a series of good news stories, in fact. Every RHA has at least one indicator where they shine. Here are four success stories that include both the actual numbers and a description of the "promising practice" behind a positive rate or trend:

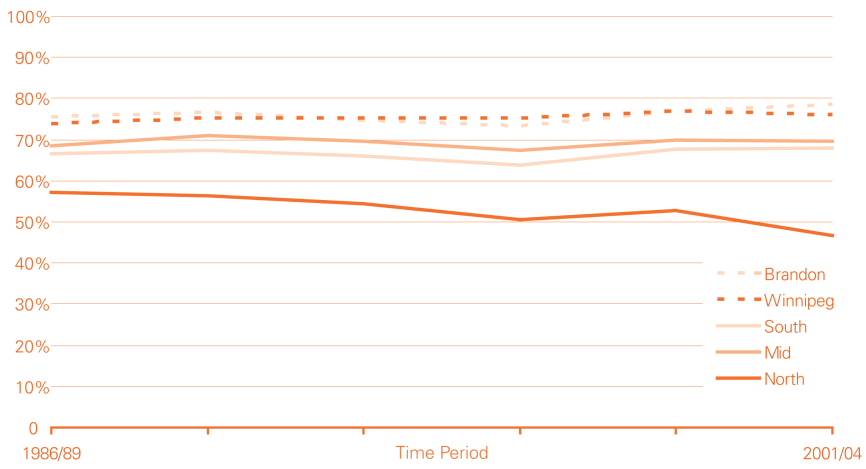
Winnipeg's Geriatric Program Assessment Team may be reducing polypharmacy among older adults

Polypharmacy (i.e., taking many prescription drugs) is a growing problem, particularly among older adults. The more drugs people take, the greater the chance of drug interactions and admission to hospital as a result of bad side effects, and the less likely they are taking any one particular medication properly. Seniors living in the community may be at particularly high risk, because their drug intake is not monitored in the same way that it is for seniors living in long–term care.

Winnipeg RHA appears to be doing something right when it comes to controlling the number of adults 65 and older taking six or more drugs at any given time. The health region has a substantially lower rate of polypharmacy (4.9%) than other RHAs; its rate is also much lower than the provincial average of 6.3%. Perhaps most striking is that all of the areas within Winnipeg have rates below or similar to the provincial average. While Winnipeg's rates, like those in other RHAs, have increased over time, they are still relatively low compared to other regions. Even after controlling for other factors, living in any area within Winnipeg RHA still decreased a senior's chance of being on multiple medications.

The medication review component of Winnipeg's Geriatric Assessment Program warrants consideration by other regions interested in reducing polypharmacy. Since 1999 the program has assessed new home care clients to identify health problems and review their medications. Although other RHAs are starting to do medication reviews targeted at this population, most are "patchwork" programs or education programs, which research has shown are ineffective.

Figure 1. Percentage of Women Receiving Cervical Cancer Screening



Regional Diabetes Programs in Brandon and Assiniboine helping prevent amputations

Brandon and Assiniboine have Manitoba's lowest rates of lower leg amputations due to diabetes. Between 1996 and 2004, Brandon's rate was 8 per thousand diabetes patients and Assiniboine's rate was 12.5 per thousand; the provincial rate was about 14 amputations for every thousand patients with diabetes. Even after controlling for other factors, a person with diabetes who lived in Brandon or Assiniboine RHA was still less likely to have a lower limb amputation than someone living in any other region. The two RHAs also saw significant decreases in rates from 1985 to 2004—a period when amputation rates were stable across the province.

The regional diabetes programs that have been place in Brandon and Assiniboia since before 1995 deserve some of the credit for these regions' lower amputation rates. In both programs, teams of nurses and dietitians worked together to help people with diabetes manage their conditions. Now the RHAs share the Prairie Health Matters program. This includes assessments and referrals, education and health promotion for clients with or at risk for diabetes. Some physician practices in Brandon and Assiniboine also offer regular diabetes clinics. The medical literature confirms strategies such as these are key elements of an effective diabetes program.

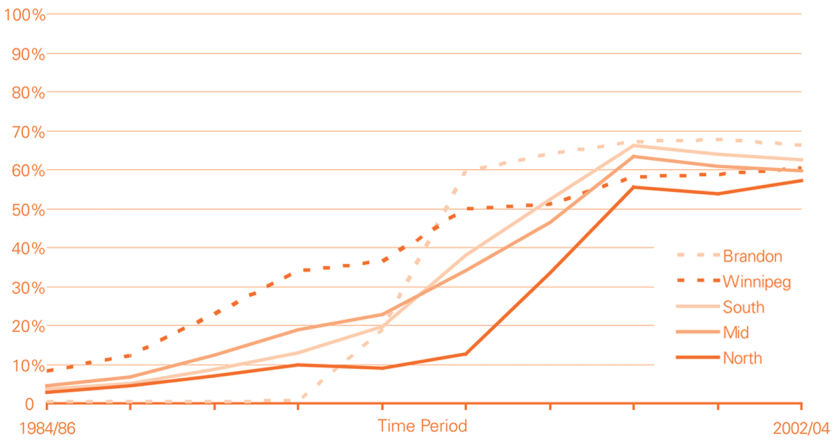
Taking preventive care to where women live: Success of mobile mammography testing may hold lessons for reducing inequality in cervical cancer screening rates

Manitoba's rates for cervical cancer screening among women ages 18 to 69 have changed little since the mid–1980s (figure 1). Rates of Pap testing among women living in many RHA districts—including some in the south, more in the middle portion of the province, and many in the north—are failing to keep pace with the province's slight increase in screening rates over time. In some districts, rates are actually decreasing, and the gap in cervical cancer screening rates has widened over time.

Rates for mammography screening (for breast cancer), in contrast, have been climbing (figure 2). This is likely thanks, in large part, to the Manitoba Breast Screening Program, which has since the late 1990s had mobile units regularly travelling to rural areas to screen women ages 50 to 69. Many RHAs outside Winnipeg have mammography screening rates that are improving faster than the provincial average. By 2002–2004, rates in the rural south (63%) and in the middle portion of the province (60%) had surpassed those in most parts of Winnipeg. Even the north's rates (57%) had increased to levels near those in the province's largest RHA.

The contrast between cervical cancer screening and mammography screening is striking. Time will tell whether the recent introduction of a universal Pap testing program leads to reduced inequalities like in the province's breast cancer screening program.

Figure 2. Percentage of Women Receiving Mammograms



Note: Rates for Brandon are missing for the period of 1984/86 to 1990/92.

South Eastman's support for breastfeeding yields top rates; Winnipeg's least healthy areas seeing rates increase rapidly

South Eastman has worked longer than any RHA to support breastfeeding. And those efforts appear to be paying off. It has the best breastfeeding rates and trends in Manitoba; all districts within the region have high rates

and most have trends that are increasing faster than provincial trends. After controlling for other factors, mothers living in South Eastman are more likely to be breastfeeding when they leave hospital than mothers in most other regions.

Two hospitals in the province have particularly high breastfeeding rates: Steinbach Bethesda Hospital in South Eastman RHA and Boundary Trails Health Centre in Central RHA. Even after controlling for other factors, women who give birth in these facilities are more likely than mothers in other facilities to be breastfeeding when they go home. Both hospitals are striving to follow breastfeeding policies from the World Health Organization (WHO) and UNICEF.

Manitoba's other breastfeeding success story is set in the least healthy area of Winnipeg. Some of the largest increases in rates have occurred in the city's core area, a low income, poor health status neighborhood that has historically had very low breastfeeding rates. Rates in Winnipeg's inner city neighborhoods rose from 64% to 77% between 1989 and 2004. These positive changes are likely, in part, the result of national and provincial prenatal and postnatal education and support programs that have been available to families in the city's core area since the mid–1990s, such as the Canadian Prenatal Nutrition Program (CPNP) and the provincial Healthy Child Manitoba initiatives.

Continuity of care counts

As part of this project, we also looked at "continuity of care" as a possible predictor of certain positive health and screening outcomes. Manitobans were considered to have good continuity of care if they received at least half of their care from the same physician over a two–year period. Continuity of care regularly emerged as a key predictor of good outcomes, even after controlling for individual differences in health status.

People with good continuity of care had better outcomes, including lower amputation rates in diabetics, higher rates for mammography and cervical cancer screening, and higher rates of childhood immunizations. With our data, we were able to estimate the extent to which the absence of continuity of care leads to potential health problems. For example, if half of a region's population did not have good continuity of care, then the following poor outcomes could possibly be linked to this lack of consistent contact: 13% of amputations in diabetics, 7% of non–immunized two–year–olds, 16% of women not receiving mammography screening, and 10% of women not having a Pap test. Although we defined continuity of care as that provided by a physician, our findings likely apply to primary care teams as well.

To sum up

Many of Manitoba's RHAs show promising practices for other indicators; unfortunately there was not enough room in this summary to tell all the stories described in the full report. Virtually every region—large or small, urban or rural—has at least one indicator where they shine. We encourage you to read the executive summary and to delve into the whole report available at MCHP's website (www.umanitoba.ca/centres/mchp then go to "Reports"). Regions can look at what is going on within their jurisdiction, and compare their rates and trends with those in other RHAs. More broadly, planners and decision–makers across Canada will find a wealth of information about public health and health service outcomes, programs and policies.

We encourage planners and decision–makers to explore the programs and policies that appear to be contributing to promising rates and trends. It will be important to continue monitoring these indicators over time, since many of the initiatives are still relatively new; within the next few years, we should have a better sense of what impact they are having at a population level. We also believe the methods we applied in this project may be useful to other researchers and program planners examining indicators, to identify promising programs and policies related to quality of care initiatives or population–based interventions.

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