How Manitobans Use Prescription Drugs

MANITOBA CENTRE FOR HEALTH POLICY AND EVALUATION

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Spending on drugs is growing faster than any other area of health care. Canadian data show that in 1982, spending on prescription drugs from all sources was 6.2% of total health care spending. In 1997, the latest year for which data are available, it was 10.8%, a 75% increase in just fifteen years.

Yet we've known very little about how people use prescription drugs—until now. The Manitoba Centre for Health Policy and Evaluation (MCHPE) has just completed a study that will help fill this information gap.

The study tracks patterns of prescription drug—or pharmaceutical—use across the province. Like other analyses in MCHPE's Population Health Information System, we looked at use according to where people live, not where they filled their prescription. Thus, if a Winnipeg resident had a prescription filled in Dauphin, it would be counted for Winnipeg.

Prescription drugs help us in many ways. They overcome infection, control diabetes, regulate heart rhythms, lower blood pressure, and relieve pain and anxiety. At one time or another, every Manitoban has had a prescription filled, and thousands take prescription drugs daily.

The analyses in this study are based on prescription claims submitted to Manitoba Health by the province's 286 community-based pharmacies for the calendar year 1996. Manitoba Health's Drug Program Information Network, or DPIN, has been in place since July 1994. Pharmacists enter virtually all dispensed prescriptions into DPIN—whether government, private insurance or the consumer pays the bill—in order to make use of the system's screen for things like potential drug interactions. Not included in the system are drugs given to patients through nursing stations (mainly located in the far north) or in hospitals.

Payment for prescription drugs comes from a variety of sources. Private insurance companies or individuals pay about 50% of the cost, with the rest covered by different levels of government.

During 1996, Manitoba's Pharmacare program changed its reimbursement guidelines considerably, resulting in most families paying a higher proportion of pharmaceutical costs. We made comparisons to confirm that there was not a major shift in usage patterns that would raise questions about the validity of the results.

The study investigated questions like: What proportion of Manitobans use prescription drugs, how often, at what cost? How does drug use differ according to age or gender? What types of drugs are Manitobans taking most? Is usage influenced by where people live, for example, urban or rural? Are the sickest people the major users of prescription drugs? Here is what we found.

What proportion of Manitobans use prescription drugs, how often, at what cost?

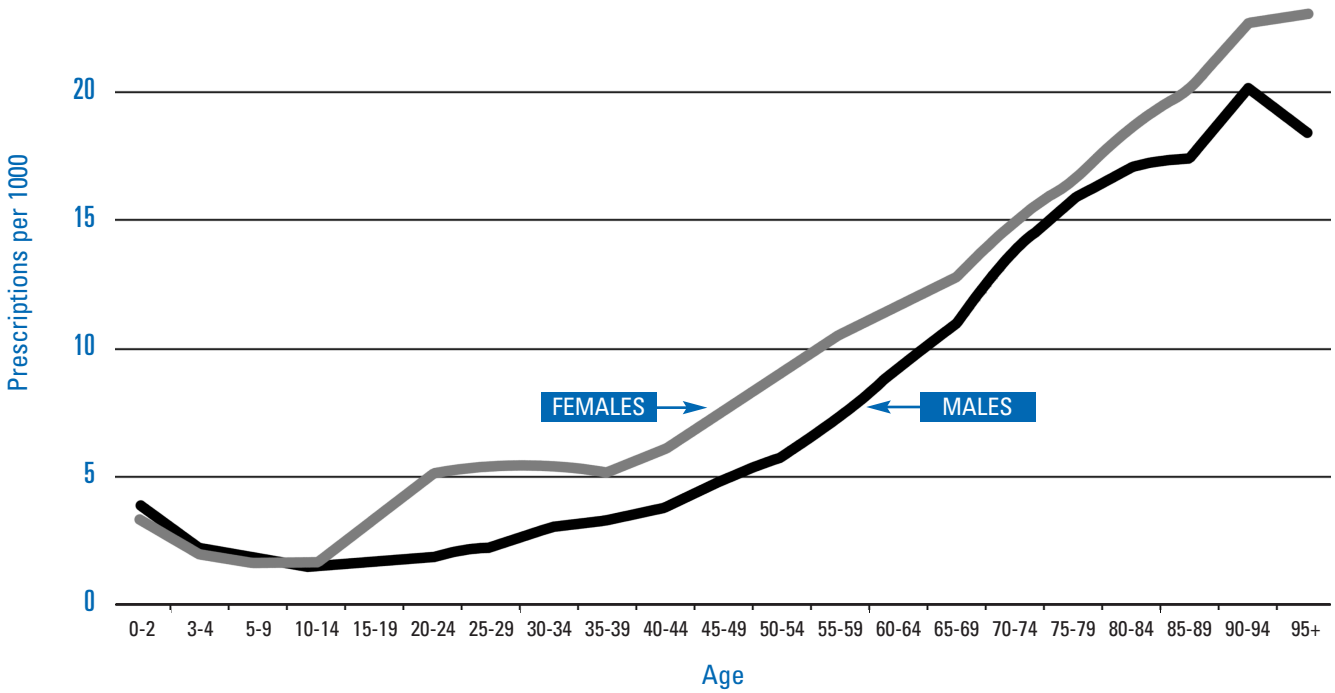
For the purpose of this study, a "user" is defined as an individual who had at least one prescription filled during the calendar year 1996. "Prescription" refers to both original prescriptions and refills. To explain, if somebody was prescribed a drug during 1996 and had it refilled three more times during the year, that was counted as four prescriptions, even though it was for the same drug. We found that:

- There were 6.7 million prescriptions dispensed in 1996.
- Two-thirds of Manitobans (66.4%) had at least one prescription filled.
- On average, each user filled 8.9 prescriptions.
- The average cost per prescription was $27.94 in 1996, and total spending per user was $248.54. Total per capita spending—including the one-third who didn't have a prescription in 1996—was $164.86.
- Total spending on pharmaceuticals was $187.6 million, a 2.8% increase over 1995. Ingredient price of the drugs accounted for $144.3 million. The other 23% of the cost was the professional dispensing fee. (On average, pharmacies received $6.50 per prescription.)

How does drug use differ according to age or gender characteristics?

- Women used more prescription drugs than men, from age 15 up to age 75 (Fig.1). There were 9.7 prescriptions per female user compared to 7.9 per male user.
- The difference by gender is accounted for largely by women's increased use of diuretics, estrogens, thyroid replacement, anti-infectives, non-steroidal anti-inflammatory drugs, opioids (like codeine), anti-anxiety drugs, sedatives and anti-depressants.
- Specifically, women are prescribed anti-infection drugs 1.5 times and anti-anxiety and anti-depressant drugs twice as often as men from the mid-teenage years to age 65.
- The proportion of Manitobans receiving at least one prescription varied from a low of 47% for men aged 20 to 24 years to a high of 92% for women over age 95.
- Use of pharmaceuticals increased with age: 1.6 prescriptions per resident in the 10-14 age category; 4.2 prescriptions in the 35-39 age category; 12.0 in the 65-69 age group; and 18.1 in the 80-84 age group.
- Manitobans 65 years and older comprised 13.6% of the population, but accounted for 35.6% of the prescriptions dispensed, and 39.0% of total pharmaceutical spending.

1. Prescriptions per 1000 residents by age and gender, 1996



What types of drugs are Manitobans taking most?

Intensity of use was measured by the number of prescriptions in different categories of drugs over the year. We found that:

- The most commonly dispensed group of drugs were those which act on the nervous system, such as pain-killers, and drugs used to relieve anxiety/depression (some are also used to encourage sleep). There were 1,274 prescriptions per 1,000 residents.
- Cardiovascular drugs were the second most commonly prescribed (1,122 prescriptions per 1,000 residents). Anti-infection drugs were the third most commonly prescribed (863 prescriptions per 1,000 residents).

Is usage influenced by where people live, for example, urban versus rural?

The study looked at use of prescription drugs by 20 different geographic areas: the 11 rural Regional Health Authorities, and nine areas in Winnipeg. Remember that usage information is according to where an individual lived, not where the medication was purchased.

Winnipeg has more physicians—particularly specialists—compared to the rest of the province. One might therefore expect different access to pharmaceuticals. However, as judged by overall use and costs, there is little difference in Manitobans' use of pharmaceuticals by area of residence. We found that:

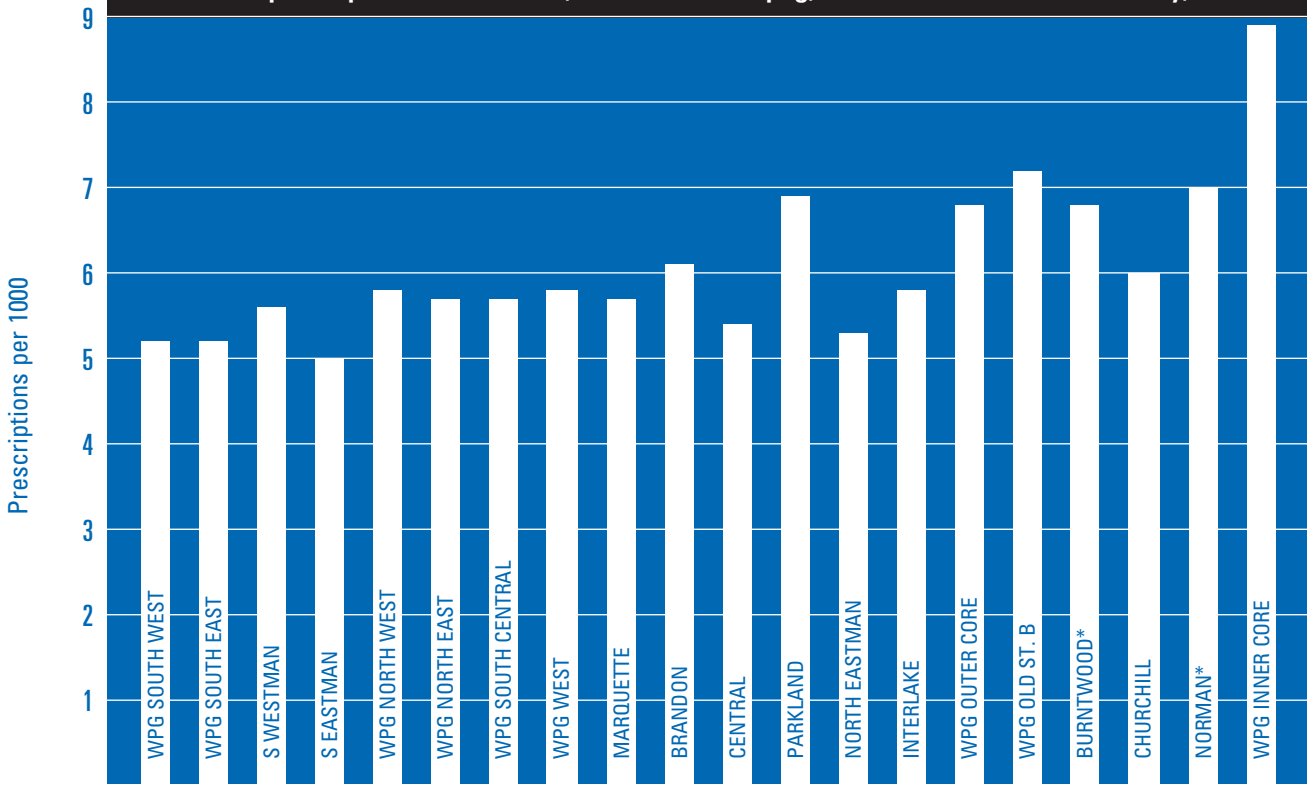
- About 68% of Winnipeggers and close to 65% of non-Winnipeg residents had at least one prescription dispensed during the year.
- The mean number of prescriptions per resident was almost identical—5.9 in Winnipeg vs. 5.8 outside the city.
- Total spending per Winnipeg resident was $167.57, and for non-Winnipeg residents $161.17.

Are the sickest people the major users of prescription drugs?

Most people would agree that if a health care system is working well, people in poorer health would use more health care services. We examined the pharmaceutical data to see if this held true for prescription drugs—and it did.

The study used the measure of premature mortality—the rate of death before age 75—as an indicator of the general health of the population in each area. Then, pharmaceutical use was compared across areas (Fig. 2):

2. Prescriptions per 1000 Residents, RHAs and Winnipeg, in order of Premature Mortality, 1996



* Amounts are less than actual because nursing stations don't report

- Areas of the province where health is generally poorer had more prescriptions dispensed.
- Spending per resident per year also tended to be higher in the less healthy regions.
- In the healthiest area of Manitoba, Winnipeg Southwest, there were 5.2 prescriptions per resident. In the least healthy area of Manitoba, Winnipeg Inner Core, there were 8.9 prescriptions per resident—a 71% difference between the two extremes.

Previous research in Manitoba and elsewhere has shown that health varies according to a person's socioeconomic status. Those in the highest socioeconomic groups are healthier than those in the middle, who are in turn, healthier than those in the lowest category.

We found this health gradient in the use of pharmaceuticals. People in the highest-income neighbourhoods had fewer prescriptions on average than people in the middle-income neighbourhoods, who in turn had fewer prescriptions than those in the lowest-income neighbourhoods. We found that:

- The proportion of Winnipeg residents who had at least one prescription filled in 1996 ranged from 70.8% in the lowest-income group to 66.7% in the highest-income group. The number of prescriptions per user ranged from 11.2 in the lowest-income category to 7.3 per user in the highest.
- Per capita spending on pharmaceuticals also varied by neighbourhood income. In the highest-income neighbourhoods, prescription drug spending was about $152 per person; in the lowest-income neighbourhoods it was nearly $200 per person.
- Government pays 100% of prescription drug costs for some Manitobans, for example, Social Services recipients, status First Nations, and residents of nursing homes. However, most Manitobans pay at least part of the costs, either out of their own pockets, or through private insurance programs. We found that as income decreases, the share paid by government as part of the Pharmacare program increases.

Conclusion

This study was a first step in describing how Manitobans use prescription drugs. The results are encouraging in terms of how well the system is working. Regardless of where people live throughout the province, access to pharmaceuticals is about equal. Areas where residents are the least healthy use the most prescription drugs. And those who have the fewest resources have more of their medications paid for by government.

The difference in prescription drug use between males and females, and between different age groups is consistent with other research. Although this study describes such patterns, it was not designed to explain those patterns. However, there is exciting potential for future research—in these areas and others. We will be able to study, for example, the extent to which the population receives optimal drug therapy, and whether people continue to refill their prescriptions over time.

This overview gives us a first glimpse into how Manitobans are currently using the most rapidly growing segment of the health care system. We have found good news on two fronts. First, the pharmaceutical delivery system appears to be working well: people most likely to benefit from pharmaceuticals are receiving them, and people who are more healthy are prescribed fewer drugs.

Second, the data we have used to study these patterns appear to be strong. Having high quality pharmaceutical data, in addition to the information we have on other parts of the health care system, offers a rich opportunity for further research. Understanding better how our health care system is currently used can suggest ways to preserve and improve it for the future.

Summary by Carolyn De Coster and Cheryl Hamilton, based on the report Analysis of Patterns of Pharmaceutical Use in Manitoba, 1996: Key Findings *by Colleen Metge, Charlyn Black, Sandra Peterson, Anita Kozyrskyj, Noralou Roos and Bogdan Bogdanovic.*

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