March
2005

The High Cost of High-Cost Drug Users in Manitoba

MANITOBA CENTRE FOR HEALTH POLICY

Summary by RJ Currie with technical assistance from Carolyn De Coster, based on the report: *High-Cost Users of Pharmaceuticals: Who Are They?* by Anita Kozyrskyj, Lisa Lix, Matthew Dahl and Ruth-Ann Soodeen

In 2000/01, Manitobans spent $328 million on prescription drugs. That's a lot, though perhaps not surprising. But it gets more interesting when you realize that over forty per cent of those prescription dollars—about $135 million—were consumed by only five per cent of all the Manitobans taking prescription drugs. Considering that about 75% of that is reimbursed by the government, this relatively small group cost Manitoba over $100 million in prescriptions alone.

We also know that drug costs have been rising dramatically year after year. So it follows that this small but expensive five per cent group—a group we call high-cost users—might become an important focal point in any discussion on health care spending. The more we know about high-cost users, the more we'll know whether their costs can be reduced or whether other interventions are the answer—or even possible.

This study looks at high-cost prescription users in Manitoba in 2000/01 and compares them to other Manitobans taking prescriptions. We also look at some patterns in the three previous years. We try to answer many questions, including: What drug categories account for higher prescription costs? What explains the higher drug costs—disease prevalence? more expensive drugs? taking too many drugs? Are there signs or predictors that someone will become a high-cost user?

A study of available literature told us that very little is known about Canadian high-cost users who are subsidized through public prescription insurance. What is known is that high-cost users are more likely than most to suffer from chronic conditions and also from multiple illnesses. Not surprisingly, they are therefore more likely to need multiple medications and to try newer, more expensive drugs. All of which predisposes them to adverse events such as hospitalization.

So there was much to learn about high-cost users. We wanted to know about their socioeconomic status, prescription uses and costs, most common illnesses, and their use of the health care system. We also were interested in their health outcomes and in identifying trigger points for transition from low- to high-cost users.

Some Insights

As mentioned, high-cost users are usually very sick, which is why they need medications (Fig. 1). Forty per cent of high-cost users have high blood pressure, 25% diabetes, and 6% peptic ulcers. These rates are three- to six-fold higher than they are for non-high-cost users. High-cost users are also more likely to have mental health problems; they are twice as likely to suffer from depression than non-high-cost users, and six times more likely to suffer from schizophrenia.

But the presence of one chronic illness alone does not explain the higher prescription costs for these users. They also are far more likely to suffer from multiple illnesses. Close to 40% of high-cost users have two or more major conditions and

over 85% receive six or more medications. This compares to 7% and 16% for non-high-cost users.

Not surprisingly, the end result of all this illness is higher use of many health care services. High-cost users see physicians more often, are hospitalized more often and stay in hospital longer than non-high-cost users.

Another thing that appears to make users "high-cost" is that their medications cost more, even if they aren't necessarily taking more. When we look at users taking six prescriptions or more, the average annual prescription cost is more than four times greater for high-cost users than for non-high-cost users (Fig. 2).

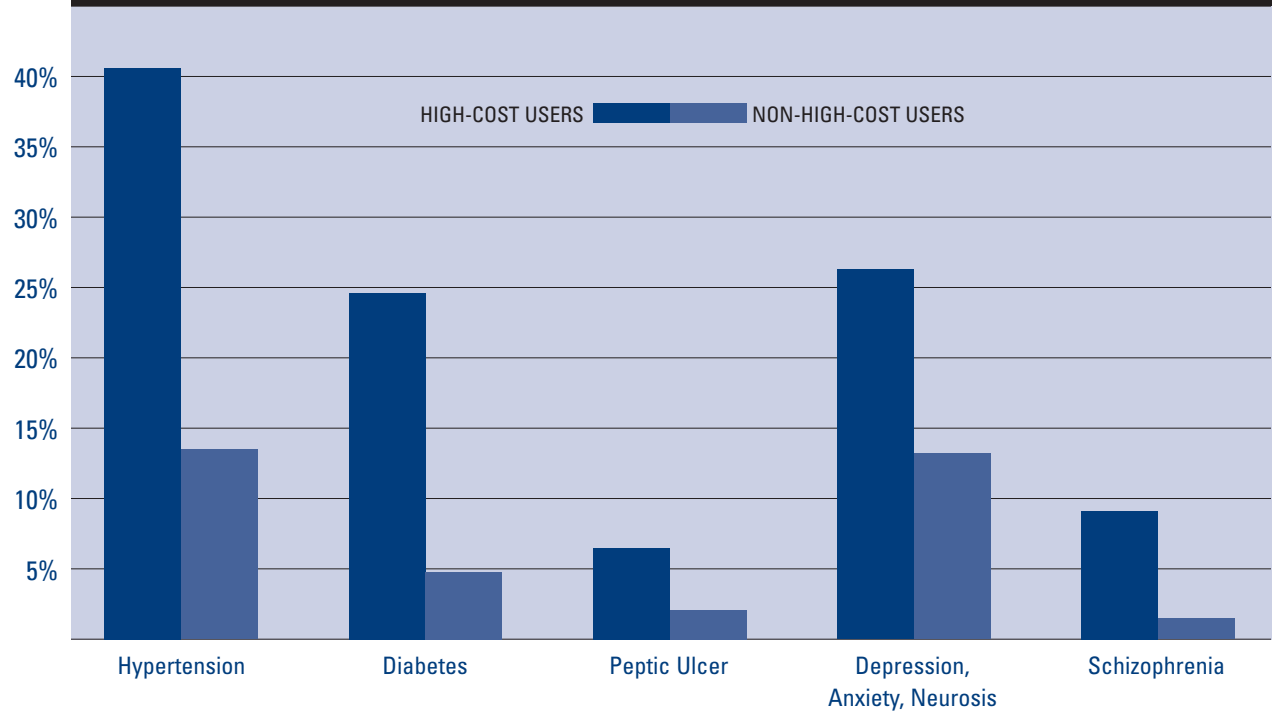
This appears partly due (though not entirely) to the mix of drugs high-cost users are taking. For example, we looked at the percentage of drug costs consumed by those who were taking a cardiovascular medication, along with medications for nervous, digestive and musculoskeletal disorders. This group consumes about 24% of the total spent by high-cost users in 2000/01. This compares to only 6% for the non-high-cost group. In dollars, this works out to $3,435 versus $1,007 per person.

The daily cost of medication for high-cost users is double that for non-high-cost users. Part of this can be explained by greater illness, but not all of it. In some cases a more expensive name brand drug is being used when a therapeutically equivalent and far less expensive drug is available. For example, we noted that Losec, a peptic ulcer drug, is frequently prescribed. It is also the most expensive drug in its class. The same is true of Vasotec, used to treat high blood pressure or congestive heart failure.

We've also learned that not all high-cost users are the same. We identified two groups: persistent (top 5% of costs from 1997/98 to 2000/01) and intermittent (top 5% in 2000/01, but not each of the three previous years). Persistent users are more likely to have cardiovascular problems requiring a greater number and mix of medications (twelve as opposed to ten). Intermittent users tend to be taking immune system modulating drugs used for illnesses like cancer or multiple sclerosis.

In both these sub-groups, some users who are taking fewer medications still have the highest prescription costs. So too, do those with uncommon conditions such as cystic fibrosis or HIV/AIDS.

1. High-Cost Users Have Much Higher Treatment Rates for Chronic Illness Than Non-High-Cost Users, 2000/01



Worrisome Patterns

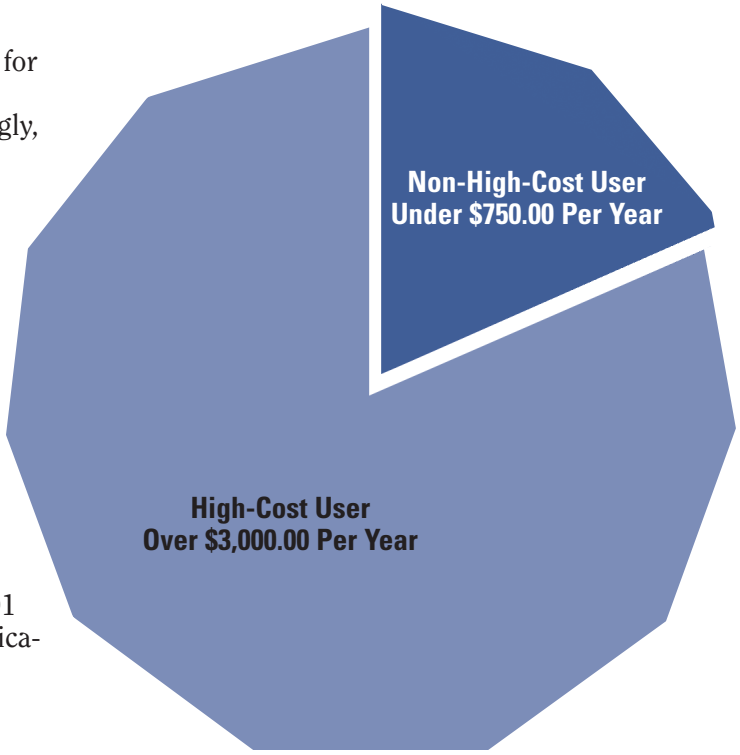
Taking multiple medications is a risk factor for hospitalization, readmission, long hospital stays and institutionalization. Not surprisingly, this is what faces high-cost users at a far greater rate than for non-high-cost users. What is interesting is that persistent high-cost drug users are at particular risk compared to those with similar levels of multiple illness in the intermittent or non-high-cost groups. So the question is, Did their illnesses alone lead to their poorer health outcomes or did the consistent use of multiple drugs also play a part?

There are other worrisome patterns worth noting:

- High-cost users are taking increasingly more prescription medications. In 2000/01 almost 90% were taking six or more medications. This represents an increase of 10% over the previous four years.
- A large proportion of high-cost users are seniors or low-income individuals. The proportion of these vulnerable individuals is increasing.
- Half of high-cost users see three or more family doctors a year. This is a concern because inappropriate, sometimes fatal, drug combinations are more common among persons seeing multiple health care providers. In our study, prescription users with the same level of multiple illness average one day longer in hospital if they see three or more family practitioners during the year.
- High-cost users are more frequent users of health care than non-high-cost users, even as far back as three years before they become high-cost.

What Can Be Done?

First of all, if this study has told us anything, it's that high-cost users of pharmaceuticals in Manitoba are indeed very ill people. It is reassuring that a large share of medications are being used by people who really need them. It is also reassuring that they have greater access to other health care services.



2. Prescription costs of a high-cost user vs. a non-high-cost user, each taking six prescriptions or more (2000/01). The annual prescription cost for the high-cost user is more than four times higher, or over 80 cents of each loonie spent on both.

That being said, we now know more about high-cost users than before, so where do we go from here? How can this information be used to help high-cost users even more? At the same time, will it help lower the physical and financial strain on the health care system? Here are some ideas about how health care providers and managers might use this information.

Let's start with the fact that in the year leading up to becoming high-cost users, we've learned that hospitalization among these individuals increased dramatically. They were more likely than non-high-cost users to be

hospitalized, and once in hospital, their typical stays were seven days or more. They were also more likely to receive home care for the first time. This suggests that they had greater underlying illness than most to begin with. But it also suggests that there are signs, means of predicting, when people are at risk of becoming high-cost prescription users.

All of which means that opportunities exist for possibly meaningful intervention to prevent them from becoming high-cost users. Being hospitalized means there is time, facilities and human resources for conducting medication reviews and possibly improving efficiency of the drugs these unfortunate individuals are taking.

We are talking about things like medication management programs. At the time of this study, high-cost users were averaging 12 different medications per year. In some cases, this mix of medications may contribute to poorer health outcomes and increase the demand for future health care use. Medication management focusses on individuals and tries to delay their disease progression. At the same time, it tries to optimize disease control with the right number of medications.

In short, the goal is to maximize the patient's health while reducing their drug intake and reliance on the health care system. At the same time this saves them money and eases the strain on the public purse. Or put another way, if these patients average only 11 different medications a year instead of 12, Manitoba could save over $8 million a year on pharmaceuticals alone.

A key component of this initiative would be to ensure that management teams are staffed with primary care givers that are multidisciplinary in nature and address a broad range of conditions, including mental health problems. They need not be located in one site, but should include collaboration between physicians, nurses, pharmacists, home care nurses and specialists. And, since poorer health among high-cost-users relates to seeing more than two family practitioners a year, having them see only one or two a year might also improve their health outcomes.

Medical management also makes patients aware that there are cheaper brands of medication available to them that do the same job. As noted in an earlier MCHP report (*Pharmaceuticals: Therapeutic Interchange and Pricing Policies*), treating patients with brand name pharmaceuticals is likely costing Manitobans millions of additional dollars. It could well be that the only thing separating many high-cost users from non-high-cost users is not so much the kind of drugs they take, but the brand of drugs they take.

There are major savings to be made by using therapeutically equivalent generics rather than more expensive name brands. Manitoba Health has proceeded in this direction by introducing the lowest-cost alternative drug reimbursement program. This will save all Manitobans money, including those paying out-of-pocket for their prescriptions.

A large proportion of high-cost users of prescriptions, especially in the earlier described "intermittent" group, are burdened with cancer and other immune system related conditions. While these individuals are candidates for medication management, we need to go further. These people are treated with expensive biotech drugs. Often a new drug represents their best hope. But they can't take it because it's not yet covered under any reimbursement plan. So the process for deciding whether the Province will reimburse patients for new drugs approved by Health Canada needs to be made as streamlined as possible.

This study has given us new insights into high-cost users of pharmaceuticals in Manitoba, who are among the most seriously and persistently ill people in the province. But it's foreseeable that the *physical* burden this places on them and the health care system can be reduced. It's foreseeable that the *financial* burden this places on both can also be reduced. It's even foreseeable that some Manitobans can be saved from becoming high-cost users in the first place.

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Manitoba Centre for Health Policy, University of Manitoba, Winnipeg, Manitoba, R3E 3P5