



THE COST OF SMOKING IN MANITOBA

*A summary of the report, *The Cost of Smoking: A Manitoba Study*, by Patricia Martens, Nathan Nickel, Evelyn Forget, Lisa Lix, Donna Turner, Heather Prior, Randy Walld, Ruth-Ann Soodeen, Leanne Rajotte, and Okechukwu Ekuma.*

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What are the healthcare costs of smoking?

Everyone knows that smoking tobacco is bad for your health. Decades of research and experience have shown that smoking is a leading cause of lung cancer, heart disease, and other health problems. But what does this mean for the healthcare system? What does smoking cost in terms of public healthcare dollars?

Those questions are behind a new, in-depth study by the Manitoba Centre for Health Policy (MCHP). The bottom line? Smoking costs Manitoba's healthcare system at least \$226 million each year, plus another \$18 million for smoking-related cancer care.

These extra costs of healthcare directly related to smoking are close to the annual provincial budget for community and mental health services (\$241 million) or the Manitoba Pharmacare Program (\$269 million). The province expects to collect \$286 million from tobacco taxes in 2014/2015.

As you might expect, the study concluded that smokers use more healthcare services than people who have never smoked. And those extra services translate into higher costs, as shown in Table 1. Smoking costs the province roughly \$39 million every year for extra physician visits, \$40 million for extra prescriptions, and \$147 million for extra days in hospital. These are healthcare services that would not be needed if people had never smoked.

Table 1: Extra costs for healthcare services to smokers

Type of service	Excess cost
Physician visits	\$39 million
Prescriptions (funded by Pharmacare)	\$40 million
Hospital admissions	\$147 million
Total	\$226 million

This study found that smokers in Manitoba have substantially higher healthcare costs—at least \$226 million more per year, plus another \$18 million for cancer care—and that these costs continue for many years, because smokers are not dying much younger than non-smokers.

Most smokers are living into older age

Surprisingly, we found that smokers are not dying a lot younger than non-smokers. Most former and current smokers in Manitoba can expect to live into their late 70s or early 80s. Their life expectancy is only slightly shorter than people who have never smoked (Figure 1).

Figure 1: Life expectancy for smokers and non-smokers



For the smokers, living into older age is good news, although they may not be aging in good health. For the healthcare system, however, it means that the added costs of caring for them will continue for many years, contrary to common thinking. Earlier studies from other countries generally showed that smokers tend to die about 10 years younger than non-smokers.

This study found that difference in life expectancy was quite a bit less – roughly 1 to 3 years.

A unique study

This study is one of the most comprehensive of its kind ever conducted. It looks at smoking habits and healthcare use in the province over 22 years—from 1989 to 2011—for about 45,000 Manitobans. Person by person, the study linked people's responses to survey questions about smoking with information about the healthcare they actually used in the years after the survey.

Most other studies on the costs of smoking have not had access to individual records on healthcare use. Instead, they relied on people remembering what healthcare services they used. For this study, we used information from provincial records that document all publicly funded healthcare services. As with all MCHP studies, all identifying information was removed from the data to protect patients' confidentiality.

Table 2: Smoking categories used in the study

Term	Meaning
Current daily smokers	Smoked daily at the time they were surveyed
Recent quitters	Was a daily smoker; quit up to five years before the survey
Long-time quitters	Was a daily smoker; quit <i>more</i> than five years before the survey
Never a daily smoker	Smoked occasionally at time of survey or previously
Never smoked	Never smoked at any time in their lives

For the information on smoking habits, we used three surveys: the Manitoba Heart Health Survey (1989–1990), and Manitoba participants in the National Population Health Survey (1996–1997), and the Canadian Community Health Survey (multiple waves from 2000 to 2011). Based on the various ways the surveys asked about smoking habits, our study compared people in two ways: (1) people who had ever smoked (smokers) versus people who never smoked (non-smokers), and (2) using the five categories of smokers outlined in Table 2.

We then looked at how much publicly funded healthcare each group used—visits to doctors, prescriptions, hospitalizations, and admissions to nursing homes. When we found differences in the numbers of services each group used, we calculated the cost of those extra services.

Accounting for other differences between smokers and non-smokers

One of the biggest challenges in research about smoking is to account for the possibility that smokers may be sicker than non-smokers, for reasons that may not be related to smoking itself. For example, smokers are more likely to be overweight and have various chronic health conditions, including some that don't have obvious connections to smoking such as arthritis and depression. They are also more likely to be older and live in lower-income areas. These and many other factors can affect how much healthcare people use. So researchers have to find ways to show which differences in healthcare use are really related to smoking and which are not related to smoking.

For this study, we used three different kinds of statistical techniques to make sure we compared groups as fairly as possible. We accounted for more than 200 differences

between smokers and non-smokers—things like age, sex, income, nutrition, and alcohol use—based on data available in the surveys and the health records housed at MCHP. By creating groups that were basically the same except for their smoking habits, we can say with reasonable confidence that any differences we found are related to smoking.

Other key findings

This study builds a detailed picture of smoking, health, and healthcare in Manitoba. Some of our other key findings include:

- Smoking rates have fallen a lot over the past two decades. Figure 2 shows that the percentage of Manitobans who have ever smoked fell from about 65% in 1989 to around 40% in 2011. Figure 3 shows the percentage of current daily smokers fell from about 22% in 1996 to around 14% in 2011. This may not be surprising, given all the campaigns and policies against smoking. Still, the level of smoking in the province remains an important public health concern.

Figure 2: Percentage of Manitobans who have ever smoked

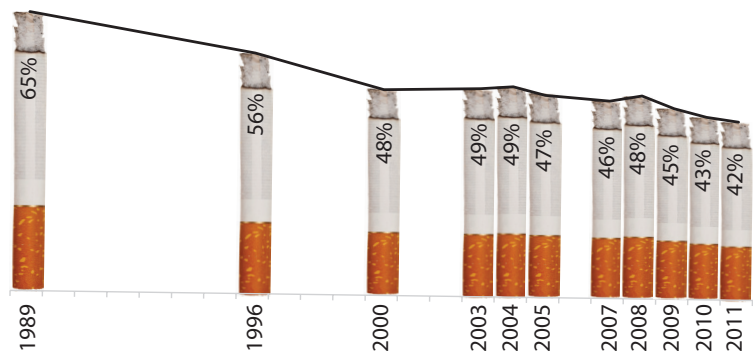


Figure 3: Percentage of Manitobans who are current daily smokers



- For a smaller group of people, we were able to look at how their smoking habits have changed over 16 years (1994 to 2008). About half of the daily smokers said they had cut down during that time, and more than 80% of occasional smokers quit altogether.
- Many people who quit or cut down may have done so because they got sick or worried about their health. Some of the findings about smokers' use of healthcare back up this thinking. For example, recent quitters had more visits to doctors in the five years after they were surveyed, compared to all other categories of smokers.
- Smokers had much higher rates of some but not all kinds of cancer. As expected, lung cancer was 10 times higher among smokers than non-smokers. Smokers also got 10 times more of a group of cancers known to be related to smoking. Overall, smoking accounts for about 580 extra cases of these cancers in Manitoba each year.
- Smoking does not seem to be a factor in determining whether or not people need to move into a nursing home. Admissions to nursing homes were similar across all groups. (The surveys did not include people already living in nursing homes, so these results only refer to people who moved into a nursing home after they were surveyed.)

Regardless of the reason, the reality is that once smokers get beyond age 50, their higher healthcare costs are likely to continue for another two or three decades.

shown. Also, the cost estimates listed above are the lowest—the most conservative—from the three strategies we used to separate the impact of smoking from other factors that could affect people's need for healthcare. For readers who want more information, the full report includes results for all three approaches.

This study did not include several aspects of healthcare and costs that would add to the costs of smoking. These include the effects of second-hand smoke and the costs beyond healthcare, such as lost income or the cost of income assistance for people who can't work because they are sick.

For cancer care, differences in the way records are kept meant that we could not include the specific costs of treatment such as radiation and chemotherapy given in hospital. Because we did

not have access to the more detailed, person-by-person healthcare data that we used for the rest of the study, we calculated the percentage of the budget of CancerCare Manitoba that is likely related to smoking-related cancers.

Finally, the surveys did not include people living in First Nations communities, and some remote areas. From other sources, we know that smoking rates tend to be higher in these communities, so our cost estimates would likely be higher if we had been able to include those people.

Could we be over- or under-estimating the costs?

In every study, researchers have to make decisions about which information to use and how best to analyze it, and those decisions can affect the final results. For this study, we intentionally made decisions that would lead towards underestimating rather than overestimating the findings. That is, we believe the costs of smoking are likely higher than we report.

For example, the cost estimates are based on smoking habits from the 2011 survey—the most recent year available. But 2011 is also the year that had the lowest smoking rates of the 22 years covered by the study. Therefore, the costs for previous years would have been even higher than we have

Why this research matters

This study found that smokers in Manitoba have substantially higher healthcare costs—at least \$226 million more per year, plus another \$18 million for cancer care—and that these costs continue for many years, because smokers are not dying much younger than non-smokers.

This may be a reflection of the good access to universal healthcare that Manitobans enjoy. Or it may be related to the fact that many smokers cut down or quit before they get old. Regardless of the reason, the reality is that once smokers get beyond age 50, their higher healthcare costs are likely to continue for another two or three decades. This has a major impact on the need for healthcare services in Manitoba and the costs for those services.

The Manitoba Centre for Health Policy at the University of Manitoba's College of Medicine, Faculty of Health Sciences, conducts population-based research on health services, population and public health and the social determinants of health.

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