

Health care costs and smoking in Minnesota



The bottom line

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The costs: \$2.87 billion annually

In Minnesota, smoking was responsible for \$2.87 billion in excess medical expenditures in 2007 — a per capita expense of \$554 for every man, woman and child in the state.³ See inside for a breakdown of these costs.

How costs stack up

To get a sense of the magnitude of smoking-related medical costs, it is helpful to compare the \$2.87 billion in public and private health care expenditures attributed to smoking in 2007 with costs of other important efforts. This juxtaposition is for comparison purposes only and shows a relative view of just how much taxpayers, employers and government spend on these preventable costs.

\$2.87 billion
could also buy:



5 Target Fields

\$2.7 billion

or



10 TCF Bank Stadiums

\$2.9 billion

or



12 I-35W Bridges

\$2.8 billion

or



57,000 4-year Degrees

\$2.9 billion

or



72,000 Jobs at \$40,000

\$2.9 billion

5 Target Fields × \$545 million each = \$2.7 billion⁴

10 TCF Bank Stadiums × \$289 million each = \$2.9 billion⁵

12 I-35W bridges × \$234 million each = \$2.8 billion⁶

57,000 four-year undergraduate degrees at the University of Minnesota × \$50,000 each = \$2.9 billion⁷

72,000 jobs × \$40,000 per year each = \$2.9 billion

The call to action: Prevention

In times of economic uncertainty, individuals, businesses and governments alike turn to the basics: What do we need? What can we afford? How do we close the gap between the two?

There's no doubt that health care is something we all need. In Minnesota, recent data show that nearly \$33 billion¹ are spent annually providing health care to our citizens.

In the midst of major budget constraints and a national debate on health care reform, policymakers and employers are increasingly looking at prevention as an important means to control those costs.

It's time well spent. We know that smoking is the No. 1 preventable cause of death in the country.

Minnesota has implemented numerous strategies to reduce tobacco use, such as providing smoke-free workplaces, raising tobacco prices and offering resources to help smokers quit. Those efforts are working — adult smoking rates in Minnesota declined from just over 22 percent in 1999 to 17 percent in 2007.²

Yet much work remains to reduce the burden smoking puts on our state. New prevention efforts offer significant opportunity for controlling health care costs.

This document outlines the estimated costs of health care in Minnesota directly attributable to smoking.

Smoking claims the lives of more than 5,000 Minnesotans each year. Much work remains to reduce the burden smoking puts on our state.

The costs: \$2.87 billion broken down

The \$2.87 billion Minnesotans spent on excess medical costs related to smoking includes nursing home care, professional services, hospital care, prescription drugs and other personal health care for adults. It also includes \$4 million in neonatal expenditures due to maternal smoking during pregnancy. These total expenditures do not include the costs of lost productivity or workers' compensation that are indirectly attributable to smoking.

Smoking-attributable Health Care Costs — Minnesota, 2007

Cost Component	Costs
Nursing home (adult)	\$1,065,000,000
Physician and other professional services (adult)	\$772,000,000
Hospital care (adult)	\$460,000,000
Other personal health care (adult)	\$334,000,000
Prescription drugs (adult)	\$234,000,000
Neonatal expenditures (infant)	\$4,000,000
Total Costs	\$2,869,000,000

This information has been developed using data provided by the state of Minnesota and calculated using a tool developed by the Centers for Disease Control and Prevention to calculate these costs on a state-by-state basis.⁸

The lives lost: A state health tragedy

In 2007, smoking was responsible for the deaths of 5,121 adults in Minnesota and 14 infants whose mothers smoked during pregnancy.⁹ These individuals suffered from one or more of 19 adult and four infant conditions that have been tied to infant mortality or premature death in smokers. The chart below demonstrates the staggering proportion of overall deaths from these conditions that can be tied directly to smoking.

Total and Smoking-attributable Deaths — Minnesota, 2007

Disease Category	All Deaths	Smoking-attributable Deaths
Cancer* (adult)	4,207	2,447
Respiratory diseases [†] (adult)	2,268	1,383
Heart and vascular diseases [‡] (adult)	9,840	1,289
Perinatal conditions ^{††} (infant)	118	14
Total Deaths	16,433	5,135

* Includes: Lip, oral cavity, pharynx; esophagus; stomach; pancreas; larynx; trachea, lung, bronchus; cervix uteri; kidney, other urinary; urinary bladder; and acute myeloid leukemia

[†] Includes: Pneumonia, influenza; bronchitis, emphysema; and chronic airway obstruction

[‡] Includes: Ischemic heart disease; other heart diseases; cerebrovascular disease; atherosclerosis; aortic aneurysm; and other arterial disease

^{††} Includes: Short gestation/low birth weight; respiratory distress syndrome; other respiratory-newborn; and sudden infant death syndrome

This information has been developed using data provided by the state of Minnesota and calculated using a tool developed by the Centers for Disease Control and Prevention to calculate these costs on a state-by-state basis.¹⁰

Totals may not equal sums because of rounding.

The human impact: A composite study

At 45, Michael had been addicted to smoking since he was 16, back when he'd started lighting up behind the bleachers with his buddies. Over the years he'd listened to his parents, his wife and even his kids tell him about the risks and ask him to stop, but his answer was always the same: "Hey, I feel fine. What's the big deal?"

The big deal came a year ago when he woke up one night with what seemed like bad indigestion. By the time pain was radiating up into his jaw and down his left arm, he knew he was in trouble. His wife called the paramedics, and during the ambulance ride to the emergency room, all Michael could think about was the fear in his wife's eyes when they'd said "heart attack."

The night remains a blur, with just fragmented memories of doctors' conversations — "artery blockage," "permanent damage," "fibrillation." He's grateful he has no recall of getting a high-voltage shock through his chest wall to restore a regular heartbeat.

The next day, his doctor told him he wasn't out of the woods. His years of smoking had led to his heart attack, increased his blood pressure and left him at risk for developing blood clots in the brain and lungs, inflammation of the membrane covering his heart and possibly an aneurysm. He would be undergoing a series of medical tests to assess the damage to his heart.

He also learned he would need to have a procedure called balloon angioplasty to widen his coronary artery and that the cardiologist would implant a wire mesh tube called a stent to hold the artery open. It wouldn't be a cure — there was none — but it would reduce his risk for another heart attack.

Then came cardiac rehabilitation. For six months, Michael met regularly with members of his cardiac rehab team — his family doctor, a heart specialist, nurses, exercise specialists, physical and occupational therapists, and dietitians — to help him regain his strength, stop smoking and develop healthier lifestyle habits. A counselor helped him deal with the depression that often follows a heart attack.

This tragic scenario shows the painful human costs of smoking-related disease as well as the economic costs. Out of work for more than two months and lacking short-term disability insurance, Michael suffered a loss of income the family could ill afford. He has a chronic, progressive medical condition, is at increased risk for sudden death from heart arrhythmias and faces lifelong costs for heart drugs, blood pressure medication, blood thinners and other medicines. Because he is likely to develop further complications, he sees doctors frequently and undergoes medical tests routinely — all of which have a daunting price tag.

In 2009, Blue Cross and Blue Shield of Minnesota paid \$292 million in claims related to heart attacks, an average of \$43,000 per heart attack episode.¹¹



**BlueCross BlueShield
of Minnesota**

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¹ Minnesota Department of Health, Health Economics Program, *Minnesota Health Care Spending 2007*; Issue Brief, November 2009.

² *Creating a Healthier Minnesota: Progress in Reducing Tobacco Use*. Minneapolis, MN: ClearWay MinnesotaSM, Blue Cross and Blue Shield of Minnesota and Minnesota Department of Health; September 2008.

³ Fellows JL, Waiwaiole LA. *Smoking-attributable Mortality and Economic Costs in Minnesota, 2007, Final Report*. Portland, OR: Kaiser Foundation Hospitals, Center for Health Research, 2010.

⁴ *Twins Find Outdoors Great in Target Field Debut*, Dave Campbell, Associated Press, last modified April 13, 2010, accessed Sept. 24, 2010, <http://nbcsports.msnbc.com/id/36440918/ns/sports-baseball>.

⁵ *Stadium Quick Facts*, University of Minnesota, accessed Sept. 24, 2010, http://stadium.gophersports.com/about_quick_facts.html.

⁶ *Frequently Asked Questions*, Minnesota Department of Transportation, accessed Sept. 24, 2010, <http://projects.dot.state.mn.us/35wbridge/bridgeFAQ.html>.

⁷ *2010–11 Tuition & Fees*, University of Minnesota, accessed Sept. 24, 2010, http://onestop.umn.edu/pdf/tuition_2010-11.pdf. (Based on in-state tuition and miscellaneous student fees.)

⁸ Centers for Disease Control and Prevention (CDC). *Smoking-attributable Mortality, Morbidity, and Economic Costs (SAMMEC): Adult SAMMEC and Maternal and Child Health (MCH) SAMMEC software*, 2002. Available at <http://apps.nccd.cdc.gov/sammec>.

⁹ Fellows JL, Waiwaiole LA. *Smoking-attributable Mortality and Economic Costs in Minnesota, 2007, Final Report*. Portland, OR: Kaiser Foundation Hospitals, Center for Health Research, 2010.

¹⁰ Centers for Disease Control and Prevention (CDC). *Smoking-attributable Mortality, Morbidity, and Economic Costs (SAMMEC): Adult SAMMEC and Maternal and Child Health (MCH) SAMMEC software*, 2002. Available at <http://apps.nccd.cdc.gov/sammec>.

¹¹ Figure represents claims paid by Blue Cross (discounts applied), its members (through copays and deductibles) and Medicare and other health plans (through coordination of benefits) for claims incurred between Jan. 1, 2009, and Dec. 31, 2009.