HEALTH CARE COSTS AND SMOKING

The Bottom Line

BlueCross BlueShield of Minnesota

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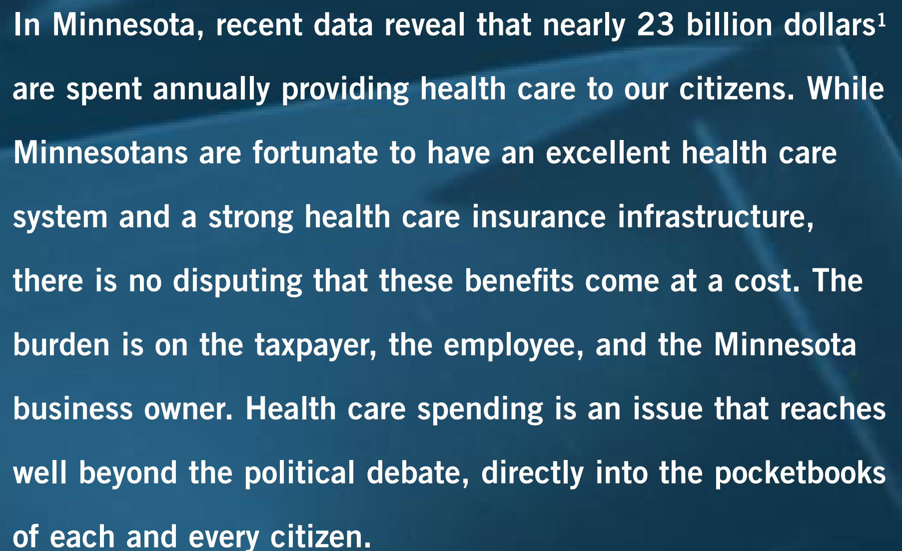

In Minnesota, recent data reveal that nearly 23 billion dollars[1] are spent annually providing health care to our citizens. While Minnesotans are fortunate to have an excellent health care system and a strong health care insurance infrastructure, there is no disputing that these benefits come at a cost. The burden is on the taxpayer, the employee, and the Minnesota business owner. Health care spending is an issue that reaches well beyond the political debate, directly into the pocketbooks of each and every citizen.

In this environment, seeking to curb health care costs is a priority among policymakers and businesses. To address this issue head on, the hierarchy of preventable disease becomes a vivid road map to how we can dramatically cut health care costs by eliminating some of the primary causes of disease, and thereby alleviate both unnecessary costs and, equally, unnecessary suffering.

We know that smoking is the number-one preventable cause of death in the country. Minnesota is no exception. Inside are the estimated costs of health care in Minnesota directly attributable to smoking.

THE COSTS: $1.98 BILLION ANNUALLY

In Minnesota, smoking was responsible for $1.98 billion in excess medical care expenditures in 2002. These expenditures jumped from $1.6 billion[2] just four years earlier, and amount to a per capita expense of $393 for every man, woman, and child in the state. The figure does not include the costs of lost productivity or workers' compensation that are directly attributable to smoking. Tragically, smoking during pregnancy caused eight infant deaths and $6 million in neonatal expenditures in 2002.

Smoking-Attributable Medical Costs for Adults and Infants—Minnesota, 2002

COST COMPONENT	TOTAL	PER CAPITA*
Adult smoking-attributable medical expenditures, 2002†		
Physician and other professional services	$ 546,000,000	$108
Hospital care	291,000,000	58
Prescription drugs	191,000,000	38
Nursing home	788,000,000	156
Other personal health care	156,000,000	31
Infant smoking-attributable neonatal expenditures, 2002	6,000,000	1
Total Smoking-Attributable Medical Costs	**$1,978,000,000**	**$393**

*Per capita estimates based on 2002 Minnesota population of 5,034,000 (Minnesota Demographic Center).

†Total smoking-attributable medical expenditures derived from expenditure smoking-attributable fractions in Miller et al. (1999), and personal health care expenditure data for 2002 obtained from the Minnesota Department of Health (MDH, 2004 unpublished).

Totals may not equal sums because of rounding.

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.[3]

THE PERSPECTIVE: HOW COSTS STACK UP AGAINST THE STATE BUDGET

To get a sense of the sheer magnitude of smoking-related medical costs, it's helpful to compare the $1.98 billion in public and private heath care expenditures attributed to smoking in 2002 with items in Minnesota's state budget. This juxtaposition is for purposes of comparison only and shows just how much taxpayers, businesses, and government spend on these preventable costs in contrast to how much the state is able to spend on the well-being of our citizens.

As shown in this chart, the dollars spent on excess medical costs attributable to smoking tower over the state's 2004 budget for early childhood education ($48 million), transportation ($79 million), veterans' homes ($30 million), and higher education ($1.3 billion) combined.[4] In contrast, 2004 Minnesota's cigarette tax revenues amounted to merely $172 million.[5]

Medical Costs Attributed to Smoking versus State Budget Items

Smoking-attributable medical costs in Minnesota, 2002	**$1,978,000,000**
Compared to the combined total of these state budget items:	
Pollution Control Agency	$ 15,971,000
Veterans' Homes	29,901,000
Department of Agriculture	41,941,000
Early Childhood Education	47,671,000
Employment and Economic Development	63,784,000
Public Safety	73,526,000
Transportation	79,031,000
Child Care Programs	102,881,000
Children's Services Grants	111,264,000
Department of Natural Resources	126,802,000
Higher Education	1,287,455,000
Combined Total	**$1,980,227,000**

In 2002, smoking was responsible for the deaths of 5,689 adults in Minnesota and eight infants whose mothers smoked.[6] These individuals suffered from one or more of the nineteen adult and four infant conditions that have been tied to premature death in smokers.[7] The chart below demonstrates the sometimes-staggering proportion of overall deaths from these conditions that can be directly tied to smoking.

Annual Deaths and Smoking-Attributable Mortality, by Cause of Death and Gender—Minnesota, 2002

DISEASE CATEGORY	MALES		FEMALES	
	Total Deaths	Number of Deaths Attributable to Smoking	Total Deaths	Number of Deaths Attributable to Smoking
Neoplasms				
Lip, oral cavity, pharynx	79	57	45	20
Esophagus	173	124	56	30
Stomach	94	25	74	9
Pancreas	257	52	269	60
Larynx	30	25	9	6
Trachea, lung, bronchus	1,261	1,100	1,064	733
Cervix uteri	–	–	31	3
Kidney, other urinary	145	54	73	3
Urinary bladder	164	76	77	21
Acute Myeloid Leukemia	94	21	71	8
Total	**2,297**	**1,533**	**1,769**	**893**
Cardiovascular diseases				
Ischemic heart disease	3,047	599	2,504	283
Other heart diseases	1,190	206	1,582	122
Cerebrovascular disease	1,028	107	1,659	105
Atherosclerosis	73	18	118	7
Aortic Aneurysm	190	120	140	64
Other arterial disease	75	8	110	13
Total	**5,603**	**1,059**	**6,113**	**595**
Respiratory diseases				
Pneumonia, influenza	380	84	503	56
Bronchitis, emphysema	71	64	83	67
Chronic airways obstruction	866	702	857	628
Total	**1,317**	**851**	**1,443**	**752**
Perinatal conditions				
Short gestation/low birth weight	21	2	22	2
Respiratory distress syndrome	1	0	4	0
Other respiratory-newborn	7	0	5	0
Sudden infant death syndrome	23	3	5	1
Total	**52**	**5**	**36**	**3**
Overall Total	**9,269**	**3,447**	**9,361**	**2,242**

Source: Adult and MCH SAMMEC software (CDC, 2002). Totals may not equal sums because of rounding.

THE INDIVIDUAL: WHAT "TOBACCO-RELATED" DISEASE REALLY MEANS

While the financial costs of smoking state wide are severe, they don't reveal the human impact of these costs on the thousands of individuals and families in Minnesota struggling with a smoking-related disease.

THE COST OF EMPHYSEMA: A COMPOSITE CASE STUDY

Chronic obstructive pulmonary disease, or COPD, is most commonly known as emphysema. Blue Cross and Blue Shield of Minnesota members alone average nearly $28 million in COPD-related costs.[8] More than 80 percent of cases of emphysema are smoking-related.

Emphysema destroys the fragile tissues between the lungs' air sacs. Though its effects are devastating, most people don't experience the symptoms until extensive damage has already occurred in their lungs.

Jane, age 53, began smoking when she was a young adult. Drawn in by the popular allure of cigarettes, she soon became addicted. She never envisioned the consequences.

Two years ago Jane was diagnosed with emphysema. Like most people with this disease, her first symptom was shortness of breath. She had lived with it and a mild "smoker's cough" for years. She didn't mention it to her doctor until she was unable to walk a single block without resting.

Jane's lungs are operating at 30 percent of their original functionality. Her medical treatment is designed to slow the progression of the disease; no treatment can reverse or halt it.

Jane sees a pulmonary specialist every three months and her primary care physician whenever a respiratory infection arises. She uses three different inhalers daily. Together, these medications help to prevent wheezing and shortness of breath. She takes another medication twice daily to help block inflammation, fluid retention, mucous secretion, and constriction in the lungs. When Jane is suffering from a respiratory infection, common with emphysema, her doctors add a steroid to her treatment. In addition, she has been prescribed an antidepressant to help cope with the stress and depression associated with the disease. Doctor visits frequently mean blood work, chest X-rays, stress tests, and even CT scans.

Despite this treatment regimen, Jane was forced to quit her job, having lost the strength and stamina it required. She now suffers from shortness of breath even when at rest, contributing to a loss of appetite, weight loss, and fatigue. Eating and dressing herself are becoming exhausting chores.

Jane knows that as her lung function deteriorates further, she will need supplemental oxygen therapy. She may soon be a candidate for lung surgery to remove diseased lung tissue, but even this will not stop the march of the disease.

This tragic scenario shows the painful human cost of smoking-related disease, but also the economic cost. Jane has suffered a loss of income, now takes five prescription drugs daily, sees doctors frequently, and undergoes expensive medical tests regularly—all of which have a daunting price tag.

1. Minnesota Department of Revenue, Health Economics Program, "Minnesota Health Care Spending 2002"; Issue Brief 2004–05, November 2005.
2. Minnesota Department of Health, Fact Sheet, "Smoking-Attributable Mortality and Economic Costs in Minnesota"; Smoking-Attributable Expenditures (SAE), 1998; February 28, 2002.
3. Fellows, Jeffrey L., *Smoking-Attribuable Mortality and Economic Costs in Minnesota in 2002: Final Report for the Economic Modeling Consultation* (Tobacco). Portland, Ore.: Kaiser Foundation Hospitals, Center for Health Research, 2004.
4. General Fund Balance Analysis, Expenditures by Omnibus Bill Summary, State of Minnesota, Department of Finance, June 14, 2004.
5. Minnesota Department of Revenue, Minnesota Accounting and Procurement System printout, January 28, 2005.
6. Fellows, *Smoking-Attributable Mortality.*
7. Ibid.
8. Figure represents claims made to Blue Cross that are paid by Blue Cross (discounts applied in figure), its members (through copays and deductibles), and Medicare and other health plans (through coordination of benefits). Figure is an average of costs from September 1, 2000, to August 31, 2004.

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Center for Tobacco Reduction and Health Improvement
651-662-6696

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