



Saving Lives, Saving Money

A **state-by-state** report on the health and economic **impact of tobacco taxes**

2011

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The American Cancer Society Cancer Action Network (ACS CAN), the nonprofit, nonpartisan advocacy affiliate of the American Cancer Society, supports evidence-based policy and legislative solutions designed to eliminate cancer as a major health problem. ACS CAN works to encourage elected officials and candidates to make cancer a top national priority. ACS CAN gives ordinary people extraordinary power to fight cancer with the training and tools they need to make their voices heard. For more information, visit www.acscan.org.

Executive Summary

Each year, tobacco use causes hundreds of thousands of premature deaths and costs billions of dollars in medical care and productivity losses in the United States. Strong tobacco control policies at the state level can help reduce the burden of tobacco use. *Saving Lives, Saving Money: A State-by-State Report on the Health and Economic Benefits of Tobacco Taxes*, provides new information about the public health and economic benefits to states that increase their cigarette taxes.

Increasing cigarette excise taxes is an evidence-based policy approach to accomplishing the critical public health goals of reducing the number of current and potential smokers. Cigarette taxes are also a powerful economic tool, directly producing sustained increases in state tax revenues and resulting in large savings in health care costs.

The American Cancer Society Cancer Action Network (ACS CAN) commissioned leading experts to derive updated and expanded estimates for the public health benefits and economic savings of a \$1-per-pack increase in the cigarette excise tax in each of the 50 states and the District of Columbia.

These estimates show a \$1-per-pack cigarette tax increase in every state and D.C. would result in fewer smokers, smoking-related deaths, and youth who become smokers. In addition, raising cigarette taxes would substantially increase tax revenues and reduce health care costs associated with several smoking-related diseases.

SAVING LIVES

A \$1-per-pack cigarette tax increase would reduce the number of smokers by the thousands in every state. In a large state like California, the tobacco tax increase would result in 130,000 fewer adult smokers. In seven specific states the tobacco tax increase would prevent more than 20,000 premature deaths. All told, a \$1 increase in the cigarette taxes of every state would produce the following public health benefits:

Adults Who Would Quit Smoking	Youth Who Would Never Start Smoking	Reduction in Smoking-Related Deaths ¹
1.40M	1.69M	1.32M

SAVING MONEY

A \$1-per-pack tobacco tax increase would lead to more than \$100 million in revenues in each of 44 of the states. At the same time, tobacco tax increases would save states hundreds of millions of dollars in health care costs. If every state and D.C. raised its cigarette tax by \$1 per pack, they would save nearly \$645 million over five years by reducing lung cancer, heart attack, and stroke treatment costs. All states and D.C. would also see significant savings in Medicaid programs treating smoking-related conditions, as well as reduced pregnancy-related treatment costs.

Lung Cancer Treatment Savings	Heart Attack and Stroke Treatment Savings	States' Medicaid Program Savings	Smoking-Related Pregnancy Treatment Savings	Increase in State Revenue
\$199.20M	\$443.73M	\$146.34M	\$406.69M	\$8.62B

WHAT STATES CAN DO

ACS CAN recommends that all states aim for regular, significant cigarette tax increases to achieve the maximum public health and economic benefits.

- Every state should **raise its cigarette tax** as part of a broader ongoing effort to reduce tobacco use and improve public health.
- Tax increases should be **significant** to have a significant effect on curbing tobacco use.
- Tax increases should be **frequent**.
- States should reduce **illegal sales of cigarettes**.
- Tax revenue should be **directed toward public health goals** such as tobacco prevention and cessation programs.

¹ Reduction in smoker deaths and averted future smoker deaths

Introduction

Tobacco's burden on public health and the economy in the United States is well known. There are hundreds of thousands of premature deaths, hundreds of billions of dollars in medical care and productivity losses each year, and more than 1,000 people start smoking every day.

Implementing strong tobacco control policies at the state level has been proven to reduce smoking and discourage new smokers. Through a three-pronged approach – higher tobacco taxes, comprehensive smoke-free laws, and fully funded tobacco prevention and cessation programs – experience and evidence show that state tobacco control policies can help curb the tobacco burden on this country.

Cigarette excise taxes are also a powerful economic tool. Higher cigarette taxes produce sustained increases in tax revenues, as has been demonstrated in dozens of states.²

Cigarette tax increases are a widely used, evidence-based policy approach to reduce the number of current smokers and discourage potential smokers. The taxes also produce sustained increases in state tax revenues, demonstrated through dozens of state cigarette tax increases.

The taxes vary widely from state to state. As of June 1, 2011, cigarette taxes ranged from a high of \$4.35 per pack in New York to a low of 17 cents per pack in Missouri. No state comes close to matching the health and economic costs attributed to smoking, which are estimated at \$10.28 per pack. Although many states have raised their cigarette taxes over the past five years, 21 states still have taxes that are less than \$1 per pack. Fourteen states and D.C. have cigarette taxes of \$2 a pack or more, but would still see significant public health benefits from further increases.

To better understand the dramatically positive impact of tobacco tax increases, researchers have created models to measure the health and economic benefits to a state when a tax increase is implemented. Measuring the benefits of these increases can be complex, but the results are a critical tool for demonstrating just how many deaths can be prevented and how much money can be saved – and raised – as a result.

ABOUT THIS REPORT

This report provides new information about the public health and economic benefits to states that increase their tobacco excise taxes. The first part of the report describes the projected trends across all states and D.C. and an overall picture of the dramatic impact if they all increased their tobacco excise taxes by \$1 per pack. The analysis projects the benefits of cigarette tax increases on public health, such as reduction in smoking and deaths avoided, and on state budgets, including increases to state revenues reduced spending on treatment for lung cancer and other diseases, caring for pregnant smokers, and savings to state Medicaid programs. The second half of the report includes a breakdown of the health and economic benefits that a cigarette tax increase would bring to each state.

The estimates in this report were calculated for ACS CAN using the most up-to-date economic and public health research and methodology. In estimating the changes to the overall health of the population, the findings are based on standard assumptions about how tobacco users react to changes in tobacco prices and laws around tobacco use, how these policies reduce the number of youth who become regular smokers, and the most recent health data from the Centers for Disease Control and Prevention (CDC) on the percentage of smokers expected to die prematurely from smoking. Similarly, in estimating the cost savings to states from tobacco control policies, the report used the latest studies and data on the costs of smoking-related disease and the estimates of savings to states with lower burden of treating lung cancers, heart attacks, and strokes caused by smoking. The methodology and assumptions used to calculate the estimates are detailed in the Methodology.

These estimates will change slightly each year because the data are based on current tobacco control policies, population data, local laws, and health care costs that can change over time. These estimates take into account past changes in the federal tobacco tax.

² Chaloupka, F. and J.A. Tauras. The Impact of State Cigarette Excise Tax Increases on Cigarette Smoking, Cigarette Excise Tax Revenues, Smoking Attributable Deaths, and Related Health Care Costs. Prepared for the American Cancer Society Cancer Action Network, May 2011.

State	Reduction in Adult Smoker Deaths
Alabama	10,230
Alaska	926
Arizona	8,054
Arkansas	5,382
California	44,457
Colorado	8,005
Connecticut	3,559
Delaware	1,363
District of Columbia	523
Florida	29,296
Georgia	18,593
Hawaii	1,092
Idaho	2,522
Illinois	20,437
Indiana	13,867
Iowa	4,318
Kansas	4,630
Kentucky	11,463
Louisiana	10,226
Maine	1,892
Maryland	7,094
Massachusetts	6,851
Michigan	16,506
Minnesota	7,868
Mississippi	6,316
Missouri	16,828
Montana	1,343
Nebraska	2,801
Nevada	5,918
New Hampshire	1,868
New Jersey	9,276
New Mexico	2,932
New York	16,051
North Carolina	20,128
North Dakota	1,258
Ohio	20,270
Oklahoma	7,905
Oregon	5,709
Pennsylvania	22,237
Rhode Island	1,138
South Carolina	8,846
South Dakota	1,050
Tennessee	14,049
Texas	37,026
Utah	1,754
Vermont	813
Virginia	14,949
Washington	6,454
West Virginia	5,155
Wisconsin	7,492
Wyoming	1,003
TOTAL	479,723

Saving Lives

Taxes on cigarettes and other tobacco products improve public health in several ways. Higher taxes make cigarettes more expensive. To avoid the higher costs, some smokers reduce the number of cigarettes they smoke and some quit smoking. For every 10 percent increase in the price of a pack of cigarettes, youth smoking rates drop by 6.5 percent and overall cigarette consumption declines by 4 percent.³ More expensive cigarettes mean that young people will be less likely to become regular smokers. The fewer current smokers and the fewer youth who start smoking, the fewer people who would be expected to die from a tobacco-related disease. The effects occur gradually after the tax is applied, as smoking is reduced, disease slows, and ultimately, death rates decline.

In total, if each state and D.C. increased its cigarette tax by \$1, the following estimates of public health benefits would apply across the United States:

Adults Who Would Quit Smoking	Youth Who Would Never Start Smoking	Reduction in Smoking-Related Deaths ⁴
1.40M	1.69M	1.32M

REDUCTIONS IN SMOKING RATES

With a one-time, \$1-per pack cigarette tax increase, every state and D.C. would reduce the number of smokers by the thousands. For a large state like California, a tax increase would result in about 130,000 fewer adult smokers. In half the states, adding \$1 to the cigarette tax would reduce the number of current smokers by at least 20,000. The potential impact is stronger in states with higher smoking rates. For example, a tobacco tax increase would mean 41,000 fewer smokers in Tennessee and 59,000 fewer smokers in Ohio, as smokers quit and young people never start.

REDUCTIONS IN OVERALL PREMATURE DEATH

It is clear that cigarette excise taxes reduce deaths from smoking and exposure to secondhand smoke. While the link between increased taxes and reduced premature deaths is well-documented,⁵ the evidence now shows that in every state, raising taxes would reduce tobacco-related deaths in large numbers.

A total of 480,000 premature deaths of current adult smokers could be prevented nationwide if every state and D.C. implemented a \$1-per-pack cigarette tax increase. Seven of the states would each prevent more than 20,000 premature deaths, and an additional 10 states would see at least 10,000 deaths prevented. All but three states would prevent at least 1,000 premature smoking-related deaths with a \$1 cigarette tax increase.

With their larger populations, California and Texas could prevent the deaths of 44,500 and 37,000 people, respectively, with a one-time \$1 tax increase.

³ Chaloupka and Tauras, 2011.

⁴ Reduction in smoker deaths and averted future smoker deaths

⁵ Chaloupka, F.J., T-W Hu, K.E. Warner, R. Jacobs, and A. Yurekli. The Taxation of Tobacco Products, *Tobacco Control Policies in Developing Countries*, Oxford University Press, 2000.

A total of 480,000 premature deaths of current adult smokers could be prevented nationwide if every state and D.C. implemented a \$1-per-pack cigarette tax increase.



REDUCTIONS IN FUTURE SMOKERS AND FUTURE SMOKER DEATHS

The best way to reduce the health harms from smoking is to keep people, especially the young, from ever picking up a cigarette in the first place. The majority of new smokers are under 18 when they start.⁶ Research also shows that youth are even more sensitive to the prices of tobacco products than adults.⁷ That means increasing the tax which results in higher priced cigarettes is an effective way to reduce the number of kids who try cigarettes, become regular smokers, and eventually succumb to disease or death resulting from their tobacco use.

In each state that raised its cigarette tax by \$1 a pack, at least 1,000 fewer people, many of them youth, would become regular smokers. Thirty states would reduce the number of future smokers by more than 20,000; 12 states would prevent more than 50,000 people from becoming smokers. In Texas alone, this tax increase could result in 150,000 fewer people starting to smoke.

About half of all smokers will eventually die of a tobacco-related illness.⁸ By preventing smokers from ever starting, tobacco taxes prevent thousands of premature deaths. A \$1 tax increase in California, for example, would result in 76,700 fewer premature deaths due to a lower initiation rate. More than half of states would avoid at least 10,000 premature deaths by reducing the number of future smokers.

Across the United States, we would see 1.6 million fewer future smokers and 845,000 fewer premature deaths of future smokers if every state and D.C. raised its cigarette tax by \$1.00.

State	Reduction in Future Smokers	Reduction in Future Smoker Deaths
Alabama	34,364	17,182
Alaska	3,713	1,857
Arizona	25,593	12,796
Arkansas	20,794	10,397
California	153,292	76,646
Colorado	32,608	16,304
Connecticut	13,078	6,539
Delaware	4,478	2,239
District of Columbia	1,259	630
Florida	86,113	43,056
Georgia	70,888	35,444
Hawaii	3,687	1,844
Idaho	9,987	4,993
Illinois	77,853	38,927
Indiana	55,073	27,536
Iowa	15,403	7,701
Kansas	17,530	8,765
Kentucky	41,470	20,735
Louisiana	36,364	18,182
Maine	5,946	2,973
Maryland	25,362	12,681
Massachusetts	22,184	11,092
Michigan	59,541	29,771
Minnesota	28,572	14,286
Mississippi	22,507	11,253
Missouri	58,745	29,372
Montana	4,461	2,230
Nebraska	11,020	5,510
Nevada	18,908	9,454
New Hampshire	6,297	3,149
New Jersey	30,730	15,365
New Mexico	10,132	5,066
New York	47,670	23,835
North Carolina	70,902	35,451
North Dakota	3,924	1,962
Ohio	72,403	36,202
Oklahoma	29,129	14,564
Oregon	21,152	10,576
Pennsylvania	75,148	37,574
Rhode Island	3,634	1,817
South Carolina	28,386	14,193
South Dakota	4,160	2,080
Tennessee	43,370	21,685
Texas	150,059	75,030
Utah	7,612	3,806
Vermont	2,857	1,429
Virginia	51,789	25,895
Washington	21,467	10,733
West Virginia	18,269	9,134
Wisconsin	26,963	13,482
Wyoming	3,273	1,636
TOTAL	1,690,119	845,059

⁶ Substance Abuse and Mental Health Services Administration. (2010). *Results from the 2009 National Survey on Drug Use and Health: Volume I. Summary of National Findings* (Office of Applied Studies, NSDUH Series H-38A, HHS Publication No. SMA 10-4856Findings). Rockville, MD. Available at <http://oas.samhsa.gov/NSDUH/2k9NSDUH/Alts.htm#Fig4-3>.

⁷ Chaloupka, FJ. State and local policies - lessons learned. ImpacTeen Research Paper number 38. Chicago: University of Illinois at Chicago, Institute for Health Research and Policy, Health Policy Center, 2010.

⁸ Jha P, et al. A nationally representative case-control study of smoking and death in India. *New England Journal of Medicine*. 358(11):1137-1147 (2008).

Across the United States, we would see 1.6 million fewer future smokers and 845,000 fewer premature deaths of future smokers if every state and D.C. raised its cigarette tax by \$1.00.



INCREASING PUBLIC HEALTH BENEFITS

All of the public health benefits described are directly related to the size of the tax increase. The larger the tax increase, the greater the benefits. A \$1.25 tobacco tax increase in a state like Mississippi would yield significantly greater benefits than a \$1 increase by preventing an additional 5,600 people from becoming smokers, reducing the number of adult smokers by an additional 4,600 and averting about 4,400 premature deaths due to smoking.

Conversely, when states implement lower cigarette tax increases, the potential public health benefits are smaller, fewer deaths are prevented, and smoking rates decline more slowly.

Saving Money

Raising cigarette taxes produces fiscal benefits in two ways. First, higher taxes bring in more tax revenue for the state. This is true even as the overall sales of cigarettes decline – the additional tax revenue is greater than the lost revenue from fewer cigarettes sold. Second, because higher tobacco taxes are proven to reduce smoking rates and consumption, states spend significantly less on treating people for tobacco-related disease and recognize major savings in programs such as Medicaid.

A \$1-per-pack cigarette tax increase in every state would yield the following health care cost savings across the country over five years:

Lung Cancer Treatment Savings	Heart Attack and Stroke Treatment Savings	States' Medicaid Program Savings	Smoking-Related Pregnancy Treatment Savings	Increase in State Revenue
\$199.20M	\$443.73M	\$146.34M	\$406.69M	\$8.62B

INCREASED REVENUE

By increasing its cigarette tax, each state would see an overall increase in cigarette tax revenues. The higher the tax increase, the greater the increase in revenue. A \$1-per-pack tax increase would lead to at least \$100 million in additional revenues in each of 44 of the states. The District of Columbia, which would see the smallest revenue due to its small population, would receive an estimated \$6.7 million additional tax revenue each year from a \$1 tobacco tax increase. For a large state like Texas, a \$1.00 tobacco tax increase would lead to a spike of \$532 million over current revenues. If every state across the country and D.C. implemented a \$1-per-pack tax increase, the additional revenue raised would total \$8.62 billion, bringing the total revenue to \$25.7 billion. This represents a 54 percent increase over 2010 gross state cigarette tax revenue.⁹

⁹ Orzechowski and Walker. *The Tax Burden on Tobacco*, 2010.

If every state across the country and D.C. implemented a \$1-per-pack tax increase, the additional revenue raised would total \$8.62 billion, bringing the total revenue to \$25.7 billion. This represents a 54 percent increase over 2010 gross state cigarette tax revenue.

DECREASED HEALTH CARE COSTS

Reducing smoking saves states millions of dollars in expenditures for treating lung cancer, heart attacks and strokes, pregnancy complications, and other health problems. With a \$1-per-pack tax increase, 38 states would each save at least \$1 million in health care costs over five years from treating lung cancer alone. Fourteen states would enjoy at least a \$5 million in savings each, and California would save an estimated \$18.5 million due to lower lung cancer treatment costs. If every state raised its cigarette tax by \$1, they would save close to \$200 million over five years by reducing lung cancer treatment costs.

The health care savings from reducing costs for treating heart attacks and strokes related to smoking would be even greater. Seventeen states would save more than \$10 million over five years, with four states saving in excess of \$20 million just for treating these conditions.

States would also benefit from lower costs for treating smoking-related pregnancy complications. More than half of the states would each save at least \$5 million over five years with a \$1 tax increase. Every state except for three and D.C. would save at least \$1 million over that time.

State Medicaid programs spend large sums on treating tobacco-related disease. Seven states would each save an estimated \$5 million or more over five years by increasing their tobacco tax by \$1. Twenty-nine states would each see at least \$1 million in savings over five years.

If every state and D.C. raised its cigarette tax by \$1, they would save close to \$200 million over five years by reducing lung cancer treatment costs.



State	Five Year Lung Cancer Cost Savings
Alabama	\$4,220,324
Alaska	\$389,679
Arizona	\$3,370,720
Arkansas	\$2,235,761
California	\$18,469,619
Colorado	\$3,311,843
Connecticut	\$1,497,195
Delaware	\$219,874
District of Columbia	\$566,934
Florida	\$12,170,502
Georgia	\$7,647,895
Hawaii	\$461,691
Idaho	\$1,039,796
Illinois	\$8,523,735
Indiana	\$5,751,289
Iowa	\$1,800,126
Kansas	\$1,916,602
Kentucky	\$4,714,104
Louisiana	\$4,205,974
Maine	\$791,736
Maryland	\$2,963,022
Massachusetts	\$2,882,017
Michigan	\$6,893,176
Minnesota	\$3,276,453
Mississippi	\$2,609,921
Missouri	\$6,878,600
Montana	\$561,451
Nebraska	\$1,159,283
Nevada	\$2,446,685
New Hampshire	\$778,743
New Jersey	\$3,898,920
New Mexico	\$1,222,041
New York	\$6,807,376
North Carolina	\$8,284,100
North Dakota	\$517,096
Ohio	\$8,423,134
Oklahoma	\$3,280,057
Oregon	\$2,372,692
Pennsylvania	\$9,254,826
Rhode Island	\$479,299
South Carolina	\$3,650,111
South Dakota	\$438,428
Tennessee	\$5,797,664
Texas	\$15,402,051
Utah	\$731,528
Vermont	\$341,005
Virginia	\$6,155,284
Washington	\$2,715,914
West Virginia	\$2,121,459
Wisconsin	\$3,144,154
Wyoming	\$414,478
TOTAL	\$199,206,367

Policy Recommendations

As these estimates show, states derive large, measurable benefits from increasing cigarette taxes. Over the past 10 years, 47 states and D.C. have raised their cigarette taxes in more than 100 separate increases. The average state cigarette excise tax has increased by a factor of five since the mid-1990s.¹⁰ Fourteen states and D.C. now have cigarette taxes of \$2 or more, but in 21 states tobacco taxes remain less than \$1.

Cigarette taxes are proven, predictable sources of new state revenue. Yet some states are considering rolling back cigarette taxes, which would harm public health, reduce their tax revenue, and increase their health care costs. ACS CAN recommends that all states aim for regular, significant cigarette tax increases to achieve the maximum public health and economic benefits.

- Every state should **raise its cigarette tax**.

There is no ceiling to the health and economic benefits of increasing cigarette taxes. All states would see great return from higher tobacco taxes, but those states with currently low cigarette taxes would particularly benefit from this policy change.

- Tax increases should be **significant**.

Small tax increases are not effective in producing significant public health and economic gains. The increase should be both substantial in absolute amount (at least \$1 per pack), and also large enough compared to the existing tax and average price to cause consumers to notice the price difference and respond to it.

- Tax increases should be **frequent**.

As with most consumer goods, the impact of a price increase on consumer behavior declines over time. The tobacco industry continually devises new ways to maintain sales despite tax increases and other tobacco control policies through price discounting, new marketing techniques, and other activities. To maintain the impact of the tax on smoking rates, public health, revenues, and health care costs, states should raise cigarette taxes on a frequent basis.

- States should reduce **illegal sales of cigarettes**.

Illegal cigarette sales lessen the impact of cigarette excise taxes. To avoid this, states should adopt high-tech tax stamps, license all involved in tobacco distribution, and effectively enforce tax policies.

- Tax revenue should be **directed toward public health goals**.

Research has shown that states can see even greater payback and public health gains from cigarette tax increases if the tax revenues are reinvested in comprehensive programs designed to reduce tobacco use and to prevent non-communicable diseases.¹¹ This could include tobacco cessation programs and evidence-based health and wellness strategies.

¹⁰ Ibid.

¹¹ Chaloupka and Taurus, 2011.

Methodology

KEY ASSUMPTIONS

- The net-of-tax cigarette price is assumed to be rising at the same rate as it increased between November 2009 and November 2010.
- A 10 percent increase in cigarette price would reduce smoking prevalence among youth by 6.5 percent and overall consumption by 4 percent.
- All federal and state cigarette excise taxes are assumed to increase cigarette prices by the amount of the tax.
- The average probability of a premature death for a regular adult smoker falls from 0.50 to 0.10 after cessation.
- Smoking attributable death is based on a 0.50 probability.
- A 10 percent increase in cigarette prices would reduce smoking prevalence among pregnant women by 7 percent.
- All numbers are rounded. Totals do not always equal the summation of the rounded parts.

DATA SOURCES

Tax Revenue

All estimates are based on the state fiscal year, with the state tax increases assumed to go into effect at the start of the 2012 fiscal year (July 1, 2011). Data used for these estimates come from several sources:

Annual, state-level tax-paid cigarette sales are taken from *The Tax Burden on Tobacco, 2010*, and the monthly state cigarette sales and tax revenue reports published by Orzechowski and Walker. At the time these estimates were produced, the annual tax-paid sales data were available through FY2010 and the monthly data were available through October 2010.

State cigarette excise tax rates and effective dates for changes over the past several years were obtained from multiple sources, including: *The Tax Burden on Tobacco, 2010* (Orzechowski and Walker, 2011); and factsheets on state tax rates and increases from the Campaign for Tobacco-Free Kids (available on-line at: <http://www.tobaccofreekids.org/research/factsheets/pdf/0275.pdf>).

Average state-level retail cigarette prices, including generic brands, reported in *The Tax Burden on Tobacco, 2010* (Orzechowski and Walker, 2011).

Monthly Consumer Price Index (all urban consumers, current series) produced by the Bureau of Labor Statistics (<http://www.bls.gov/cpi/home.htm>).

Smoking Prevalence

Sources above, and these sources:

Adult Smoking Prevalence – data on state level smoking prevalence among persons 18 years of age and older in 2008 and 2009 are taken from the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (available on-line at www.cdc.gov/brfss).

Youth Smoking Prevalence – data on the estimated future smoking prevalence of the cohort of 0- to 17-year-olds in 2008 and 2009 are based on the population weighted averages of smoking prevalence rates for 18- to 24-year-olds and 25- to 34-year-olds in 2007, taken from the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (available on-line at www.cdc.gov/brfss).

Age-specific state-level population projections for each year were obtained from the U.S. Census Bureau (www.census.gov).

Pregnant Women Smoking Prevalence

In addition to the data on state cigarette taxes, cigarette prices, and the consumer price index described above:

State-specific smoking prevalence rates among pregnant women are taken from the Centers for Disease Control and Prevention Natality public-use data on CDC WONDER On-line Database. In reporting year 2006, maternal tobacco use for all the states that we are examining is provided, with the exception of California, Delaware, Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York, North Dakota, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Vermont, Washington, and Wyoming. Between 2002 and 2006, these states changed the way they collect smoking information among pregnant women. The new data is not comparable to the old data. Therefore, smoking prevalence rates among pregnant women using the latest year in which the old data collection is employed are used for these states. California-specific smoking prevalence among pregnant women for 2003 was obtained from California Department of Health Services, Tobacco Control Section. Prevalence data for 2003 was obtained from: <http://ww2.cdph.ca.gov/programs/tobacco/Documents/CTCPPregnancy06.pdf>

State-level birth projections for 2012-2021 were obtained from the U.S. Census Bureau (<http://www.census.gov/population/projections/DownldFile3.xls>).

Monthly Consumer Price Index for Medical Care (all urban consumers, current series) produced by the Bureau of Labor Statistics (<http://www.bls.gov/cpi/home.htm>).

Lung Cancer Incidence and Cost

In addition to the data on state cigarette taxes, cigarette prices, and the consumer price index described above:

Weighted adjusted risk ratios for the four major histologic types of lung cancer were obtained from Khuder, S and A. Mutgi (2001). "Effects of Smoking Cessation on Major Histologic Types of Cancer," *CHEST* 120(5): 1577-1583, 2001.

Total lung cancer deaths and smoking attributable lung cancer percent were obtained from the American Lung Association, "Trends in Lung Cancer Morbidity and Mortality," Epidemiology and Statistical Unit, Research and Scientific Affairs, September 2008.

The total number of adult smokers for years 1998-2006 were obtained from various *MMWR* reports (Cigarette Smoking Among Adults – United States, 2006, 2004, 2003, 2002, 2001, 2000, 1999, and 1998 and Tobacco Use Among Adults - 2005).

The prevalence of histologic types of lung cancer were obtained from the Wellness Community National Cancer Support Web site (http://www.thewellnesscommunity.com/programs/frankly/lung/lung_cancer_home.asp).

Data on state level smoking prevalence among persons 18 years of age and older in 2009 are taken from the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (available on-line at www.cdc.gov/brfss).

Lung cancer costs obtained from Chang et al. (2004), "Estimating the Cost of Cancer: Results on the Basis of Claims Data Analyses for Cancer Patients Diagnosed With Seven Types of Cancer During 1999 to 2000," *Journal of Clinical Oncology* 22(17): 3524-3530.

Heart Attack and Stroke Savings

Monthly Consumer Price Index for Medical Care (all urban consumers, current series) produced by the Bureau of Labor Statistics (<http://www.bls.gov/cpi/home.htm>).

Smoking prevalence among individuals aged 35-64 in 2009 is based on the state specific population weighted averages of smoking prevalence rates for 35- to 44-year-olds, 45- to 54-year-olds, and 55- to 64-year-olds in 2009, taken from the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (available on-line at www.cdc.gov/brfss).

State Medicaid Savings

In addition to the data on state cigarette taxes, cigarette prices, and the consumer price index described above:

The state-specific numbers of Adult Medicaid recipients in FY2007 were obtained from the Kaiser Family Foundation State Health Facts Web site: (<http://www.statehealthfacts.org/medicaid.jsp>).

The state-specific average expenditures per adult Medicaid recipients in FY2007 were obtained from the Kaiser Family Foundation State Health Facts Web site: (<http://www.statehealthfacts.org/medicaid.jsp>)

Federal Medical Assistance Percentages (FMAP) for Medicaid in FY2011 were obtained from the Kaiser Family Foundation State Health Facts Web site: <http://www.statehealthfacts.org/comparetable.jsp?ind=184&cat=4>

Smoking-attributable fractions (SAFs) for publicly funded health care for the 50 states and DC for fiscal year 1993 were obtained from Miller, L.S., et al. (1998) "State Estimates of Medicaid Expenditures Attributable to Cigarette Smoking Fiscal Year 1993" *Public Health Reports* 113:140-151.

State-specific prevalence of smoking among individuals with income levels less than \$15,000 obtained from the Behavioral Risk Factor Surveillance System, 2009.¹²

¹² The BRFSS smoking prevalence rates for the states of Alaska, Nevada, and Wisconsin for individuals with incomes <\$15,000 were not provided in 2009. Instead, the most recent prevalence figures for individuals with incomes <\$15,000 were used for these states. In particular, for the states of Alaska, Nevada, and Wisconsin, the smoking prevalence rates (for individuals with incomes <\$15,000) from 2005, 2007, and 2008 were used respectively. These earlier prevalence rates were used to predict the 2009 prevalence rate of smoking among individuals with incomes < \$15,000 accounting for the impact of state-specific changes in cigarette prices between 2005 and 2009 for Alaska, between 2007 and 2009 for Nevada, between 2008 and 2009 for Wisconsin and accounting for an annual natural decline of smoking prevalence of two percent.