



Saving Lives, Saving Money

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

2011

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



The Health and Economic Benefits of Raising Washington's Cigarette Tax

A \$1.00 increase in Washington's cigarette tax would prevent approximately 21,500 youth from smoking and, over five years, save an estimated \$8.59 million in lung cancer, heart attack, and stroke costs.

Raising the excise tax on cigarettes is one of the most effective ways to reduce smoking, save lives, and raise government revenue – even in tough economic times. Excise taxes decrease the number of youth who start smoking, increase the number of smokers who quit, cut health care costs, and reduce deaths from lung and other cancers, heart attacks, strokes, and other preventable diseases. The health benefits of cigarette taxes are even greater when the revenue raised is earmarked for tobacco control or public health programs.

Washington's current cigarette tax is \$3.025 per pack, the 3rd highest in the nation. This is well above the nationwide average of \$1.45 per pack. Washington has not raised its cigarette tax since 2010.⁺

SAVING LIVES

A \$1.00-per-pack increase in Washington's cigarette tax would be expected to provide the following reductions in the number of smokers and, as a result, the number of smoking-related deaths:^{*}

Adults Who Would Quit Smoking	Youth Who Would Never Start Smoking	Reduction in Smoking-Related Deaths
18,800	21,500	17,200

SAVING MONEY

In addition to saving lives, raising Washington's cigarette tax would cut healthcare costs and raise millions of dollars in revenue. Over five years, a \$1.00 cigarette tax increase would be expected to produce the following economic and fiscal benefits:^{*}

Lung Cancer Treatment Savings	Heart Attack and Stroke Treatment Savings	State's Medicaid Program Savings	Smoking-Related Pregnancy Treatment Savings	Increase in State Revenue
\$2.72M	\$5.87M	\$3.00M	\$6.37M	\$68.40M

⁺Sources: Orzechowski and Walker. *The Tax Burden on Tobacco*, 45, 2010, and The Campaign for Tobacco Free Kids. "State Cigarette Excise Tax Rates and Rankings". August 2010. Available at <http://www.tobaccofreekids.org/research/factsheets/pdf/0097.pdf>.

^{*}Estimates are based on analysis performed on behalf of the American Cancer Society Cancer Action Network. Totals in charts have been rounded.



The Health and Economic Benefits of Raising West Virginia's Cigarette Tax

A \$1.00 increase in West Virginia's cigarette tax would prevent approximately 18,300 youth from smoking and, over five years, save an estimated \$6.78 million in lung cancer, heart attack, and stroke costs.

Raising the excise tax on cigarettes is one of the most effective ways to reduce smoking, save lives, and raise government revenue – even in tough economic times. Excise taxes decrease the number of youth who start smoking, increase the number of smokers who quit, cut health care costs, and reduce deaths from lung and other cancers, heart attacks, strokes, and other preventable diseases. The health benefits of cigarette taxes are even greater when the revenue raised is earmarked for tobacco control or public health programs.

West Virginia's current cigarette tax is \$0.55 per pack, the 8th lowest in the nation. This is well below the nationwide average of \$1.45 per pack. West Virginia has not raised its cigarette tax since 2003.*

SAVING LIVES

A \$1.00-per-pack increase in West Virginia's cigarette tax would be expected to provide the following reductions in the number of smokers and, as a result, the number of smoking-related deaths:*

Adults Who Would Quit Smoking	Youth Who Would Never Start Smoking	Reduction in Smoking-Related Deaths
15,000	18,300	14,300

SAVING MONEY

In addition to saving lives, raising West Virginia's cigarette tax would cut healthcare costs and raise millions of dollars in revenue. Over five years, a \$1.00 cigarette tax increase would be expected to produce the following economic and fiscal benefits:*

Lung Cancer Treatment Savings	Heart Attack and Stroke Treatment Savings	State's Medicaid Program Savings	Smoking-Related Pregnancy Treatment Savings	Increase in State Revenue
\$2.12M	\$4.66M	\$480,000	\$5.79M	\$126.80M

*Sources: Orzechowski and Walker. *The Tax Burden on Tobacco*, 45, 2010, and The Campaign for Tobacco Free Kids. "State Cigarette Excise Tax Rates and Rankings". August 2010. Available at <http://www.tobaccofreekids.org/research/factsheets/pdf/0097.pdf>.

*Estimates are based on analysis performed on behalf of the American Cancer Society Cancer Action Network. Totals in charts have been rounded.



The Health and Economic Benefits of Raising Wisconsin's Cigarette Tax

A \$1.00 increase in Wisconsin's cigarette tax would prevent approximately 27,000 youth from smoking and, over five years, save an estimated \$9.47 million in lung cancer, heart attack, and stroke costs.

Raising the excise tax on cigarettes is one of the most effective ways to reduce smoking, save lives, and raise government revenue – even in tough economic times. Excise taxes decrease the number of youth who start smoking, increase the number of smokers who quit, cut health care costs, and reduce deaths from lung and other cancers, heart attacks, strokes, and other preventable diseases. The health benefits of cigarette taxes are even greater when the revenue raised is earmarked for tobacco control or public health programs.

Wisconsin's current cigarette tax is \$2.52 per pack, the 7th highest in the nation. This is well above the nationwide average of \$1.45 per pack. Wisconsin has not raised its cigarette tax since 2009.*

SAVING LIVES

A \$1.00-per-pack increase in Wisconsin's cigarette tax would be expected to provide the following reductions in the number of smokers and, as a result, the number of smoking-related deaths:*

Adults Who Would Quit Smoking	Youth Who Would Never Start Smoking	Reduction in Smoking-Related Deaths
21,800	27,000	21,000

SAVING MONEY

In addition to saving lives, raising Wisconsin's cigarette tax would cut healthcare costs and raise millions of dollars in revenue. Over five years, a \$1.00 cigarette tax increase would be expected to produce the following economic and fiscal benefits:*

Lung Cancer Treatment Savings	Heart Attack and Stroke Treatment Savings	State's Medicaid Program Savings	Smoking-Related Pregnancy Treatment Savings	Increase in State Revenue
\$3.14M	\$6.33M	\$1.70M	\$6.44M	\$122.20M

*Sources: Orzechowski and Walker. *The Tax Burden on Tobacco*, 45, 2010, and The Campaign for Tobacco Free Kids. "State Cigarette Excise Tax Rates and Rankings". August 2010. Available at <http://www.tobaccofreekids.org/research/factsheets/pdf/0097.pdf>.

*Estimates are based on analysis performed on behalf of the American Cancer Society Cancer Action Network. Totals in charts have been rounded.



The Health and Economic Benefits of Raising Wyoming's Cigarette Tax

A \$1.00 increase in Wyoming's cigarette tax would prevent approximately 3,300 youth from smoking and, over five years, save an estimated \$1.37 million in lung cancer, heart attack, and stroke costs.

Raising the excise tax on cigarettes is one of the most effective ways to reduce smoking, save lives, and raise government revenue – even in tough economic times. Excise taxes decrease the number of youth who start smoking, increase the number of smokers who quit, cut health care costs, and reduce deaths from lung and other cancers, heart attacks, strokes, and other preventable diseases. The health benefits of cigarette taxes are even greater when the revenue raised is earmarked for tobacco control or public health programs.

Wyoming's current cigarette tax is \$0.60 per pack, the 12th lowest in the nation. This is well below the nationwide average of \$1.45 per pack. Wyoming has not raised its cigarette tax since 2003.*

SAVING LIVES

A \$1.00-per-pack increase in Wyoming's cigarette tax would be expected to provide the following reductions in the number of smokers and, as a result, the number of smoking-related deaths:*

Adults Who Would Quit Smoking	Youth Who Would Never Start Smoking	Reduction in Smoking-Related Deaths
2,900	3,300	2,600

SAVING MONEY

In addition to saving lives, raising Wyoming's cigarette tax would cut healthcare costs and raise millions of dollars in revenue. Over five years, a \$1.00 cigarette tax increase would be expected to produce the following economic and fiscal benefits:*

Lung Cancer Treatment Savings	Heart Attack and Stroke Treatment Savings	State's Medicaid Program Savings	Smoking-Related Pregnancy Treatment Savings	Increase in State Revenue
\$410,000	\$950,000	\$210,000	\$1.21M	\$24.90M

*Sources: Orzechowski and Walker. *The Tax Burden on Tobacco*, 45, 2010, and The Campaign for Tobacco Free Kids. "State Cigarette Excise Tax Rates and Rankings". August 2010. Available at <http://www.tobaccofreekids.org/research/factsheets/pdf/0097.pdf>.

*Estimates are based on analysis performed on behalf of the American Cancer Society Cancer Action Network. Totals in charts have been rounded.

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.