

SIGNIFICANT STRIDES: Reducing Smoking and Expanding Health Care in Maryland

Building on the Success of Maryland's 2008 Cigarette Tax Increase

October 30, 2013



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Introduction

In 2007, the Maryland General Assembly passed and Governor Martin O'Malley signed into law a \$1.00 per pack increase in the state's cigarette tax rate, effective on January 1, 2008. In the years immediately following the increase, youth and adult smoking rates, as well as consumption, declined dramatically in the state. In addition, the tax increase generated more than \$126 million in new revenue for the state in just the first year, and this higher level of revenue continues today. That revenue was successfully used to help expand health care coverage for Maryland residents. Therefore, even before the Affordable Care Act was adopted nationally, Maryland was one of the leading states in making health care for affordable for its citizens.

Unfortunately, not long after the cigarette tax increase, funding for the state's Tobacco Use Prevention and Cessation Program was cut by the legislature, despite the success of the program in helping to reduce youth and adult smoking rates. As this report will show, while the 2008 cigarette tax increase helped lower smoking rates dramatically in the state, the reduction in funding for the state tobacco prevention program undermined the impact of the tax increase.

Through a combination of evidence-based tobacco prevention and cessation programming and tobacco control policies including a comprehensive statewide smoke-free law, Maryland has made tremendous strides in driving down tobacco use rates. However, tobacco still poses an enormous threat to Maryland residents. Cigarette smoking is the leading preventable cause of death in the state, claiming more than 6,800 lives each year and costing the state \$1.96 *billion* annually in health care bills, including \$476 million in Medicaid payments alone. And despite recent progress, nearly one in six adults (16.2%) and one in eight youth (12.5%) still smoke today.

Research shows that a tobacco tax increase combined with a comprehensive tobacco prevention and cessation program multiplies the benefits of each intervention separately. Another dollar per pack tobacco tax increase, with the revenues allocated to fund critical health care needs and to restore previous cuts to Maryland's Tobacco Use Prevention and Cessation Program, will help put Maryland back on track to reducing the toll of tobacco in the state and help maintain our health care expansion progress.

Public Health and Economic Benefits Generated by the 2008 Cigarette Tax Increase

Five measures show the immediate success of the 2008 cigarette tax increase: trends in both youth and adult smoking rates, increased calls to the state tobacco quitline, decreased cigarette pack sales, and increased cigarette tax revenue. These smoking declines will have tremendous long-term benefits for the state, such as fewer smoking-caused deaths and disease and lower health care costs. There are additional benefits that cannot yet be calculated, such as lower business costs and increased productivity of workers who have quit or never start smoking as a result of the tax increase.

Youth Smoking Rates. Young people are particularly sensitive to price, especially compared to adults. The effects of tobacco tax increases on youth use rates are well documented by numerous

economic studies as well as states' experiences. The experience in Maryland was no different – following the 2008 cigarette tax increase, youth smoking rates dropped by more than 29 percent in two years. In 2007, the national Youth Risk Behavior Survey found that 16.8 percent of high school students in Maryland smoked cigarettes, but by 2009, the high school smoking rate had dropped to 11.9 percent. This rate is much lower than the 2009 national high school smoking rate of 19.5 percent.¹

Put another way, that decline in youth smoking has led to an estimated:

- 15,000 fewer high school smokers (some of whom have become non-smoking young adults by now);
- more than 70,000 kids alive today who will not become adult smokers;
- more than 30,000 kids alive today who will avoid a future premature smoking-related death; and
- more than \$1.5 billion in long-term health care cost savings in the state.

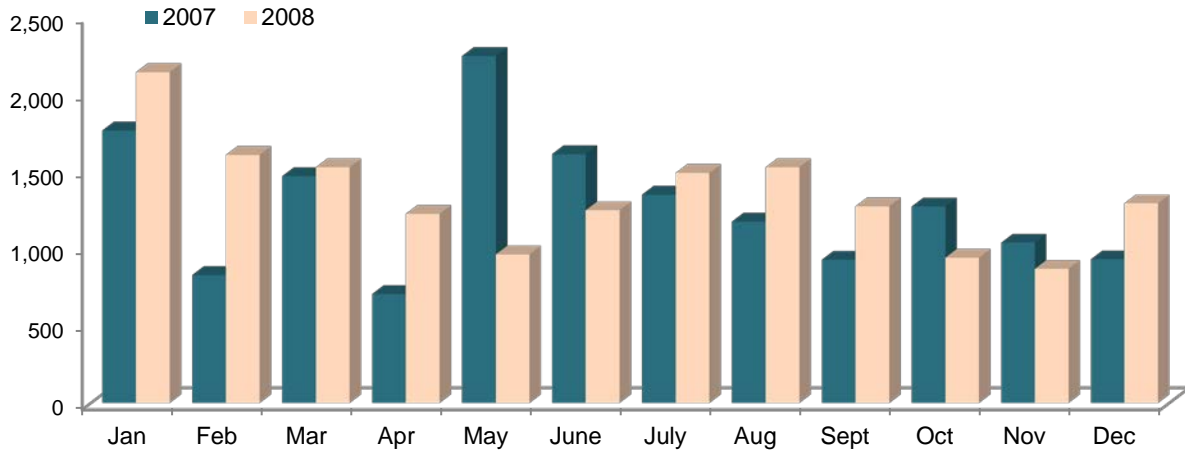
Adult Smoking Rates. Studies also show that adult smoking rates decline from tax increases even though adults are less sensitive to price changes than youth. In Maryland, adult smoking rates declined by nearly 13 percent between 2007 and 2008, from 17.1 percent in 2007 to 14.9 percent in 2008.² As with Maryland's high school smoking rate compared to the national smoking rate, Maryland's 2008 adult smoking rate is much lower than the 2008 national adult smoking rate of 20.6 percent.³

The decline in adult smokers translates to an estimated:

- more than 99,000 fewer adult smokers;
- more than 23,000 Maryland residents avoiding premature smoking-caused deaths; and
- more than \$900 million in long-term health care cost savings in the state.

Quitline Calls. The Maryland Tobacco Quitline, 1-800-QUIT-NOW, is a free resource to assist tobacco users who are trying to quit their tobacco use. The chart below shows that calls to the state quitline surged when the proposal to increase the cigarette tax was being debated in October and November 2007 and in the first few months after the 2008 increase went into effect.⁴ The increase in calls in March 2007 and May-June 2007 occurred during a successful nicotine replacement therapy initiative in Baltimore City.⁵

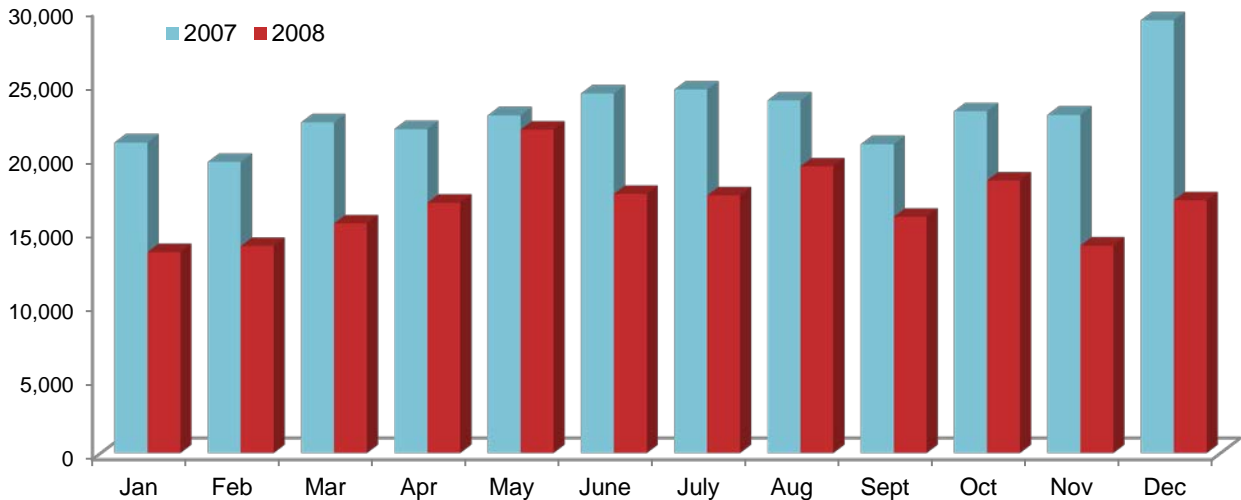
Monthly Calls to Maryland's Quitline, 2007-2008



Source: North American Quitline Consortium, 1-800-QUIT-NOW reports.

Pack Sales. Sales of cigarette packs also reflect the change in smoking levels after a cigarette tax increase, as people quit or cut back. While opponents argue that smokers could be buying cigarettes online or from other states, that type of purchasing often only lasts a month or two, after which smokers generally return to their usual nearby stores to obtain cigarettes.

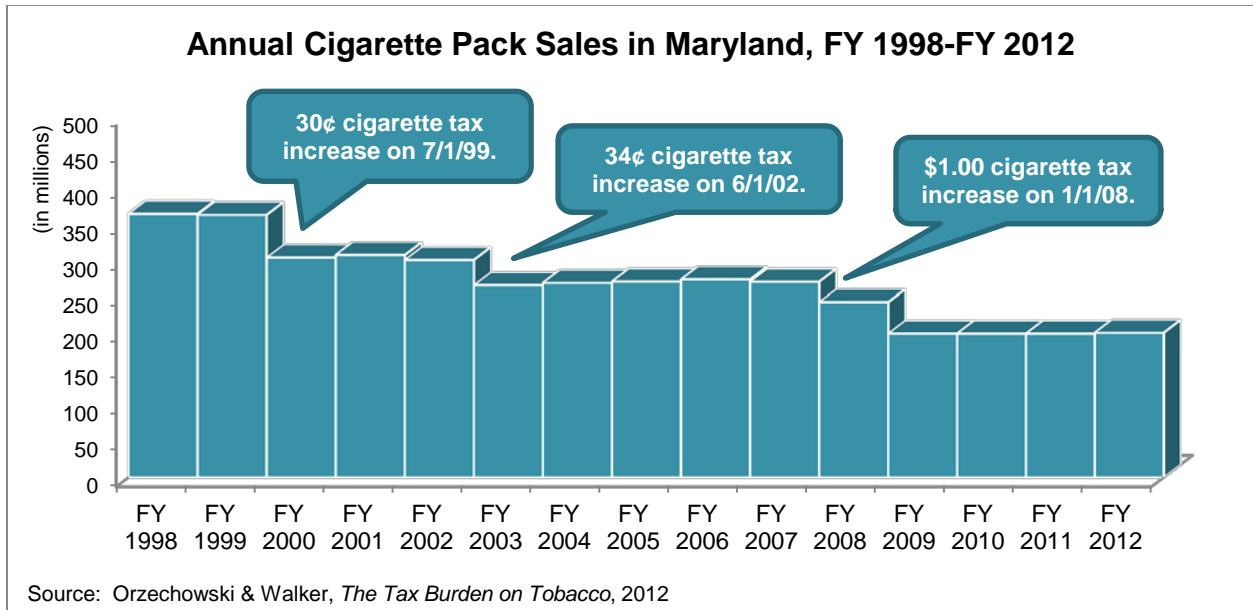
Monthly Cigarette Pack Sales, 2007-2008



Source: Orzechowski & Walker, *The Tax Burden on Tobacco*, monthly data.

The chart above shows how monthly cigarette pack sales declined from 2007 to 2008. The peak in December 2007 was likely from smokers stocking up on cigarettes before the tax increase went into effect, which can also explain the lower rate in January 2008 and the slow increase in sales in the early months of 2008. Not only were people trying to quit, but people were also likely using up their stockpiles until they had to buy cigarettes again or resume their normal buying habits. This also shows that fewer cigarettes were being purchased overall in

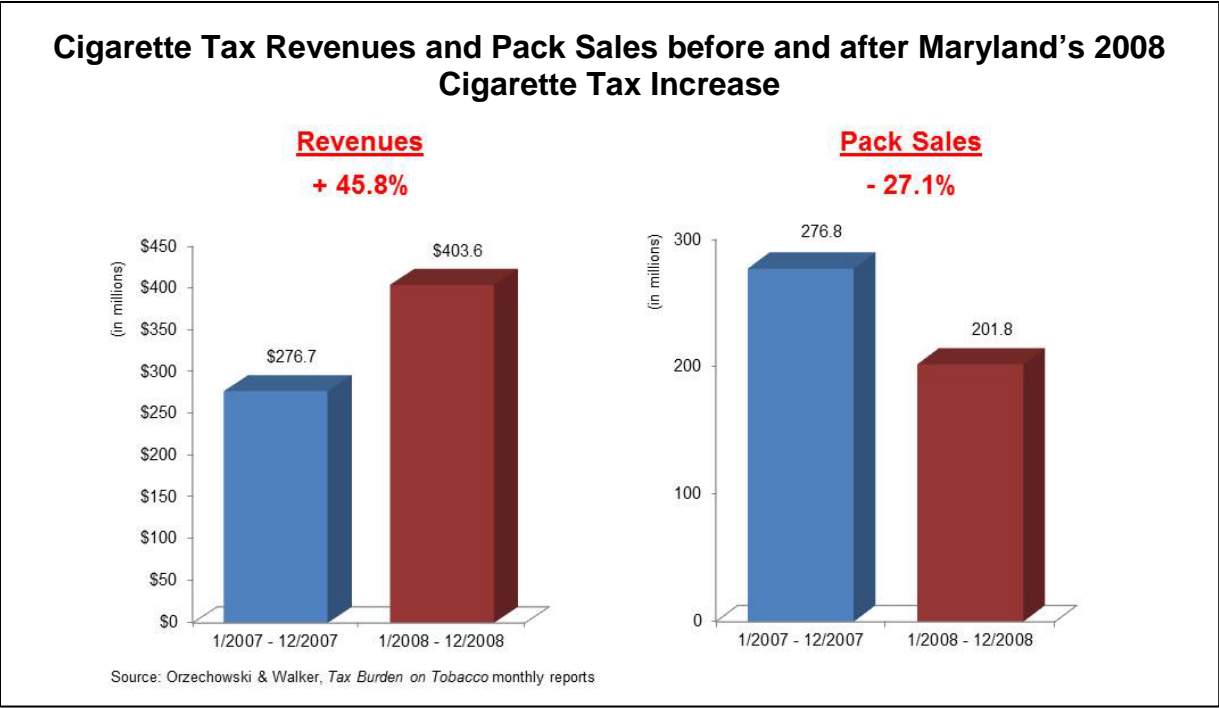
2008 because smokers had quit entirely or reduced the amount of cigarettes smoked. The longer term chart, below, shows that every time Maryland has increased its cigarette tax rate, the annual cigarette pack sales have declined – and remained at reduced levels.



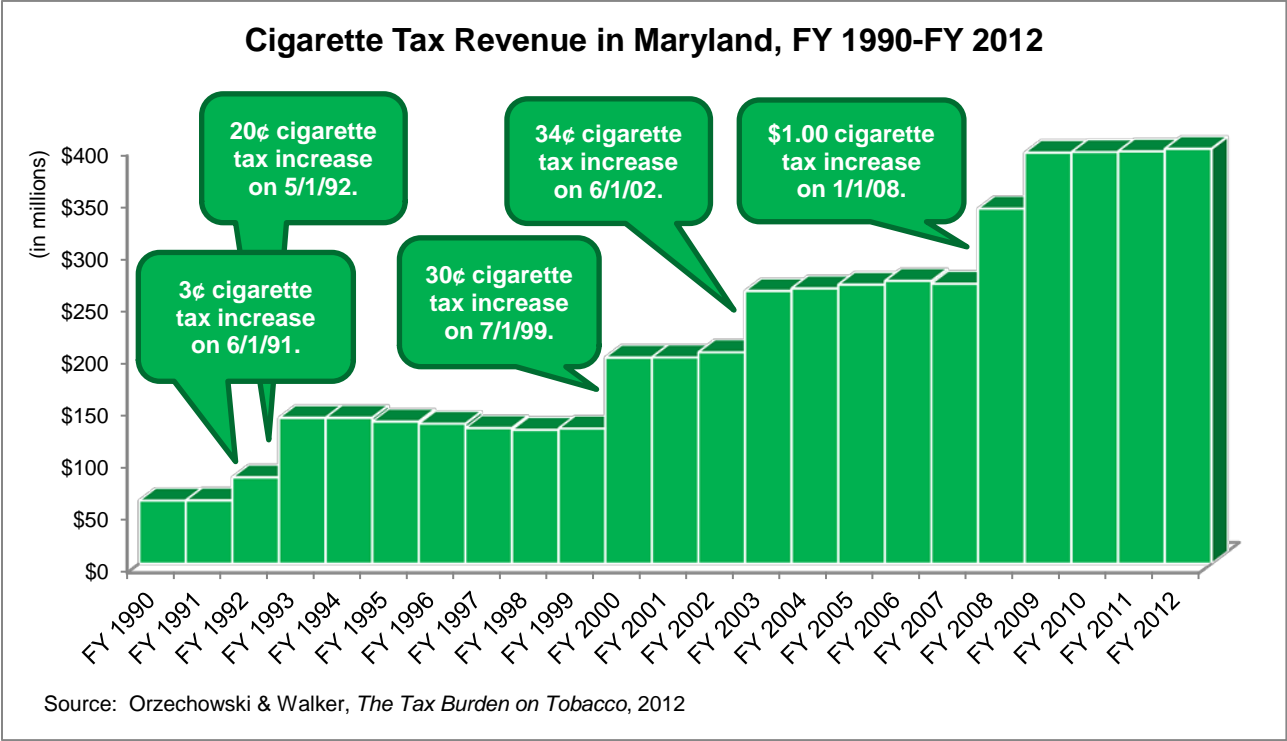
Cigarette Tax Revenues. Every state that has significantly raised its cigarette tax rate has enjoyed substantial increases to state revenues, despite the related declines in state smoking levels and despite any related increases in cigarette smuggling or cigarette tax avoidance. The increased tax per pack sold brings in more new revenue than is lost by the related pack sales declines.

In the first 12 months after the \$1.00 per pack cigarette tax went into effect, Maryland collected more than \$126 million in new revenue compared to the year before, even with the decline in cigarette sales. In other words, although pack sales declined by 27 percent, cigarette tax revenues increased by almost 46 percent in just the first year of the rate increase.

The revenue from the cigarette tax increase was used to fund health care coverage for over 100,000 Maryland parents, bringing Maryland from 44th in the nation to 14th in providing health care coverage for low-income adults.



Long-term trends in cigarette tax revenues shows that the higher level of tax revenue continues over time after each cigarette tax increase.



Additional Benefits. In addition to the five categories above, the 2008 cigarette tax increase also led to smoking declines that likely also reduced public and private non-health costs, such as reducing the amount of property damage and loss from smoking-caused fires, and shrinking

smoking-caused cleaning and maintenance costs. Even more, reducing smoking has likely improved worker productivity and reduced related losses.

Maryland Needs to Do More to Reduce the Toll of Tobacco

While Maryland has made impressive progress with tobacco tax increases, passage of a comprehensive smoke-free law, and its initial investment in the Tobacco Use Prevention and Cessation Program, tobacco use continues to take its toll on Maryland residents.⁶ Increasing the state tobacco tax rate and dedicating some of the new revenue to the state tobacco prevention program will have a strong impact on tobacco use, and its related harms and costs, in Maryland.

Tobacco use kills more than 6,800 Maryland residents every year and costs the state almost \$2 billion just in annual excess health care costs – much of it borne by taxpayers. State productivity losses from smoking total an additional \$1.83 billion per year, not even counting the productivity declines from smokers being sick more often than other workers and taking cigarette breaks while on the job. Despite recent progress in reducing smoking rates, 16.2 percent of adults in Maryland still smoke.⁷ Youth also continue to smoke – 12.5 percent of high school students smoke cigarettes, an increase from 2009.⁸ More than 22,000 Maryland kids try smoking in the state each year and 5,500 more become regular, daily smokers every year, one-third of whom will die prematurely.* Statistics can be numbing, but we cannot forget that these numbers represent mothers and fathers, brothers and sisters, colleagues and friends. Their suffering and their deaths have devastated too many families and communities.

Since Maryland last increased its cigarette tax in 2008, 23 states and Washington DC have increased their cigarette tax rates, some states more than once. Maryland's current cigarette tax rate, \$2.00 per pack, is ranked 12th in the nation. Currently six states have tax rates of \$3.00 per pack or more. Maryland increased its tax rates on some non-cigarette tobacco products in 2012, which is particularly remarkable given that most states do not increase tax rates on other tobacco products separately from cigarettes. However, despite that accomplishment, tax rates on some of these products remain unequal to the cigarette tax rate. Clearly, there is still room to increase Maryland's cigarette tax rate by at least \$1.00 per pack and equalize the tax rates on other tobacco products. As shown earlier, previous experience has demonstrated that increasing tobacco tax rates can have a dramatic effect on Maryland's tobacco use rates as well as raise needed revenue, and there is no reason to believe that another rate increase will not produce similar results.

In FY 2000 and FY 2001, the state spent \$30 million each year on its comprehensive tobacco control program to prevent kids from starting to smoke and to help smokers quit. However, by FY2013, the state only spent \$4.2 million on tobacco prevention while receiving about \$555 million from the 1998 tobacco lawsuit settlement payments, related bonus payments, and its tobacco taxes.⁹ The tobacco settlement was meant to provide funds to support state tobacco prevention efforts; but, so far, the state has not adequately allocated the tobacco settlement payments to prevent and reduce tobacco use and its harms. Similarly, tobacco tax revenues should be allocated to help those who want to quit as well as keep youth away from tobacco, but Maryland has not spent enough tobacco tax revenue on tobacco prevention and cessation services.

* For more detail on the toll of tobacco in Maryland, and citations to sources, see Appendix A.

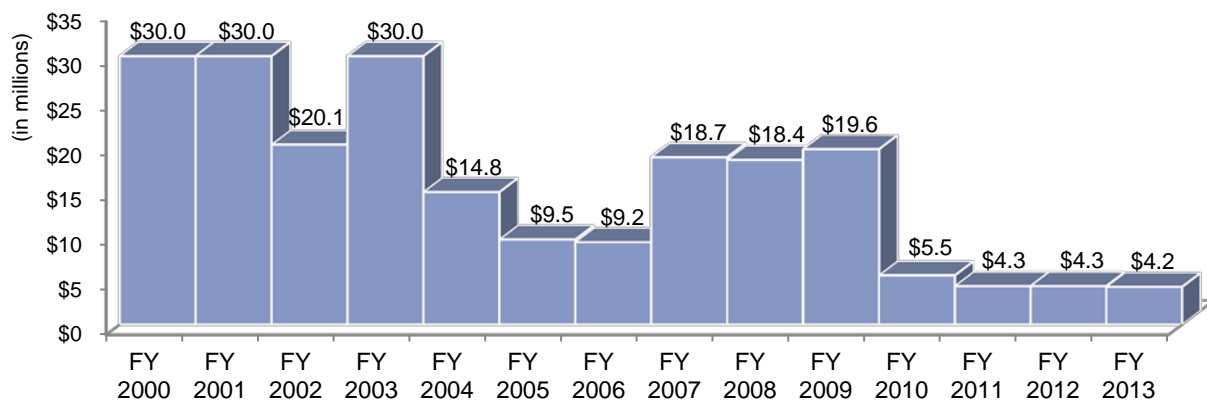
Investing in Maryland's Tobacco Use Prevention and Cessation Program Will Magnify Public Health Benefits from a Cigarette Tax Increase

The results from the 2008 cigarette tax increase mentioned earlier in this report could have been amplified had funding for the state tobacco prevention and cessation program not been cut soon after the increase or if some of the new revenues were allocated to increase funding for the state tobacco prevention program. Research shows that combining a tax increase with a comprehensive tobacco prevention and cessation program will boost the public health and economic benefits for the state. For instance, the surge in calls to the quitline as a result of the tax increase was only possible because Maryland's quitline had the infrastructure and resources to respond to the increased demand. However, since that time, funding for Maryland's Tobacco Use Prevention and Cessation Program, including the Quitline, has been cut by more than two-thirds, leaving the program with minimal funding to address the serious tobacco use problem in the state.

Since its inception in 2000, Maryland's Tobacco Use Prevention and Cessation Program has successfully reduced smoking rates in the state. In 1999, the state passed a law requiring the Governor to allocate at least \$21 million per year to the state tobacco prevention and cessation program.¹⁰ In 2000, with \$30 million in funding, Maryland implemented a comprehensive tobacco control program modeled on the best practice recommendations of the Centers for Disease Control and Prevention (CDC) to help tobacco users quit and to prevent youth from starting to smoke. Statistics show that these efforts, combined with the impact of three cigarette tax increases, have contributed to reductions in smoking among adults and youth. Between 1998 and 2008, the year before the program was drastically cut, adult smoking rates declined by 33 percent, from 22.4 percent to 14.9 percent.¹¹ In fact, the decline in Maryland's adult smoking rate was more than twice as much as the national adult smoking rate decline (14.5% decline) in the same period.¹² Youth smoking also declined substantially during this time. Between 2000 and 2008, smoking among high school students fell by 33.5 percent, from 23 percent to 15.3 percent. Over this same time period, smoking among middle school youth was cut in half, from 7.2 percent to 3.5 percent.¹³ These declines amount to thousands of fewer smokers in Maryland, fewer tobacco-related deaths, and significant reductions in future health care costs, including Medicaid costs, caused by tobacco use.

Although Maryland has made tremendous strides, the state's progress has stagnated due to deep cuts to state tobacco prevention and cessation programs (see chart below). Between FY 2009 and FY 2010, the state slashed funding for these programs by 70 percent, from \$19.6 million to \$5.5 million, and it has dropped even lower, to \$4.2 million, in FY 2013. Following the cuts, the state saw small increases in both youth and adult smoking rates. High school smoking increased from 11.9 percent in 2009 to 12.5 percent in 2011.¹⁴ Adult smoking increased from 14.9 percent in 2008 to 15.2 percent in 2009.¹⁵

Maryland Tobacco Prevention & Cessation Funding, FY 2000-FY 2013



Amounts shown are only state funding, not other sources, such as federal funding.
Sources: TFK, et al., *A Decade of Broken Promises: The 1998 State Tobacco Settlement 14 Years Later*.

Funding for the state’s tobacco prevention and cessation program should be increased so it can continue its successful work to help smokers throughout the state quit, prevent kids from smoking, and reduce smoking-caused healthcare costs. Some of the new revenue generated from any future tobacco tax increase should be allocated to help people quit and keep youth from starting.

Increasing Maryland’s Tobacco Tax Rates and Restoring Funding to its Tobacco Prevention and Cessation Programs Will Reduce Smoking, Save Lives, and Save Money

It is well established that comprehensive tobacco prevention programs that are consistent with CDC guidelines prompt substantial reductions in smoking levels among both adults and kids. This is achieved by both increasing the number of people who quit or cut back on smoking and reducing the number who start. In addition, studies have shown that the more that is spent on tobacco prevention, the lower the youth smoking rates and overall tobacco use.* As a result, state tobacco prevention programs help to reduce the death, disease, disability and other harms caused by smoking and other tobacco use – and also save money by reducing tobacco-related health care costs.†

Increasing Maryland’s tobacco tax rates and directing some of those new revenues to expand state efforts to prevent and reduce tobacco use would dramatically improve the health of Maryland residents. The tables in this section will show the public health and economic benefits from each one percentage point decline in adult and youth smoking rates in Maryland. A \$1.00 per-pack cigarette and OTP tax increase would go a long way in producing these projected benefits, especially if the rate increase is coupled with investments in its tobacco prevention and cessation program.

* See, e.g., TFK Factsheet, *Comprehensive Statewide Programs Reduce Tobacco Use*, <http://www.tobaccofreekids.org/research/factsheets/pdf/0045.pdf> and the references cited therein.

† For more on how state tobacco prevention programs cost-effectively save money, see TFK Factsheet, *Comprehensive Tobacco Prevention and Cessation Programs Save Money*, <http://www.tobaccofreekids.org/research/factsheets/pdf/0168.pdf> and the references cited therein.

Each one percentage point decline in Maryland’s youth and adult smoking rates would produce the following public health benefits, among others:

<i>Reduction in Current Adult Smokers</i>	45,400
<i>Reduction in Current Youth Smokers</i>	3,200
<i>Kids Alive Today Stopped from Becoming Addicted Adults</i>	13,400
<i>5-Year Reduction in Births Affected by Smoking</i>	3,650
<i>Total Future Smoking-Caused Deaths Avoided</i>	16,700

These estimates are conservative, however, because funding for a comprehensive program would have an impact on the use of other tobacco products besides cigarettes, such as smokeless tobacco and cigars. The state successfully increased tax rates on most non-cigarette tobacco products last year. Any future cigarette tax rate proposal should include equalization of the tax rates on other tobacco products as well, to maximize the public health and economic benefits from a tobacco tax increase.

Each one percentage point decline in adult and youth smoking rates secured by investments in tobacco prevention would also secure the following healthcare cost reductions.

<i>Future Health Cost Savings from Youth Smoking Declines</i>	\$234.3 million
<i>Future Health Cost Savings from Adult Smoking Declines</i>	\$431.3 million
<i>5-Year Savings from Fewer Smoking-Caused Heart Attacks, Strokes, and Births Affected by Smoking</i>	\$25.6 million

The projections of overall healthcare savings to public, private sector, and household healthcare costs throughout the state would occur over the lifetimes of the smokers who quit or kids who never start smoking because of a fully-funded tobacco program and/or a tobacco tax increase. The short-term health care savings from heart-stroke and pregnancy cost reductions, which would begin to accrue immediately, represent only the tip of the savings iceberg for Maryland, as the smoking declines would immediately begin to reduce numerous other smoking-caused health costs as well. Unfortunately, available data and research are not currently adequate to make reliable estimates of the actual dollar amounts.

Investing in the state tobacco prevention and cessation program for at least five years at the level recommended by the CDC would produce the following savings to the Medicaid program.

<i>Medicaid Share of 5-Year Savings from Fewer Heart Attacks, Strokes, and Births Affected by Smoking</i>	\$16.8 million
<i>Future Medicaid Savings from Youth & Adult Smoking Declines</i>	\$512.9 million

Besides Medicaid, Maryland would also see reductions to the smoking-caused health costs in city-funded programs because of the smoking declines prompted by the program – and private sector and individual smoking-caused health costs would also decline. Most notably,

* For more detail on the benefits of a one percentage point decline in smoking in Maryland, see Appendix B. See also, TFK Factsheet, *Comprehensive Statewide Programs Reduce Tobacco Use*, <http://www.tobaccofreekids.org/research/factsheets/pdf/0045.pdf>.

decreasing smoking rates among workers would also lower public and private sector employers' health care and health insurance costs.

Restoring funding for Maryland's tobacco prevention and cessation program would secure millions of dollars in future health care cost savings by preventing Maryland kids from becoming addicted smokers and by helping many current smokers and other tobacco users to quit. As Maryland has proven, tobacco control is a smart investment that improves health, saves lives, and saves money by reducing health care costs.

Conclusion

This report has documented that the 2008 cigarette tax increase in Maryland did exactly what it was expected to do – significantly reduce smoking, discourage youth from starting, and generate millions in new revenue for the state. These are very positive results for the state's health. Furthermore, the effects from the increase will continue into the future, in terms of fewer smoking-caused deaths, lower health care costs, and continued higher revenue collections.

However, the severe cut in funding for the state Tobacco Use Prevention and Cessation Program caused the downward trend in smoking to reverse slightly. As shown in this report, a comprehensive tobacco prevention and cessation program can have a significant impact on reducing tobacco use and costs in Maryland.

Maryland should enact another \$1.00 increase in its tobacco tax to build on the success of the 2008 tax increase. Another tobacco tax increase will likely generate similar benefits to the ones detailed in this report after the last increase, saving many more adults and young people from tobacco-caused illness and death, and resulting in substantial savings in health care costs for the state. Additionally, using a portion of the new revenues to ensure that the tobacco control program is funded at levels more consistent with CDC recommendations and to fund other critical health care and public health needs, especially the life-saving Medicaid program, would produce enormous tobacco use declines and other health care, public health, and economic benefits for the state. Maryland residents and businesses deserve no less.

APPENDIX A

THE TOLL OF TOBACCO IN MARYLAND

Tobacco Use in Maryland

- High school students who smoke: 12.5% [Girls: 12.3% Boys: 12.2%]
- High school males who use smokeless tobacco: 10.9%
- Kids (under 18) who try cigarettes for the first time each year: 22,100
- Additional Kids (under 18) who become new regular, daily smokers each year: 5,500
- Packs of cigarettes bought or smoked by kids in Maryland each year: 10.1 million
- Kids exposed to second hand smoke at home: 270,000
- Adults in Maryland who smoke: 19.1% [Men: 21.2% Women: 17.2% Pregnant Females: 6.2%]
- Adults in Maryland who use smokeless tobacco: 1.7% [Men: 2.5% Women: 0.9%]

Nationwide, youth smoking has declined significantly since the mid-1990s, but that decline appears to have slowed. The national 2011 Youth Risk Behavior Survey found that the percentage of high school students reporting that they have smoked cigarettes in the past month decreased slightly to 18.1 percent in 2011 from 19.5 percent in 2009. 19.0 percent of U.S. adults (43.8 million) currently smoke, slightly less than the 19.3 percent in 2010 and significantly less than the 20.9 percent in 2005.

Deaths in Maryland From Smoking

- Adults who die each year in Maryland from their own smoking: 6,800
- Maryland kids who have lost at least one parent to a smoking-caused death: 6,200
- Kids alive in state today who will ultimately die from smoking: 108,000 (given current smoking levels)

Smoking, alone, kills more people each year than alcohol, AIDS, car crashes, illegal drugs, murders, and suicides combined. For every person in Maryland who dies from smoking approximately 20 more state residents are suffering from serious smoking-caused disease and disability, or other tobacco-caused health problems.

Tobacco-Related Monetary Costs in Maryland

- Annual health care expenditures in the State directly caused by tobacco use: \$1.96 billion
- Annual health care expenditures in Maryland from secondhand smoke exposure: \$93.6 million
 - State Medicaid program's total health expenditures caused by tobacco use: \$476.0 million
- Citizens' state/federal taxes to cover smoking-caused gov't costs: \$1.2 billion (\$608/household)
- Smoking-caused productivity losses in Maryland: \$1.83 billion
- Smoking-caused health costs and productivity losses per pack sold in Maryland: \$13.91

The above productivity loss is from smoking-death-shortened work lives, alone. Even larger productivity losses come from smoking-caused work absences, on-the-job performance declines, and disability-shortened productive work lives. Other non-health costs caused by tobacco use include direct residential and commercial property losses from smoking-caused fires and smoking-caused cleaning and maintenance costs.

Tobacco Industry Advertising and Other Product Promotion

- Estimated portion spent in Maryland each year: \$120.2 million

Research has found that kids are three times more sensitive to tobacco advertising than adults and are more likely to be influenced to smoke by cigarette marketing than by peer pressure, with one-third of underage smoking experimentation attributable to tobacco company marketing.

Maryland Government Policies Affecting The Toll of Tobacco in Maryland

- FY 2013 state tobacco prevention spending from tobacco settlement and tax revenues: \$4.2 million [National rank: 34th (with 1 the best), based on percent of CDC recommendation]
- State cigarette tax per pack: \$2.00 [National rank: 12th (average state tax is \$1.53 per pack)]

Sources

Youth smoking. 2011 Youth Risk Behavior Survey. A 2010 YTS found that 14.1% of high school students smoked, but the YTS and YRBS cannot be compared to show trends because of different methodologies Current smoking = smoked in past month. The 2006 National Youth Tobacco Survey, using a different methodology than the YRBS, found that 19.7% of U.S. high school kids smoke. **Male youth smokeless.** 2011 YRBS. The 2009 National YRBS found that 15.0% of US high school males use spit tobacco. Female smokeless use is much lower. **New youth smokers.** Estimate based on U.S. Dept of Health & Human Services (HHS), "Summary Findings from the 2011 Nat'l Survey on Drug Use and Health," <http://www.samhsa.gov/data/NSDUH/2011SummNatFindDetTables/NSDUH-DeTTabPDFWHTML2011/2k11DetailedTabs/Web/HTML/NSDUH-DeTTabSect4peTaps1to16-2011.htm#Tab4.10A> with the state share of the national number allocated through the formula in U.S. Centers for Disease Control & Prevention (CDC), "Projected Smoking-Related Deaths Among Youth—United States," *Morbidity & Mortality Weekly Report (MMWR)* 45(44):971-74, November 8, 1996 [based on state young adult smoking rates, as updated in CDC, *Sustaining State Programs for Tobacco Control, Data Highlights, 2006*]. **Smokefree workplaces.** Shopland, D, et al., "State-Specific Trends in Smoke-Free Workplace Policy Coverage: The Current Population Survey Tobacco Use Supplement, 1993 to 1999," *Jnl of Occupational & Environmental Medicine* 43(8):680-86, August 2001. **Kids exposed to secondhand smoke.** CDC, "State-Specific Prevalence of Cigarette Smoking Among Adults & Children's and Adolescents' Exposure to Environmental Tobacco Smoke—United States, 1996," *MMWR* 46(44):1038-43, November 7, 1997. **Packs consumed by kids.** Estimated from Maryland's youth population & smoking rates; and see DiFranza, J & Librett, J, "State and Federal Revenues from Tobacco Consumed by Minors," *Am. Jnl of Public Health* 89(7):1106-08, July 1999 & Cummings, KM, et al., "The Illegal Sale of Cigarettes to US Minors: Estimates by State," *AJPH* 84(2):300-302, February 1994. **Adult smoking.** State: CDC, BRFSS 2011 online data: <http://apps.nccd.cdc.gov/BRFSS/list.asp?cat=TU&yr=2011&qkey=8161&state=All>. Because of changes in methodology, 2011 data cannot be compared to the data from previous years. National: 2011 Nat'l Health Interview Survey (NHIS), http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6035a5.htm?s_cid=mm6035a5_w. Adult smokeless use: CDC, BRFSS 2009 **Pregnant Females.** CDC, "Smoking During Pregnancy—United States, 1990-2002," *MMWR* 53(39):911-15, October 8, 2004, <http://www.cdc.gov/mmwr/PDF/wk/mm5339.pdf>. See also, CDC, "Trends in Smoking Before, During and After Pregnancy—Pregnancy Risk Assessment Monitoring System (PRAMS), 31 Sites 2000-2005," *MMWR* 58(SS04):1-29, May 29, 2009, <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5804a1.htm>

Adult deaths. CDC's STATE System (avg annual deaths from 2000-2004), <http://apps.nccd.cdc.gov/StateSystem/systemIndex.aspx>. CDC, "State-Specific Smoking-Attributable Mortality and Years of Potential Life Lost—United States, 2000-2004," *MMWR* 58(2), January 22, 2009; U.S. General Accounting Office (GAO), "CDC's April 2002 Report on Smoking: Estimates of Selected Health Consequences of Cigarette Smoking Were Reasonable," letter to U.S. Rep. Richard Burr, <http://www.gao.gov/new.items/d03942r.pdf>, July 16, 2003. **Lost Parents.** Leistikow, B, et al., "Estimates of Smoking-Attributable Deaths at Ages 15-54, Motherless or Fatherless Youths, and Resulting Social Security Costs in the United States in 1994," *Preventive Medicine* 30(5):353-360, May 2000, and state-specific data from author. **Projected youth smoking deaths.** CDC, *State Highlights 2006*: CDC, "Projected Smoking-Related Deaths Among Youth—United States," *MMWR* 45(44):971-974, November 11, 1996, www.cdc.gov/mmwr/mmwr_wk.html. **Health and productivity costs caused by tobacco use.** CDC, *State Data Highlights 2006* [and underlying CDC data/estimates], http://www.cdc.gov/tobacco/data_statistics/state_data/data_highlights/2006/index.htm. CDC, Smoking Attributable Mortality, Morbidity and Economic Costs, SAMMEC <http://apps.nccd.cdc.gov/sammecc/>; GAO, <http://www.gao.gov/new.items/d03942r.pdf>, July 16, 2003. State Medicaid program expenditures are before any federal reimbursement. **SHS Costs.** Behan, DF, et al., *Economic Effects of Environmental Tobacco Smoke*, Society of Actuaries, March 31, 2005, [http://www.soa.org/files/pdf/ETSReportFinalDraft\(Final%203\).pdf](http://www.soa.org/files/pdf/ETSReportFinalDraft(Final%203).pdf) [nationwide costs allocated to state based on its share of all U.S. smokers]. **State-federal tobacco tax burden.** Equals Maryland residents' federal & state tax payments necessary to cover all state government tobacco-caused costs plus the residents' pro-rata share, based on state populations, of all federal tobacco-caused costs. See above and Zhang, X, et al., "Cost of Smoking to the Medicare Program, 1993," *Health Care Financing Review* 20(4):1-19, Summer 1999; Office of Management & Budget, *Budget for the United States Government - Fiscal Year 2000*, Table S-8, 1999; Leistikow, B, et al., "Estimates of Smoking-Attributable Deaths at Ages 15-54, Motherless or Fatherless Youths, and Resulting Social Security Costs in the United States in 1994," *Preventive Medicine* 30(5):353-360, May 2000 – with other state government tobacco costs taken to be 3% of all state smoking-caused health costs, as in CDC, "Medical Care Expenditures Attributable to Smoking—United States, 1993," *MMWR* 43(26):1-4, July 8, 1994. CDC's State Data Highlights 2006 provides cost estimates that have been adjusted for inflation and put in 2004 dollars. To make the other cost data similarly current and more comparable, they have also been adjusted for inflation and put in 2004 dollars, using the same CDC methodology. **Other tobacco-related costs.** U.S. Treasury Dept., *Economic Costs of Smoking in the U.S. & the Benefits of Comprehensive Tobacco Legislation*, 1998; Chaloupka, F.J. & K.E. Warner, "The Economics of Smoking," in Culyer, A & Newhouse, J (eds), *Handbook of Health Economics*, 2000; CDC, *MMWR* 46(44), November 7, 1997; CDC, *Making Your Workplace Smokefree: A Decision Maker's Guide*, 1996; Mudarri, D, U.S. Environmental Protection Agency, *Costs & Benefits of Smoking Restrictions: An Assessment of the Smoke-Free Environment Act of 1993 (H.R. 3434)*, submitted to Subcommittee on Health & the Environment, Committee on Energy & Commerce, U.S. House of Rep., April 1994; Brigham, P & McGuire, A, "Progress Toward a Fire-Safe Cigarette," *Jnl of Public Health Policy* 16(4):433-439, 1995; Hall, JR, Jr., Nat'l Fire Protection Assoc., *The Smoking-Material Fire Problem*, November 2004. U.S. Fire Admin./Nat'l Fire Data Center, Federal Emergency Management Agency (FEMA), *Residential Smoking Fires & Casualties*, Topical Fire Research Series 5(5), June 2005, <http://www.usfa.fema.gov/downloads/pdf/tfrs/v5i5.pdf>.

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APPENDIX B

BENEFITS & SAVINGS FROM EACH ONE PERCENTAGE POINT DECLINE IN MARYLAND SMOKING RATES

The following estimates show the benefits and savings that are obtained in Maryland for each one percentage point decline in adult and youth smoking rates in the state (e.g., from new state investments in tobacco prevention or increased state tobacco tax rates). These estimates can also be switched around to show what harms and costs Maryland would suffer from each one percentage point increase to its smoking rates or from each one percentage point reduction the State fails to obtain (e.g., because it fails to sustain adequate state tobacco prevention funding or lets its tobacco tax rates erode over time).

Fewer Smokers

Fewer current adult smokers: 45,400

Fewer current pregnant smokers: 730

Fewer current high school smokers: 3,200

Maryland kids alive today who will not become addicted adult smokers: 13,400

Public Health Benefits

Today's adults saved from dying prematurely from smoking: 10,700

Today's high school smokers saved from dying prematurely from smoking: 1,200

Maryland kids alive today who will not die prematurely from smoking: 4,800

	<u>First Year</u>	<u>Over 5 Years</u>
<i>Fewer smoking-affected births:</i>	730	3,650
<i>Fewer smoking-caused heart attacks:</i>	21	272
<i>Fewer smoking-caused strokes:</i>	12	146

[The number of heart attacks and strokes prevented each year by a one-time decline in adult smoking rates of one percentage point starts out small but grows sharply until it peaks and stabilizes after about ten years.]

Monetary Benefits (Reduced Public, Private, and Individual Smoking-Caused Costs)

	<u>First Year</u>	<u>Over 5 Years</u>
<i>Savings from smoking-affected birth reductions</i>	\$1.2 million	\$6.2 million
<i>Savings from heart attack & stroke reductions</i>	\$1.4 million	\$19.4 million

[Annual savings from fewer smoking-caused heart attacks and strokes grows substantially each year as more and more are prevented by the initial one percentage point smoking decline. Savings from prevented smoking-caused cancer are even larger, but do not begin to accrue until several years after the initial smoking decline.]

Reduction to future health costs from adult smoking declines: \$431.3 million

Reduction to future health costs from youth smoking declines: \$234.5 million

[These savings accrue over the lifetimes of the adults who quit and the youth who do not become adult smokers. Roughly 15.4% of smoking-caused healthcare expenditures in Maryland are paid by its Medicaid program.]

At the same time that they reduce public and private smoking-caused costs, state smoking declines also increase public and private sector worker productivity and strengthen the state's economy.

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