



## PROJECTED COST SAVINGS AND HEALTH BENEFITS FROM VIRGINIA MAKING ADEQUATE INVESTMENTS TO PREVENT AND REDUCE TOBACCO USE

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Health care expenditures in Virginia to address health problems caused by smoking and other tobacco use total substantially more than \$2.08 billion per year, including at least \$401.0 million in total state Medicaid program expenditures.<sup>1</sup> Recent scientific research, along with the experiences of those states that have had comprehensive tobacco prevention programs, show that Virginia could quickly reduce smoking within its borders by making relatively modest increased investments in new statewide efforts to prevent and reduce tobacco use – thereby also reducing smoking-caused health costs and saving billions of dollars.

Studies in California (the first state with a comprehensive tobacco prevention program) show that over its first seven years the state program saved almost as much as it cost just by reducing smoking-caused heart attacks, strokes, and low birth-weight babies.<sup>2</sup> By sharply reducing state smoking rates, the California program has also substantially reduced every other form of smoking-caused disease and health problems within its borders – including lung cancer, lip and oral cancers, bronchitis and other respiratory ailments, and even burns from cigarette-caused fires -- thereby saving billions of additional dollars.<sup>3</sup> Overall, California officials estimate that every dollar spent on the state tobacco prevention program has reduced smoking-caused health costs by more than \$3.50 -- while also reducing indirect smoking-caused costs, such as workplace productivity declines, by another six dollars or more.<sup>4</sup> A 2000 study of Massachusetts' early tobacco prevention program (before its funding was cut) found that after only a few years it was annually saving well over two dollars in reduced smoking-caused health care costs for every single dollar it received in state funding.<sup>5</sup> Earlier, state officials announced that the program had reaped enormous savings by reducing smoking among pregnant women, which places costly demands on state health care systems by causing low birth-weight babies, other pregnancy complications, and a range of early childhood health and development problems.<sup>6</sup>

More recent research has added to these findings to show that state programs secure even larger returns on investment for sustained funding of tobacco prevention at adequate levels over ten or more years. Most notably, a more recent study of California's tobacco prevention found that for every dollar the state spent on its tobacco control program from 1989 to 2004, the state received tens of dollars in savings in the form of sharp reductions to total healthcare costs in the state.<sup>7</sup> This study confirms that the cost-saving benefits from sustained state investments in effective tobacco control programs quickly grow over time to dwarf the state expenditures, producing massive gains for the state not only in terms of both improved public health and increased worker productivity but in reduced government, business, and household costs.

Similarly, an August 2008 Australian study found that for every dollar spent on a strong tobacco control program there (consisting primarily of aggressive anti-smoking television ads along with telephone quitlines and other support services to help smokers quit) the program reduced future healthcare costs by \$70 over the lifetimes of the persons the program prompted to quit. This savings estimate was based on the study's finding that for every 10,000 who quit because of the tobacco control program, more than 500 were saved from lung cancer, more than 600 escaped having heart attacks, at least 130 avoid suffering from a stroke, and more than 1700 were prevented from suffering from chronic obstructive pulmonary disease (COPD).<sup>8</sup>

### **Cost-Savings Available to Virginia from Reducing Smoking**

Based on the results in Massachusetts, California, and other states making strong investments in tobacco prevention, it is clear that expanded investments in an adequately funded, well-run statewide tobacco-prevention program in Virginia should reduce adult smoking by at least one percentage point per year over the next five years, with similar youth smoking declines. That would shrink the current number of adult smokers in Virginia by about 294,200 – and quickly produce a range of related reductions to smoking-caused health costs, including the following, while simultaneously locking in even larger future savings.

### **SOME OF THE SAVINGS FROM REDUCING SMOKING BY ONE-PERCENTAGE-POINT PER YEAR<sup>9</sup> (Amounts in Millions of Dollars)**

<u>Savings From</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>5-Year Total</u>
<b>Fewer Heart Attacks &amp; Strokes</b>	\$1.9	\$6.5	\$12.5	\$19.3	\$26.5	\$66.6
<b>Fewer Smoking-Affected Births</b>	\$1.8	\$3.7	\$5.5	\$7.3	\$9.2	\$27.5
<b>Annual Savings Subtotal</b>	\$3.8	\$10.1	\$18.0	\$26.6	\$35.6	\$94.1

<b>Total reduction to future health costs from adult smoking declines: \$2.8 billion</b>
<b>Total reduction to future health costs from parallel youth smoking declines: \$1,597.8 million</b>

These projected savings over the first five years are only the tip of the iceberg, as far as near-term savings go, and are quite conservative. For example, substantial additional savings would come from reductions in other smoking-caused health problems prompted by the adult smoking declines, such as immediate savings from declines in secondhand smoke harms to young children and others and from fewer burns and respiratory problems from smoking-caused fires. Related declines in youth smoking would also produce additional parallel savings (e.g., from fewer pregnant teens smoking).

The heart attack and stroke savings would continue to grow sharply in subsequent years, and additional large savings would begin to appear as the incidence of all other smoking-caused health problems and diseases started to diminish -- including enormous savings from declines in lung cancer and other smoking-caused cancers. While there is a lag time between smoking declines and reductions in the overall levels of some smoking-caused disease, California has already been experiencing much more rapid lung cancer declines than other areas of the country because of its tobacco-control efforts.<sup>10</sup> Including these kinds of longer-term results, Virginia would lock in more than \$2.8 billion in health care savings from the projected reductions in smoking among adults over the first five years, with the savings accruing over the lifetimes of the adults who quit.<sup>11</sup> In addition, a parallel decline in youth smoking over five years would reduce the number of kids alive today in Virginia that will become regular smokers by about 91,300 -- thereby securing additional healthcare savings of roughly \$1,597.8 million over the adult lifetimes of those kids.<sup>12</sup>

Because state Medicaid programs pay for most of the health costs related to smoking mothers' pregnancies and births, the vast majority of the savings from reducing smoking among pregnant women in the first five years would directly reduce the Virginia Medicaid program's expenditures.<sup>13</sup> Overall, the Virginia Medicaid program directly pays for approximately 12.1% of all smoking-caused healthcare costs in the State.<sup>14</sup> Accordingly, the future savings from the adult and youth smoking declines would include reductions to the state Medicaid program's smoking-caused payments of a \$338.7 million and \$193.6 million, respectively. While the federal government reimburses Virginia for a portion of its Medicaid payments, the smoking declines would still reduce the state government's own final non-reimbursed smoking-caused Medicaid costs, over time, by about \$266.2 million.<sup>15</sup>

These projected savings from reducing adult and youth smoking do not include the substantial additional healthcare savings that would come from the State's tobacco prevention efforts also reducing exposure to secondhand smoke, consumption levels among smokers who do not actually quit, and smokeless or spit tobacco use. In addition, the declines in adult and youth smoking would, by themselves, also produce additional savings which would quickly accumulate -- such as reduced productivity losses from smoking-caused work absences, poor job performance, and early retirement; reduced property losses from smoking-caused fires; and reduced cleaning and maintenance costs caused by smoking. In Virginia, the tobacco-caused productivity losses, alone, total at least \$2.42 billion per year.<sup>16</sup> Nationwide, property losses from smoking-caused fires and smoking-caused cleaning and maintenance costs total in the billions of dollars; but there are no current estimates for the Virginia share of those nationwide costs.<sup>17</sup>

**Public Health Benefits**

While it is impossible to quantify all of the public health benefits the State would enjoy from reducing its adult and youth smoking rates by one percentage point per year, the following table provides some insight.

**PARTIAL HEALTH BENEFITS FROM REDUCING SMOKING BY ONE PERCENTAGE POINT PER YEAR**

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>5-Yr Total</u>

<b>Fewer current adult smokers</b>	<b>58,800</b>	<b>58,800</b>	<b>58,800</b>	<b>58,800</b>	<b>58,800</b>	<b>294,200</b>
<b>Fewer current high school smokers</b>	<b>4,300</b>	<b>4,300</b>	<b>4,300</b>	<b>4,300</b>	<b>4,300</b>	<b>21,500</b>
<b>Fewer smoking-affected births</b>	<b>1,080</b>	<b>2,160</b>	<b>3,240</b>	<b>4,320</b>	<b>5,400</b>	<b>16,200</b>
<b>Fewer smoking-caused heart attacks</b>	<b>29</b>	<b>94</b>	<b>178</b>	<b>272</b>	<b>371</b>	<b>945</b>
<b>Fewer smoking-caused strokes</b>	<b>17</b>	<b>52</b>	<b>98</b>	<b>148</b>	<b>199</b>	<b>514</b>
<b>Kids in State who will not become addicted adult smokers</b>	<b>18,200</b>	<b>18,200</b>	<b>18,200</b>	<b>18,200</b>	<b>18,200</b>	<b>91,300</b>
<b>Adults saved from dying prematurely from smoking</b>	<b>15,600</b>	<b>15,600</b>	<b>15,600</b>	<b>15,600</b>	<b>15,600</b>	<b>78,000</b>
<b>Kids saved from dying prematurely</b>	<b>5,800</b>	<b>5,800</b>	<b>5,800</b>	<b>5,800</b>	<b>5,800</b>	<b>29,200</b>

[Although some may look precise, these numbers are all rough estimates. Fewer smoking-affected births = fewer pregnant smokers. The numbers of heart attacks and strokes annually prevented by each year's decline in adult smoking rates point start out small but grow rapidly each year until the annual totals peak and stabilize after about 10-15 years or more. Because some kids become adults over this time period, there is a small overlap between the stated reductions to adult smoking and future youth smoking and the related lives saved.]

Along with these health benefits would come substantial immediate and longer-term declines in the full range of other illnesses and health problems caused in Virginia by smoking, including sharp future declines in the number of future lung cancer and other cancer cases in the State.<sup>18</sup>

**What Would It Cost Virginia to Secure These Benefits and Cost Savings?**

To secure these projected new public health benefits and cost savings, Virginia would have to expand its tobacco prevention funding to reduce its smoking rates below current trends by at least one percentage point per year for five years. California did just that when it started its tobacco control program, Massachusetts had similar success with its early, well-funded program, and other states with significant tobacco prevention investments are enjoying similarly positive results. By learning from these states' experiences and investing the amount recommended by the Centers for Disease Control and Prevention (CDC) for new or expanded efforts to reduce tobacco use, Virginia could do at least as well, or better.

Right now, Virginia spends about \$14.5 million per year on tobacco-prevention efforts, significantly less than the amount recommended by the CDC, \$103.2 million per year.<sup>19</sup> By investing the full CDC amount or more, Virginia would substantially improve public health, better protect the health and wellbeing of the children and youth living in Virginia, and save tens of thousands of lives and millions of dollars. Few investments by the State (if any) could have as clearly beneficial an impact on the people and taxpayers of Virginia.<sup>20</sup>

**Campaign for Tobacco-Free Kids, October 6, 2008 / Eric Lindblom**

For related TFK factsheets see: *Comprehensive State Tobacco-Control Programs Save Money*, <http://tobaccofreekids.org/research/factsheets/pdf/0168.pdf>. And see <http://tobaccofreekids.org/research/factsheets> or <http://tobaccofreekids.org/research/factsheets/index.php?CategoryID=6> for additional related information.

More detailed version available on request by emailing [factsheets@tobaccofreekids.org](mailto:factsheets@tobaccofreekids.org).

<sup>1</sup> U.S. Centers for Disease Control and Prevention (CDC), *State Highlights 2006*. American Legacy Foundation, *Saving Lives, Saving Money: Why States Should Invest in a Tobacco-Free Future*, March 2002, <http://www.americanlegacy.org/content/PDF/278055.pdf>. See, also, 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, July 16, 2003, <http://www.gao.gov/new.items/d03942r.pdf>.

<sup>2</sup> Lightwood, J.M., et al., "Short-Term Health and Economic Benefits of Smoking Cessation: Low Birth Weight," *Pediatrics* 104(6): 1312-1320, December 1999; Lightwood, J.M. & S.A. Glantz, "Short-Term Economic and Health Benefits of Smoking Cessation -- Myocardial Infarction and Stroke," *Circulation* 96(4): 1089-1096, August 19, 1997.

<sup>3</sup> CDC, "Cigarette Smoking-Attributable Mortality and Years of Potential Life Lost – United States, 1990," *Morbidity and Mortality Weekly Review (MMWR)* 42(33), August 27, 1993. CDC, "Declines in Lung Cancer Rates --- California, 1988--1997," *MMWR* 49(47);1066-9, December 1, 2000, <http://www.cdc.gov/mmwr/PDF/wk/mm4947.pdf>.

<sup>4</sup> California Department of Health Services, Tobacco Control Section, *California Tobacco Control Update*, August 2000, <http://circ.ahajournals.org/cgi/content/full/96/4/1089>. Subsequent cuts to the program's funding puts these savings and other benefits at serious risk.

<sup>5</sup> Harris, J. E., "Status Report on the Massachusetts Tobacco Control Campaign, with a Preliminary Calculation of the Impact of the Campaign on Total Health Care Spending in Massachusetts," 2000. Subsequent cuts to the program's funding puts these savings and other benefits at serious risk.

<sup>6</sup> Connolly, W., Director, Massachusetts Tobacco Control Program, Testimony, Joint Hearing of Pennsylvania House of Representatives Committee on Health & Human Services and Senate Committee on Public Health & Welfare, June 22, 1999. Miller, P, et al., "Birth and First-Year Costs for Mothers and Infants Attributable to Maternal Smoking," *Nicotine & Tobacco Research* 3(1): 25-35, February 2001 [avg. cost per smoking-affected birth: \$1,142]; Campaign for Tobacco-Free Kids (TFK), Fact Sheet, *Harm Caused by Pregnant Women Smoking or Being Exposed to Secondhand Smoke*, <http://tobaccofreekids.org/research/factsheets/pdf/0007.pdf>.

<sup>7</sup> Lightwood, JM et al., "Effect of the California Tobacco Control Program on Personal Health Care Expenditures," *PLOS Medicine* 5(8): 1214-22, August 2008, <http://medicine.plosjournals.org/perlserv/?request=get-document&doi=10.1371%2Fjournal.pmed.0050178>.

<sup>8</sup> Hurley, SF & JP Matthews, "Cost-Effectiveness of the Australian National Tobacco Campaign," *Tobacco Control*, <http://tobaccocontrol.bmj.com/cgi/content/abstract/tc.2008.025213v1>, published online August 21, 2008.

<sup>9</sup> First five year savings: Lightwood, et al., *Pediatrics*, December 1999; Miller, P., et al., *Nicotine & Tobacco Research*, February 2001; state smoking & population data. Smoking-affected births are to women who smoke during pregnancy. Future Savings: Hodgson, T.A., "Cigarette Smoking and Lifetime Medical Expenditures," *Millbank Quarterly* 70(1), 1992 [average smoker's lifetime health costs \$16,000 more than nonsmoker's despite earlier death; but the savings per each adult quitter are less than that because adult smokers have already been significantly harmed by their smoking and have already been significantly harmed by their smoking and have already incurred or locked-in extra, smoking-caused health costs]. CDC, "Smoking Attributable Mortality and Years of Potential Life Lost – United States, 1984" [with editor's update for 1990-1994], *MMWR* 46(20): 444-451, May 23, 1997; CDC, "Projected Smoking-Related Deaths Among Youth -- United States," *MMWR* 45(44): 971-974, November 8, 1996. See, also, Warner, K.E., et al., "Medical Costs of Smoking in the United States: Estimates, Their Validity, and Their Implications," *Tobacco Control* 8(3): 290-300, Autumn 1999.

<sup>10</sup> CDC, "Declines in Lung Cancer Rates --- California, 1988--1997," *MMWR* 49(47):1066-9, December 1, 2000, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4947a4.htm>.

<sup>11</sup> Hodgson, T.A., *Millbank Quarterly* 70(1), 1992; and see earlier endnote.

<sup>12</sup> Hodgson, T.A., *Millbank Quarterly* 70(1), 1992.

<sup>13</sup> See, e.g., Orleans, CT, et al., "Helping Pregnant Smokers Quit," *Tobacco Control*, 2000.

<sup>14</sup> Miller, L, et al., "State Estimates of Total Medical Expenditures Attributable to Smoking, 1993" *Public Health Reports*, September/October 1998.

<sup>15</sup> U.S. Health Care Financing Administration, <http://aspe.os.dhhs.gov/health/fmap.htm>.

<sup>16</sup> CDC, *State Highlights 2006*. See, also, GAO, "CDC's April 2002 Report on Smoking: Estimates of Selected Health Consequences of Cigarette Smoking Were Reasonable," July 16, 2003, <http://www.gao.gov/new.items/d03942r.pdf>. U.S. Treasury Dept, *The Economic Costs of Smoking in the U.S. and the Benefits of Comprehensive Tobacco Legislation*, 1998. TFK factsheet, *Comprehensive State Tobacco-Control Programs Save Money*, <http://tobaccofreekids.org/research/factsheets/pdf/0168.pdf>.

<sup>17</sup> See, e.g., Mudarri, D., *The Costs and Benefits of Smoking Restrictions: An Assessment of the Smoke-Free Environment Act of 1993 (H.R. 3434)*, U.S. Environmental Protection Agency report to the Subcommittee on Health and the Environment, Committee on Energy and Commerce, U.S. House of Representatives, April 1994; Hall, J.R Jr., National Fire Protection Association, *The U.S. Smoking-Material Fire Problem*, April 2001.

<sup>18</sup> See, e.g., the TFK factsheets at <http://tobaccofreekids.org/research/factsheets/index.php?CategoryID=13>, including *Health Harms from Smoking and Other Tobacco Use* at <http://tobaccofreekids.org/research/factsheets/pdf/0194.pdf>.

<sup>19</sup> Campaign for Tobacco-Free Kids, et al., *A Broken Promise To Our Children: The 1998 State Tobacco Settlement Nine Years Later* (December 12, 2007), <http://tobaccofreekids.org/reports/settlements>.

<sup>20</sup> The so-called "death benefit" from smokers dying earlier than nonsmokers does not weaken these savings projections; and any tobacco tax revenue declines caused by the smoking reductions could be regained by small increases in state tobacco tax rates. TFK tax report, <http://tobaccofreekids.org/reports/prices>; and TFK Factsheet, *The Immorality & Inaccuracy of the Death Benefit Argument*, <http://tobaccofreekids.org/research/factsheets/pdf/0036.pdf>.