



## COMPREHENSIVE STATEWIDE TOBACCO PREVENTION PROGRAMS SAVE MONEY

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It is well established that comprehensive statewide tobacco-prevention programs prompt sharp reductions in smoking levels among both adults and kids by both increasing the numbers who quit or cutback and reducing the numbers who start or relapse.\* As shown by the experience of those states that already have comprehensive tobacco-prevention programs, these smoking reductions save thousands of people from suffering from the wide range of smoking-caused illnesses and other health problems, thereby producing enormous declines in state health care costs and other smoking-caused expenditures.

### **Immediate Savings**

Substantial cost savings from adult smokers quitting begin to appear as soon as the smoking declines occur. While most of the health care savings from getting kids to quit smoking or never start do not appear until many years later, some savings from reducing youth smoking also appear immediately. Most notably, reducing smoking among pregnant women (including pregnant teens, who have especially high smoking rates) produce immediate reductions in smoking-caused pregnancy and birth complications and related health care costs. Research studies estimate that the direct additional health care costs in the United States associated with just the birth complications caused by pregnant women smoking or being exposed to secondhand smoke could be as high as \$2 billion per year or more, with the costs linked to each smoking-affected birth averaging \$1,142 to \$1,358 (in 1996 dollars).<sup>1</sup> And state Medicaid programs cover well over half of all births in the United States.<sup>2</sup>

Not surprisingly, program officials announced that the Massachusetts comprehensive tobacco-prevention program, which began in 1993, quickly began paying for itself just through the declines in smoking among pregnant women in the state.<sup>3</sup> In addition, research in California shows that its program, which began in 1989, reduced state health care costs by more than \$100 million in its first seven years just by reducing the number of smoking-caused low-birthweight babies, with more than \$11 million of those savings in the first two years.<sup>4</sup> Subsequent research indicates that California's overall cost savings from reducing all smoking-affected births and birth complications during its first two years totaled roughly \$20 million.<sup>5</sup>

Similarly, smoking declines among parents (including teen parents) rapidly produce health care cost savings by immediately reducing smoking-triggered asthma and respiratory illness and other secondhand-smoke health problems among their children. Parental smoking has been estimated to cause direct medical expenditures of more than \$2.5 billion per year to care for smoking-caused problems of exposed newborns, infants, and children.<sup>6</sup> And these estimates do not even include the enormous costs associated with the physical, developmental, and behavioral problems of smoking-affected offspring that not only occur during infancy but can extend throughout their entire lives.<sup>7</sup>

By quickly reducing the number of cigarettes smoked by adults and kids in the state each year, statewide tobacco-control programs also reduce other health problems, and related costs, caused by secondhand smoke. Adults and children with emphysema, asthma or other respiratory illnesses, for example, can suffer immediate distress from being exposed to cigarette smoke, which can even lead to hospitalization in some cases.<sup>8</sup> Reducing the number of cigarettes smoked in a state can also reduce the number of smoking-caused fires and the amount of smoking-caused smoke damage, soiling, and litter. While no good estimates of the related cost savings exist, smoking-caused fires cause more than \$500 million in residential and commercial property losses each year; and business maintenance and cleaning costs caused by smoking annually total roughly \$5 billion nationwide.<sup>9</sup>

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\* For extensive examples of real-world adult and youth smoking declines in states that have already initiated statewide tobacco-prevention programs, see TFK fact sheet, *Comprehensive Statewide Tobacco Prevention Programs Effectively Reduce Tobacco Use*, <http://www.tobaccofreekids.org/research/factsheets/pdf/0045.pdf>. For information on the structure of effective state programs, see TFK fact sheet, *Essential Elements of a Comprehensive State Tobacco Prevention Program*, <http://www.tobaccofreekids.org/research/factsheets/pdf/0015.pdf>. See other related fact sheets at <https://www.tobaccofreekids.org/fact-sheets/tobacco-control-policies/state-tobacco-prevention-programs-1>.

Sharp drops in the major smoking-caused diseases (such as strokes, heart disease, and lung and other cancers), with large related savings, do not appear for several years after state adult smoking levels decline. But some small declines in these smoking-caused diseases do begin to occur immediately, with significant cost savings. In California, for example, the state tobacco control program's reductions to adult smoking in its first seven years produced health care costs savings of \$390 million just through the related declines in smoking-caused heart attacks and strokes, with more than \$25 million of those savings appearing in the first two years.<sup>10</sup>

### **Annual Cost Savings From Established State Tobacco Prevention and Cessation Programs**

As noted, California's tobacco-control program secured substantial savings over the first seven years of its operation just from reducing smoking-affected births and smoking-caused heart attacks and strokes. Taken together, these savings more than covered the entire cost of the state's program over that time period, by themselves, and produced even larger savings in the following years.<sup>11</sup> For every single dollar the state has been spending on the California program it has been reducing statewide health care costs by more than \$3.60 -- with reductions in other smoking-caused costs saving another six dollars or more.<sup>12</sup> Between 1990 and 1998 the California Tobacco Control Program saved an estimated \$8.4 billion in overall smoking-caused costs and more than \$3.0 billion in smoking-caused health care costs.<sup>13</sup> In addition, these savings estimates for California do not even reflect the fact that since 1988 (the year before the California tobacco-prevention began), the rates of lung and bronchus cancer in California have declined more than five times as fast as they have in a sample of other areas of the U.S. (-14.0% vs. -2.7%). This decline is not only saving thousands of lives but also saving the state millions of dollars in medical costs with projected future savings in the billions.<sup>14</sup> Because it started later, and is a smaller state (which faces higher per-capita costs to implement some key tobacco-control elements), the Massachusetts program has not yet enjoyed as large per-capita savings as the California tobacco prevention program. But a report by an economist at the Massachusetts Institute of Technology in 2000 found that the state's program was already reducing statewide health care costs by \$85 million per year -- which means the state was annually reducing smoking-caused health care costs by at least two dollars for every single dollar it invested in its comprehensive tobacco-prevention efforts.<sup>15</sup>

A study in the *American Journal of Public Health* found that for every dollar spent by Washington State's tobacco prevention and control program between 2000 and 2009, more than five dollars were saved by reducing hospitalizations for heart disease, stroke, respiratory disease and cancer caused by tobacco use.<sup>16</sup> Over the 10-year period, the program prevented nearly 36,000 hospitalizations, saving \$1.5 billion compared to \$260 million spent on the program. The 5-to-1 return on investment is conservative because the cost savings only reflect the savings from prevented hospitalizations. The researchers indicate that the total cost savings could more than double if factors like physician visits, pharmaceutical costs and rehabilitation costs were included.

Additional 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 study of California's tobacco prevention program 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 health care costs in the state.<sup>17</sup> Similarly, a study of Arizona's tobacco prevention program found that the cumulative effect of the program was a savings of \$2.3 billion between 1996 and 2004, which amounted to about ten times the cost of the program over the same time period.<sup>18</sup> These studies confirm 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.

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 health care 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 1,700 were prevented from suffering from chronic obstructive pulmonary disease (COPD).<sup>19</sup>

### **Even Larger Future Savings From Early Tobacco-Program Smoking Declines**

While impressive, the estimates of current savings compared to current costs overlook a critically important component of the cost savings from state tobacco control. By prompting current adult and youth smokers to quit, helping former smokers from relapsing, and getting thousands of kids to never start smoking, state tobacco prevention programs lock in enormous savings over the lifetimes of each person stopped from smoking. Put simply, the lifetime health care costs of smokers total at least \$21,000 more than nonsmokers, on average, despite the fact that smokers do not live as long, with a somewhat smaller difference between smokers and former smokers.<sup>20</sup> That means that for every thousand kids kept from smoking by a state program, future health care costs in the state decline by roughly \$21 million (in 2009 dollars), and for every thousand adults prompted to quit future health costs drop by roughly \$11 million.

These savings-per-thousand figures are significant, but it is important to note that in an average-sized state a one percentage point decline in adult smoking means that more than 45,000 adults have quit smoking, which translates into savings over their lifetimes of approximately half of a billion dollars in reduced smoking-caused health care costs. And maintaining a one percentage-point reduction in youth smoking in an average-sized state will keep 14,000 kids alive today from ever becoming smokers, producing health care savings over their lifetimes of about \$300 million, as well.<sup>21</sup> Moreover, an adequately funded, comprehensive statewide tobacco prevention program in any state should be able to reduce adult and youth smoking by much more than a single percentage point over just its first few years of operation. California, for example, reduced adult smoking rates by roughly one percentage point per year, above and beyond national adult smoking declines, during each of its first seven years.<sup>22</sup> In the first three years of its youth-directed tobacco control program, Florida reduced high school and middle school smoking by almost three percentage points per year.<sup>23</sup> By reducing adult and youth smoking rates by five percentage points, an average-sized state would reduce future state smoking-caused health care costs by more than \$4 billion.

Along the same lines, the findings of a 2005 study show that if every state funded its tobacco prevention efforts at the minimum amount recommended by the U.S. Centers for Disease Control and Prevention (CDC), just the related declines in youth smoking would lock in future reductions in smoking-caused health care costs of more than \$31 billion.<sup>24</sup> The related declines in adult smoking and in secondhand smoke exposure from the states making these CDC investments in tobacco prevention would lock in tens of billions of dollars in additional smoking-caused cost savings. In addition, a 2011 benefit-cost analysis concluded that if states followed CDC's *Best Practices* funding guidelines, the states could save as much as 14-20 times the cost of program implementation through reduced medical and productivity costs as well as reduced Medicaid costs.<sup>25</sup>

### **State Tobacco-Prevention Efforts and State Medicaid Program Savings**

The long-term savings from state tobacco-prevention programs – as well as the immediate and short-term savings outlined above – also directly reduce state Medicaid program expenditures. For the average state, more than 17 percent of all smoking-caused health care expenditures within its borders are paid for by the state's Medicaid program (with actual state rates ranging from a low of slightly more than 10% for North Dakota and Delaware to more than 27% for Maine, New Hampshire and New York, and a high of 36% for Louisiana).<sup>26</sup>

A more recent example from Massachusetts demonstrates that Medicaid coverage to help smokers quit is highly cost-effective and saves money. After Massachusetts implemented comprehensive coverage of tobacco cessation services for all Medicaid beneficiaries in 2006, the smoking rate among beneficiaries declined by 26 percent in the first 2.5 years. Among benefit users, there was a 46 percent decrease in hospitalizations for heart attacks and a 49 percent decrease in hospitalizations for cardiovascular disease. Massachusetts estimates that these health gains saved \$10.2 million in health care costs in the first two years – \$2 for every dollar spent on the benefit.<sup>27</sup>

Other state health care programs and state health insurance programs for government employees also accrue significant cost savings from the smoking declines prompted by state tobacco-prevention programs.

### **Can Other States Do As Well As California, Massachusetts and Washington?**

States that establish comprehensive statewide tobacco-prevention programs should do at least as well, in terms of cost savings, as California and Massachusetts have in the past, and could do even better. By taking

advantage of the knowledge and experience gained from the efforts in California, Massachusetts, and elsewhere, other states can design and initiate programs that are even more effective than those states' efforts and can get up to full speed more quickly. Other states can also simply make larger investments in tobacco prevention.

**Campaign for Tobacco-Free Kids, December 7, 2017 / Meg Riordan**

More information is available at <https://www.tobaccofreekids.org/fact-sheets/tobacco-control-policies/state-tobacco-prevention-programs-1>.

<sup>1</sup> Miller, DP, et al., "Birth and First-Year Costs for Mothers and Infants Attributable to Maternal Smoking," *Nicotine & Tobacco Research* 3(1):25-35, February 2001. Lightwood, JM, et al., "Short-Term Health and Economic Benefits of Smoking Cessation: Low Birth Weight," *Pediatrics* 104(6):1312-20, December 1999. Adams, EK & Melvin, CL, "Costs of Maternal Conditions Attributable to Smoking During Pregnancy," *American Journal of Preventive Medicine* 15(3):212-19, October 1998. U.S. Centers for Disease Control & Prevention (CDC), "Medical Care Expenditures Attributable to Cigarette Smoking During Pregnancy – United States, 1995," *Morbidity and Mortality Weekly Report (MMWR)* 46(44):1048-1050, November 7, 1997, <http://www.cdc.gov/mmwr/preview/mmwrhtml/00049800.htm>.

<sup>2</sup> Orleans, CT, et al., "Helping Pregnant Smokers Quit: Meeting The Challenge in the Next Decade," *Tobacco Control* 9(Supplemental III):6-11, 2000.

<sup>3</sup> Connolly, W, Director, Massachusetts Tobacco Control Program, Joint Hearing of the Pennsylvania House of Representatives Committee on Health and Human Services and the Pennsylvania Senate Committee on Public Health and Welfare, June 22, 1999. Campaign for Tobacco-Free Kids (TFK) Factsheet, *Harm Caused by Pregnant Women Smoking or Being Exposed to Secondhand Smoke*, <http://www.tobaccofreekids.org/research/factsheets/pdf/0007.pdf>.

<sup>4</sup> Lightwood, JM, et al., "Short-Term Health and Economic Benefits of Smoking Cessation: Low Birth Weight," *Pediatrics* 104(6):1312-1320, December 1999.

<sup>5</sup> Miller, DP, et al., "Birth and First-Year Costs for Mothers and Infants Attributable to Maternal Smoking," *Nicotine & Tobacco Research* 3(1):25-35, February 2001.

<sup>6</sup> Aligne, CA & Stoddard, JJ, "Tobacco and Children: An Economic Evaluation of the Medical Effects of Parental Smoking," *Archives of Pediatric and Adolescent Medicine* 151:648-653, July 1997.

<sup>7</sup> TFK Factsheet, *Harm Caused by Pregnant Women Smoking or Being Exposed to Secondhand Smoke*, <http://tobaccofreekids.org/research/factsheets/pdf/0007.pdf>.

<sup>8</sup> See, e.g. California Environmental Protection Agency, *Health Effects of Exposure to Environmental Tobacco Smoke*, 1997, [http://www.oehha.org/air/environmental\\_tobacco/finalets.html](http://www.oehha.org/air/environmental_tobacco/finalets.html).

<sup>9</sup> Hall, JR, Jr., *The U.S. Smoking-Material Fire Problem*, National Fire Protection Association, April 2001; 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 submitted to the Subcommittee on Health and the Environment, Committee on Energy and Commerce, U.S. House of Representatives, April 1994; CDC, *Making Your Workplace Smokefree: A Decision Maker's Guide*, 1996.

<sup>10</sup> Lightwood, J & Glantz, S, "Short-term Economic and Health Benefits of Smoking Cessation: Myocardial Infarction and Stroke," *Circulation* 96:1089-1096, 1997. Kabir, et al., "Coronary Heart Disease Deaths and Decreased Smoking Prevalence in Massachusetts, 1993-2003," *American Journal of Public Health* 98(8):1468-69, August 2008.

<sup>11</sup> Lightwood, J & Glantz, S, "Short-term Economic and Health Benefits of Smoking Cessation: Myocardial Infarction and Stroke," *Circulation* 96:1089-1096, 1997; Lightwood, JM, et al., "Short-Term Health and Economic Benefits of Smoking Cessation: Low Birth Weight," *Pediatrics* 104(6):1312-1320, December 1999; Miller, DP, et al., "Birth and First-Year Costs for Mothers and Infants Attributable to Maternal Smoking," *Nicotine & Tobacco Research* 3(1):25-35, February 2001.

<sup>12</sup> Tobacco Control Section, California Department of Health Services, *California Tobacco Control Update*, August 2000, <http://www.dhs.ca.gov/tobacco> or <http://www.dhs.ca.gov/tobacco/documents/pubs/CTCUpdate.pdf>.

<sup>13</sup> Tobacco Control Section, California Department of Health Services, *California Tobacco Control Update*, August 2000, <http://www.dhs.ca.gov/tobacco/documents/pubs/CTCUpdate.pdf> or <http://www.dhs.ca.gov/tobacco>.

<sup>14</sup> CDC, "Declines in Lung Cancer Rates – California," *MMWR* 49(47):1066-9, December 2000, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4947a4.htm>.

<sup>15</sup> Harris, J, "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.

<sup>16</sup> Dilley, JJA, et al., "Program, Policy and Price Interventions for Tobacco Control: Quantifying the Return on Investment of a State Tobacco Control Program," *American Journal of Public Health*, Published online ahead of print December 15, 2011. See also, Washington State Department of Health, Tobacco Prevention and Control Program, News release, "Thousands of lives saved due to tobacco prevention and control program," November 17, 2010, [http://www.doh.wa.gov/Publicat/2010\\_news/10-183.htm](http://www.doh.wa.gov/Publicat/2010_news/10-183.htm).

<sup>17</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>18</sup> Lightwood, JM et al., "Effect of the Arizona Tobacco Control Program on Cigarette Consumption and Healthcare Expenditures," *Social Science and Medicine* 72(2), January 2011.

<sup>19</sup> Hurley, SF & Matthews, JP, "Cost-Effectiveness of the Australian National Tobacco Campaign," *Tobacco Control*, published online August 21, 2008.

<sup>20</sup> Hodgson, TA, "Cigarette Smoking and Lifetime Medical Expenditures," *The Milbank Quarterly* 70(1), 1992 [study's results converted to 2009 dollars using Consumer Price Index for medical care prices (following CDC updating formulas and procedures)]; See also, Nusselder, W, et al., "Smoking and the Compression of Morbidity," *Epidemiology and Community Health*, 2000; Warner, KE, 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>21</sup> Calculations based on adult and youth population data from U.S. Bureau of the Census.

<sup>22</sup> Tobacco Control Section, California Department of Health Services, "Adult Smoking Trends in California," <http://www.dhs.ca.gov/tobacco/documents/FSAdulttrends.pdf>, downloaded February 2002.

<sup>23</sup> Florida Department of Health, 2001 Florida YTS, [http://www.doh.state.fl.us/disease\\_ctrl/epi/FYTS](http://www.doh.state.fl.us/disease_ctrl/epi/FYTS).

<sup>24</sup> Tauras, JA, et al., "State Tobacco Control Spending and Youth Smoking," *American Journal of Public Health* 95(2):338-44, February 2005 [with additional calculations by the primary authors based on the studies findings and methodology].

<sup>25</sup> Chattopadhyay, S. and Pieper, D., "Does Spending More on Tobacco Control Programs Make Economic Sense? An Incremental Benefit-Cost Analysis Using Panel Data," *Contemporary Economic Policy*, 2011.

<sup>26</sup> Miller, L, et al., "State Estimates of Medicaid Expenditures Attributable to Cigarette Smoking, Fiscal Year 1993," *Public Health Reports* 113:140-151, March/April 1998. On average, the federal government reimburses the states for roughly 57% of their Medicaid program costs, <http://www.hcfa.gov/medicaid/medicaid.htm>.

<sup>27</sup> Massachusetts Department of Public Health, Tobacco Control Program, "MassHealth Tobacco Cessation Benefit," December, 2010.