Legacy
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POLICY REPORT 02

June 2004

Secondhand Smoke Tearing Families Apart

The Health and Economic Burden of Smoking on Children

INTRODUCTION

Millions of today's children will have their lives cut short by tobacco. Although tobacco use is the leading preventable cause of disease and death in the United States, nearly one-fourth (23 percent) of adult Americans — 46 million people — still smoke.[1] Among youth, 10 percent of middle school students and 23 percent of high school students smoke.[2] This widespread use of tobacco puts children in harm's way through unintended exposure to tobacco smoke from a variety of sources. For many of these exposed children, the consequences include illness and death. Nearly 6.5 million children alive today will die prematurely from tobacco-related illnesses if current trends in tobacco use persist.[3]

Concern about the health risks of tobacco typically focus on adult smokers, but nonsmokers — particularly children — are at risk for serious consequences from passive exposure through secondhand smoke, or environmental tobacco smoke (ETS) — a combination of exhaled smoke and smoke from the burning end of a tobacco product. The risks to newborns, infants, and children include low birth weight (LBW), sudden infant death syndrome (SIDS), asthma, and ear infection (otitis media), and the toll is devastating: in 2001, tobacco use accounted for more than 26,000 LBW births; 263 cases of SIDS; nearly 300,000 pediatric asthma cases; and more than 99,000 cases of ear infection. The effects of tobacco smoke touch young lives in other ways. Children who are exposed to secondhand smoke have, on average, 1.5 more lost school days per year than children who are not exposed.[4] And, tragically, smoking kills more than 80 children each year, and injures nearly 300 more, in smoking-related fires.[5]

The increased incidence of childhood disease and death is only a portion of the burden of tobacco use. There is also a significant economic cost. Each year, more than $75 billion is spent in direct medical expenditures to treat tobacco-related illnesses while another $82 billion is lost in smoking-attributable productivity costs.[6] Annual direct medical expenditures to treat children with tobacco-related ailments are estimated to be $4.6 billion, and loss of life costs are estimated to be $8.2 billion.[7]

Tobacco's terrible costs — in lives, health, and money — need not be so high. State governments can act effectively to prevent and control tobacco use and significantly reduce health care costs. However, state legislatures often lack the political will to take steps to reduce smoking. This lack of political will is especially tragic because states have the money to pay for smoking prevention programs — the funds are received each year from the Master Settlement Agreement (MSA) in most states, and many have new tobacco taxes.

During the mid-1990s, state governments filed lawsuits against the tobacco industry to recover costs being borne because of wrongful acts of the tobacco industry — acts that increased tobacco use, and its associated morbidity and mortality, among the population. In 1997 and 1998, Florida, Minnesota, Mississippi, and Texas settled their lawsuits against the major U.S. tobacco companies through individual agreements that provided those states with annual payments totaling more than $40 billion through 2025. In November 1998, the rest of the states followed and jointly entered into the MSA to settle their lawsuits against the tobacco companies. The MSA established annual base payments to each state. At the time, these payments were projected to total more than $206 billion through 2025. To date, states have received $29 billion from tobacco companies as partial payment for the devastating costs of tobacco use.[8] Unfortunately, 20 states and the District of Columbia have securitized, or sold to investors, all or a portion of the funding stream for a smaller up-front payment or have passed laws permitting such action. As a result, the amount of settlement money available to fund tobacco prevention and for other future needs has been reduced or eliminated.[9]

State leaders pledged that money received through the MSA would not only be used to pay for costs already incurred. They promised to invest in programs to reduce tobacco use, including programs to prevent children from initiating tobacco use, to treat those already addicted, and to provide health care for those who suffer from tobacco-related diseases. Sadly, 5 years after the landmark settlement, only four states — Maine, Delaware, Mississippi, and Arkansas — meet the minimum levels of funding for tobacco prevention programs recommended by the Centers for Disease Control and Prevention (CDC). Only eight other states fund tobacco prevention efforts at half of the minimum levels recommended by the CDC. In the current budget year, the states, as a whole, plan to spend $541.1 million on tobacco prevention programs — barely one-third of the CDC's minimum recommendation for all of the states ($1.6 billion). Already, states have reduced total

annual funding for tobacco prevention by 28 percent, or $209 million, leading to the elimination of two of the nation's oldest and most successful tobacco prevention programs in Florida and Massachusetts, as well as the slowdown of some of the nation's newer programs in Indiana, Maryland, Minnesota, Nebraska, and New Jersey.[9]

Why is funding for tobacco programs continually being cut, despite the huge economic burden of tobacco use? In the wake of the economic downturn that began in January 2001, many states are using tobacco settlement resources to reduce budget deficits. Although it may appear to remedy financial crises in the short-term, this strategy puts long-term fiscal and public health at risk. Successful state efforts in California, Florida, Maine, and Massachusetts show that investment in tobacco control efforts is extremely cost-effective. In California, an estimated $3 in health care costs are saved for every $1 allocated to tobacco control, and in Massachusetts, estimates show a two-to-one rate of return for every dollar spent on tobacco prevention.[10]

A sustained minimal investment in comprehensive tobacco control by state and local governments will yield substantial returns by preventing tobacco-related illnesses, thereby avoiding treatment-related costs. Even if each state commits only the minimum amount of funding recommended by the CDC to prevent and reduce tobacco use, significant savings in health care costs will be realized and 80 percent of MSA funds will remain for other programs.

To help state and local governments understand the value of investments in tobacco control, this report provides estimates of tobacco-related treatment costs for children and spells out the monetary savings that could be achieved as a result of funding tobacco control and prevention. Part One of the report provides data on the prevalence and economic costs of specific infant and child health conditions associated with exposure to secondhand smoke. Part Two of the report uses established econometric modeling techniques to provide national and state-by-state estimates of savings in child health care costs that could be attained if each state were to meet annual goals of reducing tobacco smoke exposure and the goals of lowering maternal smoking prevalence as outlined in *Healthy People 2010*.

MORE THAN 80 CHILDREN DIE EACH YEAR IN SMOKING-RELATED FIRES

Fires started by smoking materials, or lighted tobacco products, are the leading cause of unintentional fire deaths in the United States. In 1999, there were 167,700 smoking-material fires, most of which were caused by cigarettes (87.7 percent). The rest were caused by cigars or pipes (1.6 percent) or unclassified or unknown types of smoking materials (10.7 percent). These fires resulted in 807 civilian deaths, 2,193 civilian injuries, and $559.1 million in direct property damage. Of the total number of civilian deaths, 86 were among those aged 19 and under. Of the total number of civilians injured, 166 were 19 years old or younger.

Although the risk of dying in a residential fire caused by smoking materials rises with age (40 percent of fatal smoking-material fire victims were aged 65 or older), young people are clearly affected: the 86 deaths among young people represent 11 percent of the 807 smoking-material fire deaths in 1999. While the child victims of smoking-material fires include children who smoke, they largely reflect children living in households with adults who smoke.*

Since the early 1980s, there have been ongoing legislative efforts aimed at reducing smoking-material fire fatalities. To date, no bill has passed Congress; however, the 1990 Fire Safe Cigarette Act did lead to an American Society for Testing and Materials (ASTM) standard test method to measure a cigarette's ignition strength. In April 2004, Massachusetts Rep. Edward Markey introduced the Cigarette Fire Safety Act that, if enacted, would provide fire safety standards for cigarettes. Currently, Rep. Markey's bill, which has nearly 50 cosponsors, is awaiting action in a House subcommittee. At the state level, New York will be the first to adopt a fire safety standard for cigarettes, effective June 2004.

* Hall, J.R. 2003. *The Smoking-Material Fire Problem.* Quincy: National Fire Protection Agency (NFPA).

PART ONE

PREVALENCE AND POPULATION ESTIMATES OF HEALTH OUTCOMES AND RELATED MEDICAL SERVICES

In the United States, LBW is among the leading causes of neonatal deaths and, along with short gestation, accounts for 16 percent of all infant deaths.[11] Surviving LBW infants may risk long-term morbidity. Nearly 8 percent of births per year are LBW, and 20 to 30 percent of these births are attributable to smoking.[12, 13] In fact, women who smoke during pregnancy, when compared with nonsmokers, have more than double the risk of delivering an infant with LBW.[14] In addition, infants born to women exposed to secondhand smoke are two to four times more likely to be LBW.[15]

Smoking and infant exposure to tobacco smoke during pregnancy and after childbirth are also linked to SIDS, the leading cause of death among infants between their first month and year of life. SIDS is responsible for 8 percent of infant deaths, killing more than 2,000 infants each year.[7] In 2001, 12 percent of SIDS deaths were attributable to smoking. Numerous studies have found that smoking during pregnancy, maternal smoking after birth, and postnatal exposure to secondhand smoke are associated with an elevated risk of SIDS.[7, 16] Infants whose mothers smoked during pregnancy have more than twice the risk of SIDS than infants of nonsmoking mothers. The risk of SIDS among infants exposed to maternal smoking during pregnancy and parental smoking after birth is up to triple that of infants who are not exposed.[17, 18]

"When I was 21 and pregnant with my first child the doctor recommended that I quit smoking so that I wouldn't harm my baby. I tried and only was able to cut down to 10 cigarettes a day. After he was born, I went back to a pack a day. My third attempt to quit was when I was 26 and pregnant with my last child. Again I was only able to cut down to about 10 cigarettes a day. A year went by and my kids kept getting upper respiratory infections, ear infections and always had a cough."

Asthma is the most common chronic illness of childhood and can be fatal. In 2001, 9 million children had been diagnosed with asthma at least once in their lives and more than 4 million had an asthma attack within the past year.[19] Children exposed to secondhand smoke have a higher incidence of asthma than do unexposed children. In fact, there is strong evidence to support an association between secondhand smoke, particularly parental smoking, and childhood asthma.[20, 21] Prior research shows that 40 percent of asthma cases among children under the age of 2 are attributable to secondhand smoke exposure.[22] In a recent study of middle school children in North Carolina, 15 percent of asthma cases observed in the study population were attributable to secondhand smoke.[23] Children exposed to secondhand smoke are more likely than unexposed children to have restricted activities, be confined to their beds, and miss school because of asthma and other smoking-related respiratory ailments.[22]

Otitis media, or ear infection, is the most frequently diagnosed infirmity and the most common bacterial infection among children.[7] There are more than 24 million office visits annually for acute ear infections in children younger than 15 years of age.[16] In 2001, 99,069 cases among children under age 5 were attributable to smoking. Research suggests that an increasing intensity of exposure to parental smoking is associated with a higher risk of ear disease in young children.[24, 25]

COSTS

Clearly, there are substantial health costs from tobacco use, but the impact does not end there. Tobacco-related health problems result in extraordinary economic and social expenses. We developed a statistical model based on health care expenditures found in published literature to determine costs for LBW, asthma, and ear infections. We also estimated the number of infant lives lost due to SIDS.[i] The methodology developed for LBW and SIDS was informed by work set forth by Lightwood et al. in their study of LBW.[26] We constructed our own methodology to determine costs for asthma and ear infections.[ii]

In 2001, the costs of babies born to smoking mothers exceeded $300 million. Asthma cases attributable to secondhand smoke exposure cost the United States more than $236 million. Smoking-attributable ear infections cost nearly $49 million. The number of smoking-attributable infant deaths from SIDS totaled more than 260.

PART TWO

SAVINGS

Reductions in the prevalence of smoking translate directly into health care cost savings for states and individuals. Using the same model as that used to determine costs, we estimated savings for each health outcome associated with secondhand smoke exposure among children. We calculated the number of cases that could be averted and the cost savings that would result from an annual 1 percentage-point reduction in the prevalence of children's exposure to tobacco smoke. This reduction in prevalence was chosen because it can be thought of as an annual health benefit and cost savings to states and, as demonstrated in California, is an achievable annual goal for most state tobacco control programs. In addition, the 1 percentage-point reduction is the value used by Lightwood et al.[26]

We estimated the results that might be achieved if states met the *Healthy People 2010* objectives for exposure to tobacco smoke (that is, an increase to 30 percent of the proportion of females aged 18 to 49 who stop smoking in the first trimester of their pregnancy and reduction of the proportion of children who are regularly exposed to secondhand smoke at home to 10 percent).[12] For LBW and SIDS, exposure is measured by the prevalence of maternal smoking. For asthma and ear infections, exposure is measured by the proportion of children who are exposed to secondhand smoke in the household. It is unlikely that states will meet the *Healthy People 2010* objectives quickly, so these results can be thought of as being long-term rewards for reducing children's exposure to tobacco smoke.

43,000 TOBACCO ORPHANS*

Cigarette smoking kills an estimated 264,000 men and 178,000 women in the United States each year.** Researchers at the University of California, Davis have estimated that these preventable deaths leave tens of thousands of children fatherless or motherless each year, and the resulting Social Security costs exceed $1 billion.†

Based on data for 1994, smoking that year caused the deaths of an estimated 44,000 men and 19,000 women between the ages of 15 and 54, leaving 31,000 fatherless and 12,000 motherless youth. Payments made to these surviving children through the Social Security Administration's Old Age, Survivors and Disability Insurance fund will total roughly $1.4 billion.

The researchers — Dr. Bruce Leistikow, Daniel Martin, and Christina Milano — note that the loss of a parent carries additional costs. *"The loss of a parent may have a lifetime of effects on the surviving (bereft) child," they say. "Up to 40% of bereft children show emotional disturbance a year later. Over a longer term, there may be up to a fivefold increase in childhood psychiatric disorder. Adults, even the elderly, who lost a parent in childhood seem to be more vulnerable to depression, anxiety, and attempting suicide* (p. 353)."

* Orphan is defined as "a child bereaved of both father and mother; sometimes, also, a child who has but one parent living" (*Webster's Revised Unabridged Dictionary*, 1996, 1998). In this case, an orphan is a child who has lost at least one parent.

** CDC. 2002. "Annual Smoking-Attributable Mortality,Years of Potential Life Lost, and Economic Costs — United States, 1995–1999." *Morbidity and Mortality Weekly Report* 51(14):300-303.

† Leistikow, B.N., D.C. Martin, and C.E. Milano. 2000. "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* 30:353-360.

In brief, we found that 1 percentage-point reductions in secondhand smoke exposure would result each year in 2,263 fewer LBW births and associated health care costs savings of nearly $27 million; 21 fewer smoking-attributable SIDS deaths; 19,077 fewer cases of asthma and associated savings of more than $15 million; and 6,755 fewer ear infection cases with savings of more than $3 million. Meeting the long-range *Healthy People 2010* goals would result in 7,892 fewer smoking-attributable LBW births and $91 million saved nationally each year; 79 fewer SIDS deaths per year; nearly 171,000 fewer cases of childhood asthma and more than $138 million in associated savings; and more than 47,000 fewer ear infection cases, resulting in a savings of more than $23 million.

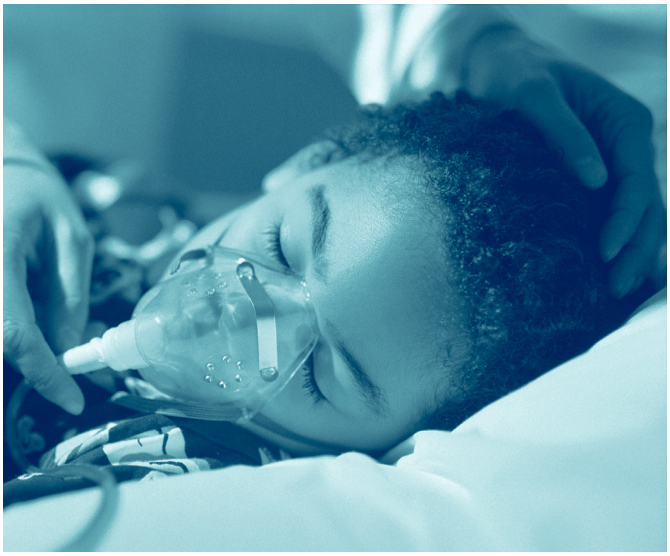
CONCLUSION

Each year, hundreds of millions of dollars are spent treating preventable tobacco-related illnesses among America's children. Much of this money could be saved if state leaders use the tobacco settlement funds to prevent and reduce exposure of children to tobacco smoke rather than diverting the money to address budget shortfalls. When making their difficult fiscal choices, state and local decision makers must realize that in meeting the goals of the MSA they are not only encouraging long-term monetary savings but are also assuring dramatic improvements in public health through sustained, adequately funded, tobacco control programs. Although short-term solutions are tempting, wise investments in current and future tobacco control efforts will yield remarkable returns in public health and public coffers.

"My daughter was born very healthy, ten toes and ten fingers all intact. She grew up to become a happy little toddler who just got very very ill one day. My daughter Kathleen developed severe asthma caused by my awful chain smoking habit. She's 8 years old now and wonders if she can live each day without worrying if she brought her metered dose inhaler and/or her nebulizer is within reach. Unfortunately, I can't turn back the clock anymore."

This report documents the social and economic impact that reductions in tobacco use would have in the areas of LBW, SIDS, asthma, and ear infections among children. It clearly shows that with even a small reduction in tobacco smoke exposure, thousands of children can be spared from needless suffering. In addition, millions of dollars can be saved. However, none of this is possible without the funding for tobacco control that is so necessary for improving our children's health.

It is important to keep in mind that children did not ask to endure the consequences of tobacco use. Nor did citizens of each state ask to pay for the costs of treating preventable tobacco-related illnesses. Now is the time to reverse the suffering by using the tobacco settlement funds for tobacco control programs. More important than the monetary savings, these efforts will spare the lives and protect the health of millions of our children.



Estimated Decreases in Smoking-Attributable Low Birth Weight Births and Subsequent Cost Savings from Reductions in Maternal Smoking Prevalence

					Annual 1%-Point Reduction in Exposure			Meet 2010 Goal of Increasing Quit Rate Among Pregnant Women to 30%		
State	Prevalence of Maternal Smoking[A]	Number of Babies Born to Smoking Mothers[B]	Cost of Babies Born to Smoking Mothers[C]	Number of Smoking-Attributable LBW Babies[D]	Reduction in the Number of Babies Born to Smoking Mothers	Cost Savings	Reduction in the Number of Smoking-Attributable LBW Babies	Reduction in the Number of Babies Born to Smoking Mothers	Cost Savings	Reduction in the Number of Smoking-Attributable LBW Babies
Alabama	0.126	7,617	$4,741,557	531	605	$376,314	42	2,285	$1,422,467	159
Alaska	0.174	1,741	$1,448,184	70	100	$83,229	4	522	$434,455	21
Arizona	0.068	5,821	$4,171,738	309	856	$613,491	45	1,746	$1,251,521	93
Arkansas	0.186	6,884	$3,303,427	422	370	$177,604	23	2,065	$991,028	127
California	0.098	51,720	$42,841,027	2,417	5,278	$4,371,533	247	15,516	$12,852,308	725
Colorado	0.091	6,098	$3,871,268	387	670	$425,414	42	1,829	$1,161,380	116
Connecticut	0.074	3,156	$2,512,390	176	426	$339,512	24	947	$753,717	53
Delaware	0.132	1,419	$1,055,638	95	107	$79,973	7	426	$316,691	29
District of Columbia	0.037	282	$408,607	27	76	$110,434	7	85	$122,582	8
Florida	0.091	18,727	$12,725,482	1,145	2,058	$1,398,405	126	5,618	$3,817,645	344
Georgia	0.083	11,083	$7,214,810	732	1,335	$869,254	88	3,325	$2,164,443	219
Hawaii	0.076	1,297	$741,687	79	171	$97,590	10	389	$222,506	24
Idaho	0.101	2,089	$844,655	99	207	$83,629	10	627	$253,396	30
Illinois	0.105	19,327	$13,779,951	1,141	1,841	$1,312,376	109	5,798	$4,133,985	342
Indiana	0.202	17,465	$10,395,000	914	865	$514,604	45	5,239	$3,118,500	274
Iowa	0.174	6,546	$2,613,569	294	376	$150,205	17	1,964	$784,071	88
Kansas	0.131	5,092	$2,247,741	258	389	$171,583	20	1,528	$674,322	77
Kentucky	0.240	13,118	$6,360,092	731	547	$265,004	30	3,935	$1,908,028	219
Louisiana	0.101	6,601	$4,820,779	508	654	$477,305	50	1,980	$1,446,234	152
Maine	0.176	2,422	$1,234,136	102	138	$70,121	6	726	$370,241	31
Maryland	0.088	6,443	$5,273,102	433	732	$599,216	49	1,933	$1,581,931	130
Massachusetts	0.093	7,540	$5,301,336	404	811	$570,036	43	2,262	$1,590,401	121
Michigan	0.157	20,948	$13,922,905	1,191	1,334	$886,809	76	6,284	$4,176,871	357
Minnesota	0.114	7,702	$3,266,293	356	676	$286,517	31	2,311	$979,888	107
Mississippi	0.126	5,328	$2,622,637	414	423	$208,146	33	1,598	$786,791	124
Missouri	0.183	13,810	$8,579,270	732	755	$468,813	40	4,143	$2,573,781	220
Montana	0.183	2,008	$562,585	97	110	$30,742	5	602	$168,775	29
Nebraska	0.149	3,698	$1,430,752	174	248	$96,024	12	1,109	$429,226	52
Nevada	0.110	3,452	$2,302,912	193	314	$209,356	18	1,036	$690,873	58
New Hampshire	0.147	2,154	$1,100,656	100	147	$74,875	7	646	$330,197	30
New Jersey	0.091	10,537	$6,872,878	621	1,158	$755,261	68	3,161	$2,061,863	186
New Mexico	0.105	2,848	$1,847,270	166	271	$175,931	16	855	$554,181	50
New York	0.087	22,100	$14,305,058	1,273	2,540	$1,644,259	146	6,630	$4,291,517	382
North Carolina	0.140	16,546	$10,094,323	1,059	1,182	$721,023	76	4,964	$3,028,297	318
North Dakota	0.168	1,282	$378,247	56	76	$22,515	3	385	$113,474	17
Ohio	0.191	28,950	$19,743,811	1,607	1,516	$1,033,707	84	8,685	$5,923,143	482
Oklahoma	0.179	8,971	$4,894,644	490	501	$273,444	27	2,691	$1,468,393	147
Oregon	0.128	5,801	$3,783,785	232	453	$295,608	18	1,740	$1,135,136	69
Pennsylvania	0.167	23,964	$14,560,323	1,336	1,435	$871,876	80	7,189	$4,368,097	401
Rhode Island	0.139	1,767	$1,152,578	93	127	$82,919	7	530	$345,773	28
South Carolina	0.126	7,025	$5,148,389	490	558	$408,602	39	2,108	$1,544,517	147
South Dakota	0.196	2,055	$560,513	91	105	$28,598	5	616	$168,154	27
Tennessee	0.172	13,474	$8,020,010	872	783	$466,280	51	4,042	$2,406,003	262
Texas	0.065	23,752	$16,669,858	1,373	3,654	$2,564,594	211	7,125	$5,000,957	412
Utah	0.075	3,597	$2,462,023	174	480	$328,270	23	1,079	$738,607	52
Vermont	0.203	1,292	$512,784	52	64	$25,260	3	388	$153,835	16
Virginia	0.080	7,911	$5,081,214	470	989	$635,152	59	2,373	$1,524,364	141
Washington	0.127	10,105	$7,806,616	426	796	$614,694	34	3,032	$2,341,985	128
West Virginia	0.267	5,454	$2,400,972	306	204	$89,924	11	1,636	$720,292	92
Wisconsin	0.159	10,982	$5,215,784	514	691	$328,037	32	3,295	$1,564,735	154
Wyoming	0.218	1,333	$409,946	75	61	$18,805	3	400	$122,984	23
United States	**0.114**	**471,334**	**$303,615,212**	**26,308**	**40,259**	**$26,802,872**	**2,263**	**141,400**	**$91,084,564**	**7,892**

Note: LBW = low birth weight.

[A] These 2001 prevalence rates were obtained from the Campaign for Tobacco-Free Kids.

[B] This number is calculated by multiplying the total number of babies born in the state during 2001 by the percentage of pregnant women in the state in 2001 who smoked during their pregnancy.

[C] These additional direct medical costs incurred as a result of live births to mothers who smoked during their pregnancy are calculated by multiplying the number of live births to smoking mothers in the state in 2001 by the average additional direct medical costs for each live birth to a smoking mother in the state in 2001.

[D] This number is calculated by multiplying the number of babies born to smokers in the state in 2001 by the excess risk for LBW.

Estimated Decreases in Smoking-Attributable SIDS Deaths and Subsequent Cost Savings from Reductions in Maternal Smoking Prevalence

State	Prevalence of Maternal Smoking [A]	Total Number of SIDS Deaths [B]	Rate of SIDS Deaths (per 100,000 live births) [C]	Number of Smoking-Attributable SIDS Deaths [D]	Annual 1%-Point Reduction in Exposure: Reduction in the Number of Smoking-Attributable SIDS Deaths	Meet 2010 Goal of Increasing Quit Rate Among Pregnant Women to 30%: Reduction in the Number of Smoking-Attributable SIDS Deaths
Alabama	0.126	32	52.9	4	0	1
Alaska	0.174	10	100.0	2	0	0
Arizona	0.068	35	40.9	2	0	1
Arkansas	0.186	27	73.0	5	0	1
California	0.098	89	16.9	9	1	3
Colorado	0.091	40	59.7	4	0	1
Connecticut	0.074	24	56.3	2	0	1
Delaware	0.132	11	102.3	1	0	0
District of Columbia	0.037	5	65.6	0	0	0
Florida	0.091	101	49.1	9	1	3
Georgia	0.083	114	85.4	9	1	3
Hawaii	0.076	9	52.7	1	0	0
Idaho	0.101	16	77.3	2	0	0
Illinois	0.105	99	53.8	10	1	3
Indiana	0.202	51	59.0	9	0	3
Iowa	0.174	33	87.7	5	0	2
Kansas	0.131	39	100.3	5	0	1
Kentucky	0.240	34	62.2	7	0	2
Louisiana	0.101	66	101.0	6	1	2
Maine	0.176	7	50.9	1	0	0
Maryland	0.088	54	73.8	5	1	1
Massachusetts	0.093	25	30.8	2	0	1
Michigan	0.157	96	71.9	14	1	4
Minnesota	0.114	35	51.8	4	0	1
Mississippi	0.126	54	127.7	6	1	2
Missouri	0.183	46	61.0	8	0	2
Montana	0.183	5	45.6	1	0	0
Nebraska	0.149	24	96.7	3	0	1
Nevada	0.110	17	54.2	2	0	1
New Hampshire	0.147	8	54.6	1	0	0
New Jersey	0.091	57	49.2	5	1	2
New Mexico	0.105	14	51.6	1	0	0
New York	0.087	64	25.2	5	1	2
North Carolina	0.140	103	87.2	14	1	4
North Dakota	0.168	10	131.1	2	0	0
Ohio	0.191	92	60.7	16	1	5
Oklahoma	0.179	38	75.8	6	0	2
Oregon	0.128	30	66.2	4	0	1
Pennsylvania	0.167	81	56.4	12	1	4
Rhode Island	0.139	5	39.3	1	0	0
South Carolina	0.126	36	64.6	4	0	1
South Dakota	0.196	15	143.1	3	0	1
Tennessee	0.172	63	80.4	10	1	3
Texas	0.065	173	47.3	11	2	3
Utah	0.075	7	14.6	1	0	0
Vermont	0.203	3	47.1	1	0	0
Virginia	0.080	76	76.9	6	1	2
Washington	0.127	61	76.7	7	1	2
West Virginia	0.267	23	112.6	5	0	2
Wisconsin	0.159	72	104.2	11	1	3
Wyoming	0.218	5	81.8	1	0	0
United States	**0.114**	**2,234**	**55.5**	**263**	**21**	**79**

Note: SIDS = sudden infant death syndrome.

[A] These 2001 rates were obtained from the Campaign for Tobacco-Free Kids.

[B] Data were obtained from the 2001 Compressed Mortality File.

[C] The total number of live births and SIDS deaths by state in 2001 were obtained from the 2001 Compressed Mortality File.

[D] This number is calculated by multiplying the number of live births in the state in 2001 to mothers who smoked during their pregnancy by the excess risk for SIDS in the state in 2001.

Estimated Decreases in Smoking-Attributable Asthma Cases and Subsequent Cost Savings from Reductions in Maternal Smoking Prevalence

State	% of All Children Aged 0–14 Exposed to Secondhand Smoke in Household [A]	No. of Asthma Cases Attributable to Secondhand Smoke Exposure [B]	Cost of Asthma Cases Attributable to Secondhand Smoke Exposure [C]	Annual 1%-Point Reduction in Exposure		Meet 2010 Goal of Reducing Exposure to 10%	
				No. of Asthma Cases Averted	Cost Savings	No. of Asthma Cases Averted	Cost Savings
Alabama	23.65%	5,594	$4,536,743	305	$247,569	3,849	$3,121,880
Alaska	17.48%	682	$553,317	48	$39,278	348	$282,200
Arizona	16.27%	4,971	$4,031,665	376	$305,164	2,283	$1,851,618
Arkansas	30.57%	4,631	$3,755,480	205	$166,110	3,714	$3,012,222
California	8.07%	14,990	$12,156,806	2,175	$1,763,631	0	$0 [D]
Colorado	14.74%	3,440	$2,789,691	285	$230,853	1,318	$1,069,193
Connecticut	15.25%	2,716	$2,202,404	218	$176,730	1,114	$903,534
Delaware	21.50%	861	$698,639	51	$41,367	549	$445,418
District of Columbia	22.88%	566	$458,909	32	$25,763	380	$307,929
Florida	15.76%	12,446	$10,093,973	970	$786,293	5,421	$4,396,035
Georgia	19.82%	9,488	$7,694,746	603	$488,940	5,603	$4,543,990
Hawaii	19.75%	1,226	$994,383	78	$63,381	721	$585,087
Idaho	14.71%	1,094	$887,259	91	$73,562	417	$338,553
Illinois	24.06%	16,923	$13,724,943	910	$738,409	11,788	$9,559,984
Indiana	30.71%	11,022	$8,939,211	486	$393,976	8,860	$7,185,834
Iowa	23.52%	3,464	$2,809,084	190	$154,054	2,373	$1,924,685
Kansas	20.03%	2,893	$2,346,538	182	$147,716	1,727	$1,400,745
Kentucky	33.79%	7,187	$5,828,469	294	$238,502	6,031	$4,891,511
Louisiana	22.20%	5,537	$4,490,268	319	$258,591	3,628	$2,942,007
Maine	21.62%	1,233	$1,000,205	73	$58,925	790	$640,916
Maryland	17.34%	4,933	$4,000,551	353	$285,986	2,489	$2,018,753
Massachusetts	13.58%	3,995	$3,239,657	356	$288,798	1,257	$1,019,099
Michigan	24.68%	13,639	$11,061,492	718	$582,551	9,670	$7,842,295
Minnesota	16.10%	4,055	$3,288,421	310	$251,220	1,831	$1,485,345
Mississippi	27.83%	4,656	$3,776,050	222	$180,040	3,556	$2,884,183
Missouri	28.25%	8,643	$7,009,651	407	$330,228	6,656	$5,398,153
Montana	17.68%	762	$618,040	54	$43,433	395	$319,955
Nebraska	19.86%	1,804	$1,462,731	114	$92,753	1,068	$865,873
Nevada	17.02%	2,040	$1,654,303	148	$120,222	1,003	$813,624
New Hampshire	22.87%	1,481	$1,200,902	83	$67,443	993	$805,524
New Jersey	16.54%	7,260	$5,888,181	541	$439,025	3,423	$2,776,066
New Mexico	18.26%	1,871	$1,517,234	128	$103,576	1,009	$818,396
New York	17.90%	17,101	$13,868,880	1,188	$963,649	8,999	$7,298,564
North Carolina	22.85%	10,191	$8,265,214	573	$464,401	6,833	$5,541,602
North Dakota	22.09%	667	$540,903	39	$31,281	435	$352,969
Ohio	26.47%	16,594	$13,457,824	824	$668,593	12,308	$9,982,191
Oklahoma	23.92%	4,454	$3,611,944	241	$195,237	3,090	$2,505,889
Oregon	14.78%	2,545	$2,064,189	210	$170,404	981	$795,568
Pennsylvania	24.04%	14,608	$11,846,996	786	$637,762	10,170	$8,247,688
Rhode Island	14.84%	716	$580,738	59	$47,764	278	$225,734
South Carolina	19.55%	3,984	$3,230,987	256	$207,749	2,320	$1,881,499
South Dakota	21.95%	890	$721,532	52	$41,965	577	$468,254
Tennessee	29.43%	9,226	$7,481,901	421	$341,037	7,261	$5,888,671
Texas	15.28%	19,036	$15,438,408	1,524	$1,236,352	7,843	$6,360,361
Utah	8.39%	1,175	$952,630	164	$133,283	0	$0
Vermont	22.02%	631	$512,075	37	$29,700	411	$333,218
Virginia	22.23%	8,415	$6,824,467	484	$392,568	5,519	$4,476,233
Washington	16.81%	5,183	$4,203,697	381	$308,938	2,503	$2,030,314
West Virginia	33.51%	2,940	$2,384,117	121	$98,160	2,459	$1,994,063
Wisconsin	22.84%	6,397	$5,187,745	360	$291,683	4,286	$3,476,095
Wyoming	24.12%	611	$495,589	33	$26,599	427	$345,898
United States	**20.77%**	**291,467**	**$236,379,781**	**19,077**	**$15,471,215**	**170,968**	**$138,655,417**

[A] Secondhand smoke exposure is defined as having at least one smoker in the household AND smoking in the home is either allowed in some places or at some times or is permitted anywhere. Data are from the 2001–2002 Current Population Survey Tobacco Use Supplements.

[B] A child is considered to be an asthma case if the child had ever been diagnosed with asthma by a doctor or health professional AND had an asthma episode in the past 12 months. Asthma information was obtained from the 2002 National Health Interview Survey.

[C] These are the extra medical costs incurred as a result of asthma cases attributable to secondhand smoke exposure.

[D] No cost savings in California since secondhand smoke exposure is below 10 percent.

Estimated Decreases in Smoking-Attributable Ear Infection Cases and Subsequent Cost Savings from Reductions in Maternal Smoking Prevalence

State	% of All Children Aged 0–5 Exposed to Secondhand Smoke in Household [A]	No. of Ear Infection Cases Attributable to Secondhand Smoke Exposure [B]	Cost of Ear Infection Cases Attributable to Secondhand Smoke Exposure [C]	Annual 1%-Point Reduction in Exposure		Meet 2010 Goal of Reducing Exposure to 10%	
				No. of Ear Infection Cases Averted	Cost Savings	No. of Ear Infection Cases Averted	Cost Savings
Alabama	20.30%	1,870	$922,920	109	$53,880	1,033	$509,648
Alaska	15.24%	222	$109,339	16	$8,108	83	$40,929
Arizona	13.65%	1,656	$817,172	135	$66,722	481	$237,534
Arkansas	31.73%	2,028	$1,000,726	85	$41,988	1,511	$745,774
California	5.84%	4,034	$1,990,528	719	$354,838	0	$0 [D]
Colorado	11.60%	1,055	$520,524	99	$49,070	159	$78,316
Connecticut	12.98%	848	$418,594	72	$35,704	212	$104,693
Delaware	19.40%	303	$149,539	18	$9,058	160	$78,844
District of Columbia	23.10%	244	$120,551	13	$6,357	151	$74,383
Florida	13.54%	4,060	$2,003,636	334	$164,707	1,155	$570,045
Georgia	17.11%	3,296	$1,626,614	222	$109,338	1,490	$735,476
Hawaii	18.47%	462	$227,925	29	$14,377	230	$113,708
Idaho	14.76%	433	$213,518	33	$16,281	152	$74,917
Illinois	20.82%	5,747	$2,836,088	329	$162,266	3,250	$1,603,858
Indiana	30.60%	4,517	$2,228,936	194	$95,818	3,309	$1,632,724
Iowa	19.01%	1,053	$519,821	65	$32,012	543	$268,120
Kansas	18.50%	1,053	$519,633	66	$32,726	527	$259,812
Kentucky	29.83%	2,564	$1,265,050	112	$55,331	1,854	$915,061
Louisiana	22.76%	2,312	$1,140,750	123	$60,848	1,410	$695,881
Maine	18.03%	358	$176,829	23	$11,376	174	$85,706
Maryland	17.41%	1,911	$942,811	127	$62,467	885	$436,512
Massachusetts	10.19%	1,113	$549,217	118	$58,223	23	$11,243
Michigan	19.85%	4,069	$2,007,998	242	$119,399	2,197	$1,084,107
Minnesota	14.39%	1,350	$666,386	105	$51,929	449	$221,366
Mississippi	26.06%	1,772	$874,651	85	$42,116	1,188	$586,468
Missouri	27.47%	3,351	$1,653,511	155	$76,629	2,319	$1,144,173
Montana	18.18%	291	$143,817	19	$9,191	143	$70,394
Nebraska	20.34%	739	$364,573	43	$21,252	409	$201,681
Nevada	16.86%	812	$400,928	55	$27,287	360	$177,484
New Hampshire	19.64%	449	$221,678	27	$13,296	240	$118,377
New Jersey	16.69%	2,839	$1,401,066	195	$96,186	1,238	$610,907
New Mexico	16.55%	650	$320,814	45	$22,175	280	$138,194
New York	14.01%	5,012	$2,473,156	400	$197,315	1,561	$770,343
North Carolina	19.18%	3,405	$1,680,301	208	$102,718	1,774	$875,318
North Dakota	19.42%	218	$107,778	13	$6,524	115	$56,876
Ohio	23.00%	5,577	$2,752,118	295	$145,622	3,430	$1,692,437
Oklahoma	23.44%	1,778	$877,548	93	$45,749	1,110	$547,578
Oregon	12.91%	846	$417,460	73	$35,790	207	$102,374
Pennsylvania	20.29%	4,489	$2,215,426	262	$129,416	2,477	$1,222,485
Rhode Island	11.71%	203	$100,242	19	$9,376	32	$15,905
South Carolina	17.08%	1,353	$667,796	91	$44,947	611	$301,281
South Dakota	19.82%	310	$152,907	18	$9,102	167	$82,435
Tennessee	30.75%	4,044	$1,995,447	173	$85,500	2,969	$1,465,138
Texas	12.89%	6,361	$3,138,953	546	$269,512	1,551	$765,337
Utah	7.76%	462	$228,040	63	$31,081	0	$0
Vermont	20.98%	210	$103,463	12	$5,883	119	$58,931
Virginia	17.07%	2,473	$1,220,529	167	$82,193	1,115	$550,162
Washington	14.45%	1,680	$829,046	131	$64,406	563	$277,610
West Virginia	31.40%	1,066	$525,841	45	$22,216	790	$389,973
Wisconsin	18.33%	1,887	$931,321	120	$59,109	933	$460,495
Wyoming	23.81%	231	$114,048	12	$5,876	146	$71,977
United States	**18.81%**	**99,069**	**$48,887,565**	**6,755**	**$3,333,294**	**47,284**	**$23,332,990**

[A] Secondhand smoke exposure is defined as having at least one smoker in the household AND smoking in the home is either allowed in some places or at some times or is permitted anywhere. Data are from the 2001–2002 Current Population Survey Tobacco Use Supplements.

[B] A child is considered to be an ear infection case if the child had three or more ear infections in the past 12 months. Ear infection information was obtained from the 2002 National Health Interview Survey.

[C] This is the extra medical costs incurred as a result of ear infection cases attributable to secondhand smoke exposure.

[D] No cost savings in California since secondhand smoke exposure is below 10 percent.

NOTES

[i]Medical expenditures associated with SIDS were not calculated. For obvious reasons, there are no medical costs associated with SIDS. Other costs that could be applied include the value of the life lost and costs incurred by the surviving parents in terms of pain and suffering, reduced work productivity, etc. No attempts were made to estimate any of these expenses because they were considered too problematic given the scope and nature of this study.

[ii]For detailed methodology, please contact research@americanlegacy.org.

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