Center for Mississippi Health Policy

ISSUE BRIEF

# MISSISSIPPI MEDICAID TOBACCO-RELATED COST

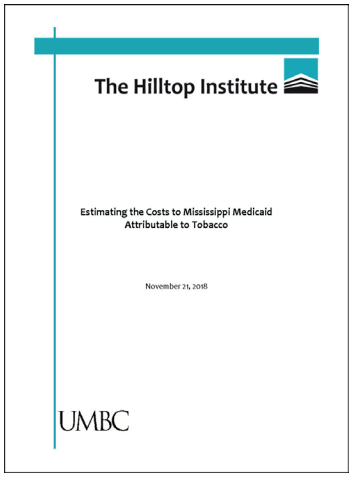
PUBLISHED DECEMBER 2018

The negative effects of tobacco usage on health have been well studied, and there is a growing body of evidence documenting the increased risk for specific diseases associated with tobacco use. This higher risk calculates into greater health care costs for treating these diseases, much of which is paid by public programs such as Medicare and Medicaid. The Center for Mississippi Health Policy commissioned researchers with The Hilltop Institute at the University of Maryland, Baltimore County to review Mississippi Medicaid claims data and quantify the financial impact of tobacco use on Mississippi's Medicaid program. This issue brief summarizes Hilltop's findings and explores associated policy implications.

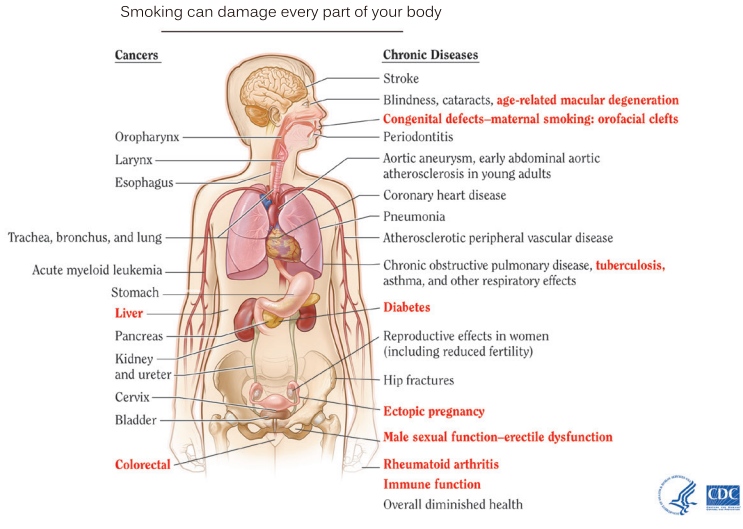
A nationwide survey of adult Medicaid consumers, conducted by the Center for Medicaid and CHIP Services (CMCS) in 2014 and 2015, found a smoking prevalence of approximately 33.8 percent for adult Mississippi Medicaid enrollees. Tobacco use by these enrollees can affect their own health, and secondhand smoke can impact the health of their family members.

In order to estimate the cost to Medicaid attributable to tobacco use, researchers with The Hilltop Institute analyzed a limited data set of all Medicaid and Children's Health Insurance Program (CHIP) enrollees and claims for calendar years 2016 and 2017. To identify the costs that could be attributable to smoking, Hilltop used a method for calculating a smoking attributable fraction that accounts for the fact that tobacco impacts multiple body systems.

***The estimated direct and indirect cost of tobacco-related illness to Mississippi Medicaid was $388 million in 2016 and $396 million in 2017.***




The complete Hilltop Report is available at mshealthpolicy.com\hilltop-report.pdf




*Source: Centers for Disease Control and Prevention. Health Effects Infographics. https://www.cdc.gov/tobacco/infographics/health-effects/index.htm#smoking-risks.*

When all categories of expenditures were totaled, the estimated direct and indirect cost of tobacco-related illness to Mississippi Medicaid was $388 million in 2016 and $396 million in 2017.

## Study Methodology

This study used claims and enrollment data from Mississippi Medicaid to develop a more precise estimate of the cost of tobacco-related diseases to the Medicaid program than using national data to extrapolate an estimate. This method takes into account many of the unique features of Mississippi's population, health care delivery system, and payment policies. The majority of Mississippi Medicaid enrollees are younger women and children, along with a group of predominantly elderly women. Children are more likely to be affected by secondhand smoke in their household, and young adults are not likely to have begun exhibiting negative health effects of smoking. While elderly persons may have high rates of smoking-related diseases, most of their acute health care services are covered by Medicare.

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Hilltop's estimates of tobacco-related costs in Mississippi were determined by multiplying the sum of claims payments made by Medicaid for each tobacco-related illness times the calculated Smoking Attributable Fraction, which was based on Mississippi's rate of smoking and research literature estimates of the relative risks for the particular illness.

**SMOKING ATTRIBUTABLE FRACTION (SAF)**
The portion of the cost of a disease that can be attributable to smoking, as separated from other potential causes.

**FIGURE 1. TOBACCO-RELATED CONDITIONS INCLUDED IN COST ESTIMATES**

| CANCER | CARDIAC & VASCULAR DISEASES | RESPIRATORY DISEASES | OTHER DISEASES |
|---|---|---|---|
| ▪ Acute Myeloid Leukemia<br>▪ Breast Cancer<br>▪ Cervical and Uterine Cancer<br>▪ Colorectal Cancer<br>▪ Esophageal Cancer<br>▪ Kidney and Renal Pelvis Cancer<br>▪ Laryngeal Cancer<br>▪ Lip, Oral Cavity, and Pharynx Cancer<br>▪ Liver Cancer<br>▪ Pancreatic Cancer<br>▪ Prostate Cancer<br>▪ Stomach Cancer<br>▪ Tracheal, Lung, and Bronchial Cancer<br>▪ Urinary and Bladder Cancer | ▪ Aortic Aneurysm<br>▪ Atherosclerosis<br>▪ Cerebrovascular Disease<br>▪ Coronary Heart Disease<br>▪ Other Arterial Disease<br>▪ Other Heart Disease | ▪ Asthma<br>▪ Bronchitis and Emphysema<br>▪ Chronic Airways Obstruction and Chronic Obstructive Pulmonary Diseases<br>▪ Influenza and Pneumonia<br>▪ Tuberculosis | ▪ Alzheimer's Disease<br>▪ Diabetes Type II<br>▪ Hip Fracture<br>▪ Macular Degeneration<br>▪ Pre or Perinatal Conditions Resulting in NICU Services<br>▪ Rheumatoid Arthritis |

*Source: Hilltop Institute. (2018).*

## Total Expenditures on Tobacco-Related Disease in CY 2016 & CY 2017

**TOBACCO-RELATED COSTS AS A PERCENTAGE OF MISSISSIPPI MEDICAID EXPENDITURES**
The estimated Medicaid expenditures attributable to tobacco represent approximately nine percent of total Medicaid expenses in CY 2016 and CY 2017, which is consistent with the results of similar studies, particularly given the composition of Mississippi's Medicaid population compared to other states.

Hilltop totaled the individually calculated amounts for each tobacco-related illness, developed estimates for costs associated with secondhand smoke, and assessed expenditures for skilled nursing facilities, chemotherapy, and radiation therapy attributable to tobacco. The sum of these estimates is presented in Figure 2.

**FIGURE 2. SUMMATION OF ESTIMATES OF DIRECT AND INDIRECT COSTS OF TOBACCO-RELATED ILLNESS TO MISSISSIPPI MEDICAID, 2016-2017**

| | 2016 | 2017 |
|---|---|---|
| Direct costs of treatment for tobacco-related conditions as primary diagnoses | $241,134,957 | $246,616,165 |
| Costs of conditions from secondhand smoke | $18,612,551 | $19,547,028 |
| Nursing facility costs attributed from other claims for tobacco-related conditions | $123,535,768 | $124,892,593 |
| Chemotherapy and radiation therapy | $4,666,951 | $4,867,313 |
| **TOTAL** | **$387,952,243** | **$395,925,117** |

*Source: Hilltop Institute. (2018).*

## Policy Implications

Many states have sought to reduce both the financial and health impacts of tobacco by implementing programs and policies to prevent smoking or assist smokers to quit, particularly among Medicaid enrollees. The following are some of the most common approaches.

### *Tobacco Cessation Support and Coverage*

**SMOKING CESSATION COVERAGE FOR PREGNANT WOMEN**
All state Medicaid programs are required to cover cessation treatment and counseling for pregnant women at no cost.

Mississippi Medicaid covers smoking cessation services for enrollees, including cessation counseling (pregnant women only), as well as any of seven FDA-approved treatments. Relative to other state Medicaid programs, Mississippi has fewer barriers to access these treatments. Mississippi Medicaid does require stepped-care therapy, copayments for some enrollees, and a limited duration for some treatments. Prior authorization and counseling for medications, however, are not required, and enrollees are not limited on the number of annual or lifetime attempts to quit smoking. Missouri is the only state to have removed all barriers.

### *Smoke-free Ordinances and Laws*

**SMOKE-FREE LAWS**
Research documenting the association between smoke-free laws and lower hospital admission rates due to cardiovascular, cerebrovascular, and respiratory diseases found greater reduction in risk was associated with more comprehensive laws.

Multiple studies have documented the association between the passage of strong laws prohibiting smoking in public places and the reduction in hospital admissions for heart attacks, other cardiovascular events, strokes, and respiratory disease, as well as drops in emergency room visits for asthma. Researchers in Mississippi found reductions in hospital admissions for heart attacks following enactment of local comprehensive smoke-free ordinances. As of June 2018, 34 states ban smoking in restaurants, 34 states ban smoking at both government and private worksites, and 27 states have 100 percent smoke-free indoor air laws for restaurants, bars, and both private and government worksites. Mississippi bans smoking statewide only at government worksites.

### *Tobacco Tax Increase*

**TOBACCO TAXES AND SMOKING RATES**
CDC found that an increase in excise taxes in Massachusetts, combined with smoking prevention and cessation programs, produced a 19.7 percent decline in cigarette consumption.

**AGE OF INITIATION**
Research shows that approximately 90% of adult cigarette smokers reported first trying cigarettes before the age of 19, and almost 100% reporting first use before age 26.

Research shows that increasing the cost of tobacco products by raising taxes on them will reduce consumption, particularly among youth. Evidence indicates that the most effective taxes are implemented in sizable increments (e.g. $1.00 - $2.00 per pack) and combined with state-supported smoking prevention and cessation programs (see sidebar). Mississippi's current tobacco tax is $0.68 per pack, and has not changed since 2009. Mississippi's tobacco tax is well below the national average of approximately $1.78 per pack.

### *Raising the Minimum Legal Age to Purchase Tobacco to 21*

**MINIMUM LEGAL AGE (MLA) LAWS**
Currently, five states require an MLA of 21, three states set their MLA at 19, and 47 states include e-cigarettes in their MLA requirements. Over 300 local governments in 21 states have raised the tobacco purchase age to 21.

**IMPACT OF RAISING MLA**
Research conducted by the National Academy of Medicine found that if the MLA were raised to 21 nationwide, there would be approximately 223,000 fewer premature deaths, 50,000 fewer deaths from lung cancer, and 4.2 million fewer years of life lost for those born between 2000 and 2019.

The National Academy of Medicine (NAM—formerly called the Institute of Medicine) examined the public health impacts of raising the Minimum Legal Age (MLA) to purchase tobacco and found that the optimal benefit would accrue with setting the MLA at 21 years because the parts of the brain most responsible for decision-making, impulse control, and susceptibility to peer pressure continue to develop substantially between 18 and 21. The NAM projected that changing the MLA to 21 would likely produce a 12 percent decrease in the prevalence of tobacco use (see sidebar). Changes in MLA requirements have been enacted at both state and local levels (see sidebar). A study evaluating the impact of the MLA change in Needham, Massachusetts from 18 to 21 found the rate of smoking among high school students decreased by nearly 50 percent from 2006 to 2010.

## Summary

The negative impacts of tobacco use on multiple body systems have been well documented in the research literature. Researchers with The Hilltop Institute applied this evidence in analyzing Mississippi Medicaid claims to develop a Mississippi-specific estimate of the cost to Medicaid attributable to tobacco. The result of this analysis was an estimated cost of tobacco-related illness to Mississippi Medicaid of $388 million in 2016 and $396 million in 2017. Policy actions taken by states in an attempt to reduce the prevalence of smoking and associated cost to public health care programs include paying for smoking cessation services, enacting laws to prohibit smoking in public places, increasing taxes on tobacco products, and raising the minimum age to purchase tobacco to 21.

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