

Medicaid Costs & Secondhand Smoke

	ATTRIBUTABLE POPULATION RISK	TOTAL COSTS	COSTS ATTRIBUTABLE TO EXPOSURE TO SECONDHAND SMOKE
POPULATION - BIRTH TO AGE 17			
LOW BIRTH WEIGHT CODES - ICD CODES THAT BEGIN WITH 765	18.0%	\$85,240,444	\$15,343,280
ACUTE LOWER RESPIRATORY ILLNESS (BIRTH TO AGE 5 ONLY) - ICD CODES THAT BEGIN WITH 480-488, 466	25.0%	\$28,551,853	\$7,137,963
OTITIS MEDIA AND MIDDLE EAR EFFUSION - ICD CODES THAT BEGIN WITH 382	14.0%	\$16,501,901	\$2,310,266
ASTHMA - ICD CODES THAT BEGIN WITH 493	35.0%	\$28,344,206	\$9,920,472
POPULATION - AGES 18+			
HEART ATTACKS AND OTHER HEART DISEASES - ICD CODES THAT BEGIN WITH 410	6.9%	\$12,149,244	\$838,298
LUNG CANCER - ICD CODES THAT BEGIN WITH 162	4.9%	\$12,204,636	\$598,027
		\$182,992,284	\$36,148,306

DATES OF SERVICE: 07/01/2012 - 06/30/2013

SPECIFIED DIAGNOSIS PRESENT IN EITHER THE PRINCIPLE DIAGNOSIS FIELD OR OTHER DIAGNOSIS CODES 1-4 POSITIONS

- According to the U.S. Surgeon General, our nation's leading authority on health, the scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke and eliminating smoking in indoor spaces fully protects nonsmokers from exposure to secondhand smoke.
- Most Mississippi adults support a statewide law in Mississippi prohibiting smoking in most public places, including workplaces, offices, restaurants, and bars (77.3%), while only 14.7% oppose such a law.
- Moreover, a recent survey of Mississippi restaurant owners and managers found that 69.9% of restaurateurs support this law, while less than 20 percent (18.7) oppose.

2014

MISSISSIPPI
Tobacco Data

METHODS

We estimated the economic impact of exposure to secondhand smoke on Medicaid beneficiary claims using the methodology developed by scientists at Johns Hopkins⁴. Using the 2006 Surgeon General's report on the consequences of involuntary smoking¹, six health conditions were identified for which there is sufficient evidence to infer a causal relationship with exposure to secondhand smoke. These are:

- Low birth weight
- Acute Lower Respiratory Illness (birth to age 5 only)
- Otitis Media and Middle Ear Effusion (birth to age 17)
- Asthma (birth to age 17)
- Heart attacks and other Heart Diseases (ages 18+)
- Lung Cancer (ages 18+)

The Mississippi Division of Medicaid mapped these six conditions to claims data for July 1, 2012 to June 30, 2013 in order to determine the total Medicaid costs (Federal and state) for treating these conditions. We then estimated the proportion of these costs that can be attributed to secondhand smoke exposure using the population attributable risk (PAR) values developed by scientists at John Hopkins⁴. PAR refers to the proportion of disease occurring in the population that is attributable to the exposure. PAR estimates for asthma were calculated by using relative risk estimates published in the 2006 Surgeon General's report^{1,4}. PAR for low birth weight, acute lower respiratory illness, otitis media and middle ear effusion were calculated from Zollinger et al.⁵. PAR for lung cancer and low coronary heart disease were calculated from Zollinger et al.⁵ and Woodward and Laugesen⁶. For each condition, the total amount of Medicaid expenditures was multiplied by the appropriate PAR to calculate the amount of expenditures that are attributable to exposure to secondhand smoke.

LIMITATIONS

- PAR estimates developed using national data may not be perfectly suited for Mississippi data.
- Costs for treating each of these six health conditions varies by condition. Our estimate for expenditures attributable to secondhand smoke exposure is based on the assumption that costs for each condition are not biased such that patients whose condition is attributable to exposure systematically have high or lower costs compared to those whose condition is not attributable.
- These estimates do not include conditions for which the evidence is suggestive, but not sufficient to infer a causal relationship with exposure to secondhand smoke. Thus, the true economic impact of exposure is likely higher.
- This study did not address the prescription drug costs or long-term costs of treating and managing these health conditions.

REFERENCES

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5. Zollinger TW, Saywell RM Jr, Overgaard AD, Jay SJ, Holloway AM, Cummings SF. Estimating the economic impact of secondhand smoke on the health of a community. *Am J Health Promot*. 2004;18:232-238.
6. Woodward A, Laugesen M. How many deaths are caused by secondhand cigarette smoke? *Tob Control*. 2001;10:383-388.

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