

# Research Brief

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## **A Comparative Analysis of Health Care and Health Care Access: Policy Implication for Mississippi**

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### **Abstract**

This research brief is the first in a series of research activities examining health and health care in Mississippi. This research brief compares health care factors that significantly impact health in Mississippi and the nation. This research brief used a comparative analysis approach that focused on comparing selected health care factors between Mississippi and the nation (e.g., outcome measures, healthcare expenditures, healthcare coverage, healthcare workforce, healthcare facilities, and health care access).

Research findings indicated that although Mississippi has made progress in some health care areas, such improvements were often too limited in terms of meeting the health care needs of its citizens. Those improvements were often below national averages, indicating that Mississippi faces even bigger health challenges than the other states. The challenges identified from this research included: (1) Mississippi's poor health outcomes; (2) limited access to many health care services; and (3) Mississippi's weak economy. Many factors impact health such as the environment, education, transportation, diet, personal behaviors, housing conditions, governmental policies, and poverty. To overcome Mississippi's health care challenges, the state must face these challenges with honesty, fairness, and a recognition that deep structural problems exist which require bold and innovative solutions. This research brief is one in a series of upcoming research activities designed to systematically address the health care crisis in Mississippi.

### **Introduction**

This research brief is the first in a series of research activities examining health and health care in Mississippi. The goal of this research brief is to compare health care factors that significantly impact health in Mississippi and the nation. By comparing key health care factors, Mississippi policymakers will be in a better position to develop policy initiatives that improve health care in the state. Because so many factors impact health (e.g., environment, education,

transportation, diet, behaviors, housing conditions, policy, and poverty), it is important for policymakers and other interested individuals to know which factors need prioritizing. Although there is a lot of health information on Mississippi, there are many factors that remain largely unknown. This research brief helps identify those factors that could be prioritized for the purpose of significantly improving health care in Mississippi.

## **Research Methodology**

This research brief was developed using a comparative analysis approach that focused on comparing selected health care factors between Mississippi and the nation (e.g., outcome measures, healthcare expenditures, healthcare coverage, healthcare workforce, healthcare facilities, and health care access). Data sources used in this research included the Medical Facilities Directory, United States Census Bureau, Kaiser Family Foundation, National Vital Statistics Report, American's Health Ranking Annual Report (2011 and 2016), Mississippi Medical Board Statistics, National Center for Health Statistics for Mississippi (2015), and the 2015 State Physician Workforce Data Book. Data are presented in tables that provide a comparison between Mississippi and the nation, and identify any statistical differences that exist. Policy recommendations are then presented based upon an analysis of the data. The next section helps establish a statistical context for understanding Mississippi's population and its health care environment.

## **Context for Health Care in Mississippi**

Mississippi is a state in the southern region of the United States with a population of approximately 3 million people. It is the 32<sup>nd</sup> most populous state with 59.5% of its population being Caucasian, 37.6% of being African American, and 2.7% being Hispanic/Latino (Census, 2015). Among Mississippi's overall population, 6.4% was younger than 5 years old, 24.3% was younger than 18 years old, and 14.7% was older than 64 years old. Eighty-two percent (82%) of Mississippi's population graduated from high school, with 20.7% of its population having a college degree or higher. The median household income in Mississippi for the year 2015 was \$39,665. The state's poverty level and unemployment rate was 22% and 6% respectively (Census, 2015). Collectively, the previous statistics indicate Mississippi is a state struggling with issues such as poverty, low educational levels, and low income levels that negatively impact the health of its citizens.

## **Research Findings**

A comparative analysis was conducted for the purpose of identifying health care factors that could be targeted for improving health care in Mississippi. The following six sections present research findings from this analysis.

### **1. Mississippian's Health Outcome**

Health outcome is used to assess how healthy a state/country is by measuring the length of life (how long people live), or the quality of life (how healthy people feel while alive). Average life expectancy for Mississippians was 75 years old in 2010 (Kaiser Family Foundation

- Life Expectancy at Birth). It was the lowest life expectancy state in the nation, which was more than 3 years shorter than the national average of 78.94 years old, and more than 6 years shorter than the state of Hawaii (81.3 years old), which was the healthiest state. From 1940 to 2010, U.S average life expectancy increased by 15.1 years, changing from 63.6 years old to 78.7 years old; while Mississippi's life expectancy increased by 14.3 years, changing from 60.7 years old to 75 years old. However, Mississippi's life expectancy has been consistently lower than the national average over the 70 years measuring period.

The top ten leading causes of death in Mississippi for the year 2015 were heart disease, cancer, chronic lower respiratory disease, accidents, stroke, Alzheimer's disease, diabetes, flu/pneumonia, kidney disease, and septicemia. The occurrence rate for all of these leading causes for death were much higher than the national average death rate, and all of them were at the top of ranking lists (CDC, National Center for Health Statistics, Stats of the State of Mississippi 2015). (See Table 1).

**Table 1. Mississippi's 10 Leading Causes of Death During 2005-2015.**

MS Leading Causes of Death (per 100,000 population)	2005 Death Rate	2015 Death Rate	Increase/Decrease (percentage)
Heart disease	306.4	240.5	-22%
Cancer	208.9	188.4	-10%
Chronic Lower Respiratory Disease	52	57.1	10%
Stroke	67.1	52.6	-22%
Accidents	58	59.8	3%
Alzheimer's disease	26.6	44.1	66%
Diabetes	23.5	32.4	39%
Flu/ Pneumonia	23.5	24	2%
Kidney disease	23.7	22	-7%
Septicemia	19.7	20.2	3%

Compared to 2005 data, the 2015 data showed Mississippi reduced its death rates in the areas of heart disease, cancer, stroke, and kidney diseases. However, the death rates in the other areas increased (especially the areas of Alzheimer's disease and diabetes).

## 2. Mississippi Health Insurance Coverage

Several health care coverage programs are available to Mississippi residents including Medicare, Medicaid, State Children's Health Insurance Program (SCHIP), private employer-based group health insurance, private non-group health insurance, and other programs such as military-related coverage. As of 2015, among Mississippi's total population, 41% was covered by employer-based group programs; 5% was covered by non-group private health insurance; 23% was covered by Medicaid/SCHIP; 15% was covered by Medicare; and 3% was covered by other programs (Kaiser Family Foundation, Health coverage & uninsured 2015). In 2015, thirteen percent of Mississippians were uninsured, which translated into 380,000 Mississippians being uninsured (Kaiser Family Foundation, Health coverage & uninsured 2015).

Compared to the rest of the nation, Mississippi's total population uninsured rate was 4% higher than the national average. Moreover, Mississippi's uninsured rate was consistently higher than the national rate in the categories of gender, age, race, and household factors (Kaiser Family Foundation). More Mississippians were covered by Medicaid/SCHIP and Medicare insurance than by employer-based group health insurance and private health insurance when compared nationally. (See Table 2).

**Table 2. 2015 Health Insurance Coverage Comparison -Mississippi and Nation.**

	Employer-Based	Non-group	Medicaid/CHIP	Medicare	Other Public	Uninsured
MS	41%	5%	23%	15%	3%	13%
Nation	49%	7%	20%	14%	2%	9%
MS - Nation	-8%	-2%	3%	1%	1%	4%

### 3. Mississippi Health Care Expenditures

Health care expenditures include privately and publicly funded personal health care services and products (for example, hospital care, physician services, nursing home care, prescription drugs, dental, home care, and medical durable). In 2009, Mississippi residents spent over \$19 billion on health care expenditure (0.9% of the national total health care expenditure) and ranked 31<sup>st</sup> out of the 50 states (Kaiser Family Foundation). Comparing the distribution of health care expenditures to all services, Mississippi residents were found to spend 5.4% more money on hospital services than the national average (Kaiser Family Foundation). Meanwhile, during the period from 1991 to 2009, Mississippi's health care expenditures on health services grew very fast. Mississippi residents' hospital expenditures changed from \$1001 per capita to \$2741 per capita (increasing 174%); physician expenditures changed from \$522 to \$1391 (increasing 166%); prescription drug expenditures changed from \$262 to \$947 (increasing 261%); nursing home expenditures changed from \$132 to \$ 439 (increasing 233%); dental expenditures changed from \$73 to \$271 (increasing 271%); home care expenditures changed from \$60 to \$196 (increasing 226%); and medical durable expenditures changed from \$43 to \$103 (increasing 140%). During the same time period, national health care expenditures increased between 119% and 272% (See Table 3).

Health care expenditures increased nationally and in Mississippi. However, except for home care, Mississippi residents' spending on health care services grew much faster than the national growth rate, especially in the nursing home and dental areas. In contrast, Mississippi's median household income only increased 98% and per capita personal income increased 170% during 1990-2015 time period (Statista 2016, FRED Economic Data 2017). These findings indicate Mississippi's healthcare expenditures were increasing faster than overall household income in Mississippi. As a result, increasing healthcare expenses have become a huge economic burden to Mississippi residents and the government.

**Table 3. Growth Rate of Healthcare Expenditures Per Capita by Service - 1991 to 2009**

	Hospital	Physician	Drug	Nursing Home	Dental	Home Care	Medical Durable
MS	174%	166%	261%	233%	271%	226%	140%
Nation	127%	136%	258%	129%	152%	272%	119%
MS - Nation	47%	30%	3%	104%	119%	-46%	21%

#### 4. Mississippi Health Care Facilities

Mississippi has 1 abortion facility; 71 ambulatory surgical facilities; 80 end stage renal disease facilities; 115 home health agencies; 99 hospice facilities; 114 hospital facilities; 211 nursing homes; 190 person care homes; 9 X-ray providers; 8 psychiatric residential treatment centers; and 117 rural health facilities (Mississippi Medical Facilities Directory 2016). As of 2016, there were 14,436 beds available in Mississippi hospitals (include 2492 psychiatric beds), 19,182 beds in nursing homes, 7,048 beds in personal care homes, and 366 beds in psychiatric residential treatments. Comparing the number of Mississippi medical facilities in the year 2011 and the year 2016, ambulatory surgical facilities increased by 6; end stage renal disease facilities increased by 7; community mental health centers increased by 3; prescribed pediatric extended care facilities increased by 9; and personal care homes increased by 29% (1,567 beds). Decreases were noted in 15% of the home health agencies' facilities; 42% of the hospice facilities; 4% beds (591 beds) in hospitals, 22% psychiatric beds (693 beds) in hospitals, 24% nursing home beds (6,103 beds), and 28% rural health facilities.

#### 5. Mississippi Health Care Workforce

In 2010, there were 5313 registered active physicians in Mississippi including 2211 primary physicians and 3102 specialists (Mississippi Medical Board Static, 2011). As of 2017, there were 6195 active physicians registered in Mississippi including 3024 primary physicians and 3171 specialists. During this seven year period (2010 – 2017), the total number of physicians increased 17% overall; the number of primary care physicians increased 37%; and the number of specialists increased 2%. However, Mississippi still ranked 1<sup>st</sup> in terms of physician shortage in the nation. Mississippi's total active physicians was only 0.7% of the total number of active physicians (923,308) in the United States (Kaiser Family Foundation, Mississippi Total Professionally Active Physician 2017). The 2015 American Association of Medical Colleges (AAMC) state physician workforce data book reported that there were 265.5 active physicians per 100,000 population in the United States. Mississippi had the lowest rate of active physicians per 100,000 population (184.7), and Massachusetts had the highest rate at 432.4 per 100,000 population. Similar shortages were also found in active physician assistants and nurses (AAMC, 2015).

#### 6. Mississippi Access to Health Care

The U.S. Center for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (BRFSS) 2013-2015 survey showed that 17.3% of Mississippi adults

reported they did not have a usual place of medical care. Over thirty-nine percent (39.3%) of Mississippi adults reported they had not seen or talked to a general doctor in the past 12 months. Nineteen percent (19%) of Mississippi adults reported not seeing a doctor in the past 12 months because of cost. Twenty-two percent (22%) of Mississippi adults reported they did not have a personal doctor. Compared to White Mississippians, more Black Mississippians reported they did not have a personal doctor and have not seen a doctor in the past 12 months because of cost. Except for “percent of adults without a usual place of medical care”, all of Mississippi’s reported BRFSS health provider and service use indicators were less favorable than national rates (See Table 4).

**Table 4. Health Provider and Service Use Indicators**

	MS	Nation	MS - Nation
Percent of adults without a usual place of medical care	17.3%	19.3%	-2%
Percent of adults who had not seen or talked to a general doctor in the past 12 months	39.3%	34%	5.3%
Percent of adults reporting not seeing a doctor in the past 12 months because of cost	18.7%	13.3%	5.4%
Percent of adults reporting not seeing a doctor in the past 12 months because of cost by race			
White	15.9%	10.4%	5.5%
Black	22.7%	19%	3.7%
Percent of adults reporting not having a personal doctor	21.9%	21.5%	0.4%
Percent of adults reporting not having a personal doctor by race			
White	19.7%	16.9%	2.8%
Black	23.4%	22.3%	1.1%

## Discussion

Although Mississippi has made progress in some health care areas, such improvements were often too limited in terms of meeting the health care needs of many Mississippians. Those improvements were often below national averages, indicating that Mississippi faces even bigger health challenges than the other states. The following sections discuss these challenges from the perspective of data presented in this research brief.

The first challenge is Mississippi’s poor health outcomes. As presented earlier in this brief, Mississippi has the lowest life expectancy among the 50 states and higher health related death than the national rate. Moreover, a high prevalence of other chronic diseases and common risk factors such as obesity, high blood pressure, smoking, physical inactivity, and unhealthy diets have compounded health problems in Mississippi.

The second challenge is limited access to many health care services. Mississippi faces higher rates of persons who are uninsured; more shortages regarding health care facilities and health care workers; and faster health care cost growth rates in comparison to other states. The



lack of health insurance, access to primary care, and adequate financial support (especially for those with moderate and low incomes), results in having less access to health care and more struggles to pay the full cost of basic physician services and prescription drugs. These problems lead to advanced chronic conditions due to late/no treatments, and lead to huge medical costs to Mississippi's economy and government.

The third challenge is Mississippi's weak economy. Poverty and illness usually go hand-in-hand. Mississippi ranks highest in the nation for the number of people living in poverty with 22% of its residents below the poverty level in 2015. Such conditions have made Mississippi policymakers struggle to provide adequate resources that lead to a higher quality of life; provide more employment and affordable housing; and increase access to quality health care and nutrition.

All of the above challenges help contribute to Mississippi being one of the most unhealthiest states in the nation, and contribute to Mississippi trailing other states in terms of economic development due to an unhealthy workforce. One factor that can help Mississippi become more economically competitive nationally and internationally is improving the health of its people. As indicated by the statistics discussed previously in this research brief, unless Mississippi begins to reverse many of the negative health care trends it is currently experiencing, it will be facing huge financial and human capital problems in the future. The next section provides policy recommendations based upon an analysis of current and projected Mississippi health care data.

### **Policy Recommendations**

The following recommendations are based upon addressing the three major challenges discussed earlier. These recommendations are presented to give policymakers and other interested parties information derived from an empirically-based analysis. The implementation of these recommendations can help begin reversing many of the negative health care trends and issues identified in this research.

1. Increase funding for public health prevention activities. Doing so can help break the vicious cycle of chronic conditions caused by a lack of early prevention. Mississippi has been experiencing high death rates due to many costly chronic diseases as well as high risk behaviors, which can be prevented by public health education, promotion, and early intervention. Currently, Mississippi ranks low in terms of the percentage of its public health agencies' budgets supported by the state general fund. Connected to this recommendation, officials could also consider setting-up corresponding evaluation systems to measure the quality of Mississippi's public health system services.
2. Address the issue of limited health care access by expanding the "Mississippi Rural Physicians Scholarship program," and medical insurance services to vulnerable and low income populations. Policies promoting these types of services are needed to encourage physicians and healthcare workers to stay in Mississippi, especially in rural areas. These policies will also help address the 300,000 Mississippians (79% of uninsured population) who fall into the "coverage gap" resulting from the state's decision not to expand Medicaid. If these populations remain

uninsured, they are likely to continue delaying, or simply not seeking, necessary medical care due to the cost of services. In the long run, this type of behavior can actually increase the total medical cost both to the person and to the government. Expanding Medicaid is one solution that can decrease Mississippi's high uninsured rate and help low income persons obtain early medical treatments.

3. Reduce Mississippi's poverty rate and improve health care in the state by expanding the Medicaid/SCHIP programs to provide health insurance to more people; providing more funding for education and job training programs that lead to higher paying jobs; and developing more employment opportunities that provide jobs and make it possible for more people to be covered by employer-based health insurance.

### **Conclusions/Next Steps**

Many factors impact health such as the environment, education, transportation, diet, personal behaviors, housing conditions, governmental policies, and poverty. However, health is more than the simple sum of all the previous factors. In facing Mississippi's health care challenges, there is no one way to solve the problem overnight. To move Mississippi in a healthier direction, Mississippi needs everyone working together. The state must face its challenges with honesty, fairness, and a recognition that deep structural problems exist which require bold and innovative solutions.

This research brief was developed to provide insight regarding health care factors impacting Mississippi's overall health conditions. It is one in a series of upcoming research activities designed to systematically address the health care crisis in Mississippi. Future research activities will include examining disparities of health care and health care access between rural and urban areas; examining citizens' health education preferences; and examining health prevention models that can be used to improve health outcomes. By using evidenced-based research, policymakers and other interested parties can begin improving the health status of Mississippi citizens.

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