

2019 Community Health Needs Assessment Central Mississippi

Baptist Memorial Hospital-Attala • Baptist Memorial Hospital-Leake
Baptist Memorial Hospital-Mississippi Baptist Medical Center
Baptist Memorial Hospital-Yazoo



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Table of Contents

Our Commitment to Community Health	2
A Systemwide Approach to Community Health Improvement	3
Baptist’s Affiliate Hospitals and Primary Service Counties	4
Central Mississippi Service Area 2019 CHNA Executive Summary	5
CHNA Hospital Partners and Study Service Area	5
CHNA Leadership	5
CHNA Methodology	6
Community Engagement	6
Overview of the Central Mississippi Service Area	6
Community Health Priorities	7
Priority Health Needs in the Central Mississippi Service Area	8
Implementation Plan	9
Board Approval	9
Full Report of 2019 CHNA Central Mississippi Service Area	10
Baptist’s Central Mississippi Service Area	11
Central Mississippi Service Area Demographic Data Analysis	12
Statistical Analysis of Health Indicators	27
Key Informant Survey Findings	69
Summary of Focus Groups	79
Evaluation of Impact From 2016–2019 CHNA Implementation Plan	86
Priorities for 2019–2022 CHNA Implementation Plan	88
Board Approval	89
Appendix A: Public Health Secondary Data References	90
Appendix B: Key Informant Survey Participants	92
Appendix C: Federally Qualified Health Center Locations	93

Our Commitment to Community Health

Baptist Memorial Health Care is dedicated to the health and well-being of the many communities we serve across the Mid-South. We believe strongly in corporate citizenship and the importance of collaboration with local organizations to build stronger and healthier communities.

To help us track community health and identify emerging concerns, Baptist conducts a Community Health Needs Assessment (CHNA) every three years. We use this comprehensive study to ensure our initiatives, activities and partnerships align with community needs.

Some of our key initiatives are listed below.

Providing access to high-quality health care

Baptist ensures residents can receive care when they need it across the region. We reinvest resources in technology to bring the highest level of health care to people across the Mid-South. We invest in hospitals and health services to deliver care to communities the federal government considers as Medically Underserved Areas or Health Professional Shortage Areas. We extend our care through community clinics and mobile services to reach people who might not otherwise receive care. We subsidize services, such as emergency care, free and reduced services for the uninsured and preventive screenings that are essential for health, but not adequately covered by federal and state funding.

Healthy communities lead to lower health care costs, robust community partnerships and an overall enhanced quality of life.

Developing community partnerships

We recognize that our hospitals are vital organizations within the communities we serve and we know that we cannot address every community need by ourselves. In order to promote health and quality of life, we collaborate with community partners who have expertise in social needs, specialty services, faith leadership, advocacy and essential resources. We also foster ongoing relationships with these partners and provide financial and in-kind gifts to support their work.

Investing in health care education and research

Baptist supports excellence in health care training and education through programs that focus on math, science and related subjects to prepare tomorrow's health care workforce. As we plan for the future, we provide training opportunities for emerging health care professionals and encourage students to pursue medicine, nursing and other allied health careers. Through leading-edge research and clinical trials, we help to advance learning in the medical field and develop new treatments for cancer and other diseases.

In these and many other ways, we demonstrate our commitment to the people we serve and our communities. In undertaking and funding regular community health needs assessments, we ensure our hospitals will be stronger partners in our neighborhoods and prepared to meet the future needs of all those who live there.

A Systemwide Approach to Community Health Improvement

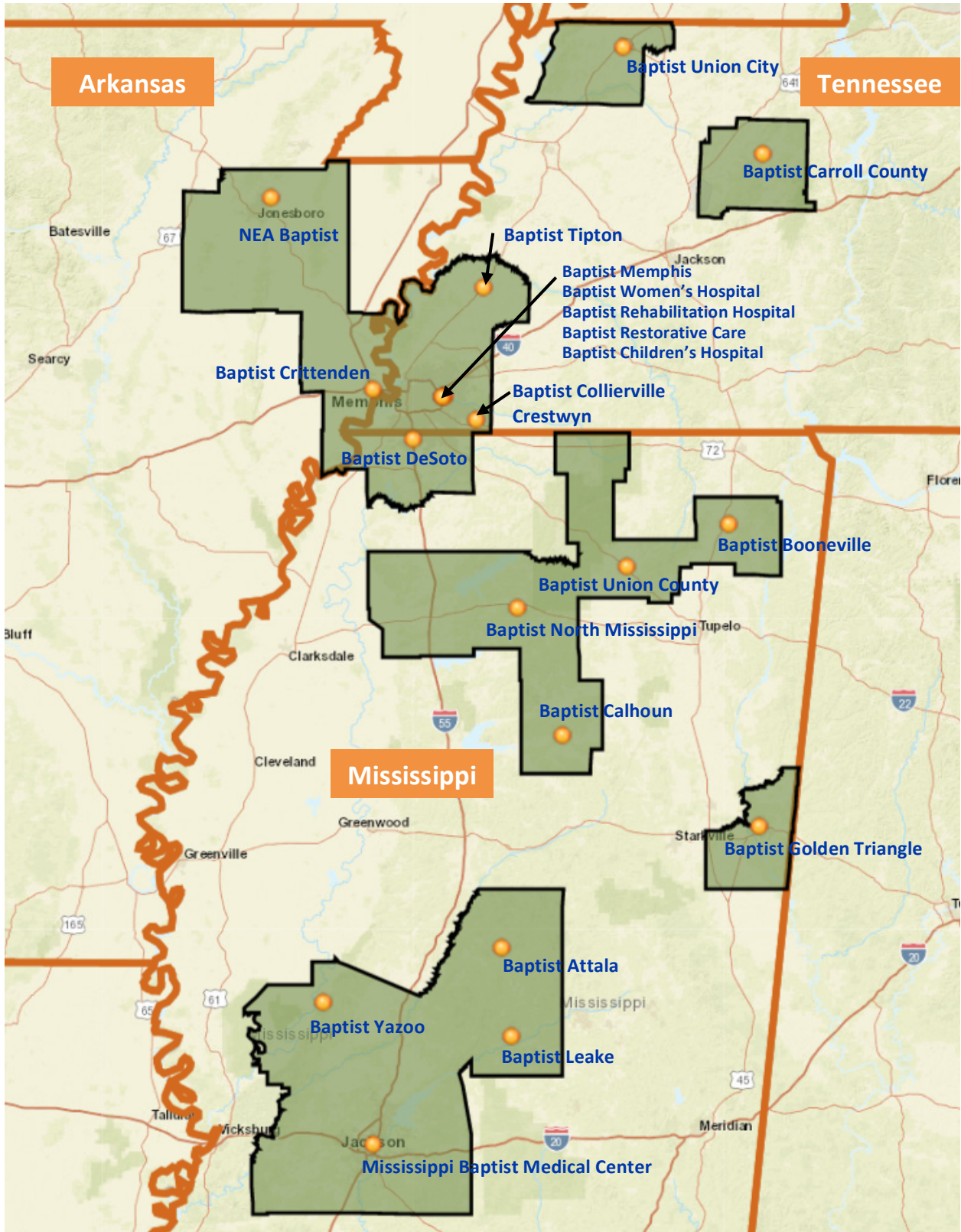
Baptist Memorial Health Care has 22 affiliate hospitals serving residents in three states. The CHNA focused on the primary service county of each not for profit Baptist Memorial hospital to identify health trends and unique disparities within these communities. Hospitals with overlapping service areas were grouped into regions for comparisons of health and socioeconomic data. Systemwide priorities were determined to address common health needs across the Mid-South. Specific strategies were outlined in each not for profit hospital’s Implementation Plan to guide local efforts and collaboration with community partners.

2019 CHNA Geographic Regions and Primary Service Areas

Region	Primary Service Counties	Hospitals
Memphis Metro	Shelby County, TN	Baptist Memorial Hospital–Memphis Baptist Memorial Hospital–Collierville Baptist Memorial Hospital for Women Baptist Memorial Rehabilitation Hospital* Baptist Memorial Restorative Care Hospital Crestwyn Behavioral Health* Spence and Becky Wilson Baptist Children’s Hospital
	Tipton County, TN	Baptist Memorial Hospital–Tipton
	DeSoto County, MS	Baptist Memorial Hospital–DeSoto
Northeast Arkansas	Craighead & Poinsett counties, AR	NEA Baptist Memorial Hospital
	Crittenden County, AR	Baptist Memorial Hospital–Crittenden
West Tennessee	Carroll County, TN	Baptist Memorial Hospital–Carroll County
	Obion County, TN	Baptist Memorial Hospital–Union City
North Mississippi	Lafayette & Panola counties, MS	Baptist Memorial Hospital–North Mississippi
	Benton and Union counties, MS	Baptist Memorial Hospital–Union County
	Prentiss County, MS	Baptist Memorial Hospital–Booneville
	Lowndes County, MS	Baptist Memorial Hospital–Golden Triangle
	Calhoun County, MS	Baptist Memorial Hospital–Calhoun
Central Mississippi	Attala, Hinds, Leake, Madison, Rankin and Yazoo counties, MS	Baptist Memorial Hospital–Mississippi Baptist Medical Center
	Attala County, MS	Baptist Memorial Hospital–Attala
	Leake County, MS	Baptist Memorial Hospital–Leake
	Yazoo County, MS	Baptist Memorial Hospital–Yazoo

*These entities are not required to conduct a CHNA.

Baptist's Affiliate Hospitals and Primary Service Counties



Central Mississippi Service Area 2019 CHNA Executive Summary

CHNA Hospital Partners and Study Service Area

Baptist Memorial Health Care has four hospitals in the Central Mississippi Service Area. Mississippi Baptist Medical Center is a highly acclaimed, multispecialty hospital located in the city of Jackson. Mississippi Baptist Medical Center primarily serves Hinds, Madison and Rankin counties and supports the critical access hospitals in Attala, Leake and Yazoo counties. The following hospitals collaborated on the 2019 CHNA for the Central Mississippi Service Area.

- > Mississippi Baptist Medical Center
- > Baptist Attala
- > Baptist Leake
- > Baptist Yazoo

CHNA Leadership

A Baptist Memorial Health Care steering committee, along with community representatives and partners, oversaw the 2019 CHNA. Community health consultants assisted in all phases of the CHNA, including project management, data collection and analysis, report writing and development of Implementation Plans.

Baptist 2019 CHNA Steering Committee

Donna Baugus, Manager of Survey Research
 Cynthia Bradford, System Community Involvement Manager
 Scott Fountain, Senior Vice President and Chief Development Officer
 Tom Gladney, Director of Data Management and Decision Support
 Bill Griffin, Executive Vice President and Chief Financial Officer
 Caitlin Hayden, System Community Outreach and Special Events Coordinator
 Kelley Jerome, General Counsel
 Jeff Lann, Manager of Research and Marketing Development
 Debbie Lassiter, Health Services Research Consultant
 Cheryl Lee, Director of Tax and Compliance
 Jim Messineo, Director of Revenue and Operations Audits
 Brenna Piccirilli, Cost Accounting Analyst in Decision Support
 Kellie Prescott, Cancer Program Coordinator
 Anne Sullivan, MD, Chief Quality and Academic Officer
 Henry Sullivant, MD, Vice President and Chief Medical Officer
 Morgan Thornton, Finance and Health Research Intern
 Kimmie McNeil Vaulx, System Director of Corporate Communications
 Ann Marie Watkins Wallace, System Senior Community Outreach Coordinator

Consulting Team

Colleen Milligan, MBA, Director, Community and Population Health Planning
 Catherine Birdsey, MPH, Research Manager
 Jessica Losito, BA, Research Consultant

CHNA Methodology

The 2019 CHNA for Baptist's Central Mississippi Service Area was conducted from August 2018 to August 2019. Quantitative and qualitative methods, representing both primary and secondary research, were used to illustrate and compare health trends and disparities across each hospital's service area. The following research methods were used to determine community health needs.

- > A review of public health and demographic data portraying the health and socioeconomic status of the community. A full listing of data references is included in Appendix A.
- > A Key Informant Survey of 40 community representatives serving the Central Mississippi Service Area to identify community health priorities, underserved populations, partnership opportunities and other insights. A list of key informants and their respective organizations is included in Appendix B.
- > Focus groups with 98 cancer survivors or caregivers to collect perspectives about their experiences, preferences and attitudes related to cancer diagnosis and care.
- > Criteria-based prioritization of health issues to determine the most pressing health needs affecting the health status of Central Mississippi residents.

Community Engagement

Community engagement was an integral part of the CHNA research. In assessing the health needs of the community, Baptist solicited and received input from community leaders and residents who represent the broad interests of the community, including those with expertise in public health and members or representatives of medically underserved, low-income and minority populations. These individuals provided valuable information about health trends, insights about existing resources and gaps in services and perspectives about factors that contribute to health disparities.

Overview of the Central Mississippi Service Area

Overall, the population across the Central Mississippi Service Area has proportionately more Black/African American people and fewer Asian and Hispanic/Latino people than the nation in general. The city of Jackson, located within Hinds County, is the capital of Mississippi and the most populous city in the state.

Jackson is the only major metro area within the Central Mississippi Service Area and is the medical hub for the other counties. Other areas within Hinds County and throughout the Central Mississippi Service Area are designated as Medically Underserved Areas and/or Health Professional Shortage Areas. Access to providers and health care services is reduced for residents in these areas and further exacerbated by poverty, lack of health insurance and related socioeconomic disparities.

In general, Madison and Rankin counties have a higher median income and fewer people living in poverty than the state and the nation. Attala, Hinds, Leake and Yazoo counties have a lower median income consistent with the state and nearly double the national percentages of

individuals and children living in poverty. Yazoo County is the most economically challenged of these counties with approximately 1 in 3 adults and nearly half of all children living in poverty.

The region trends slightly younger compared to state and national benchmarks. Attala has the largest senior population at approximately 20% of the overall population and the highest median age at 40, both of which exceed the state and national averages. Hinds has the youngest population with a median age of 34.9 and one-quarter of residents under age 25.

Health insurance coverage generally reflects economic status trends within the Central Mississippi Service Area. Consistent with state and national trends, uninsured rates across all counties have decreased over the past 10 years. Adults in Madison County, followed by Rankin County, are most likely to have health insurance, while other counties lag behind the state and nation with 10%–15% of the population uninsured. Disparities among ethnic and racial minorities reflect state and national trends. Hispanic/Latino residents are most likely to be uninsured at up to 30%–40% for some counties, followed by Black/African American residents ranging from 12%–20% uninsured.

Community Health Priorities

To improve community health, it is important to direct resources and activities to the most pressing and wide-ranging health needs in the community. Baptist determined health priorities for the 2019–2022 reporting cycle by using feedback from community partners and stakeholders, and taking into account its expertise and resources within the Central Mississippi Service Area. The prioritized health concerns, shown in alphabetical order, include the following:

Behavioral Health: Increase behavioral health screenings to initiate early treatment and improved outcomes for residents at all stages of life.

Cancer: Provide early detection and treatment to reduce death from breast, colorectal and lung cancers, and improve quality of life for patients.

Chronic Disease: Promote health as a community priority, and increase healthy lifestyle choices.

Maternal and Child Health: Improve birth outcomes for women and infants.

The rationale and criteria used to select these priorities included the following:

- > Prevalence of disease and number of community members affected
- > Rate of disease compared to state and national benchmarks
- > Health disparities among racial and ethnic minorities
- > Existing programs, resources and expertise to address the issue
- > Input from representatives of underserved populations
- > Alignment with concurrent public health and social service organization initiatives

Priority Health Needs in the Central Mississippi Service Area

Behavioral Health

Consistent with state averages, residents in most Central Mississippi counties report having more “poor mental health days” per month than the national average. Deaths due to mental and behavioral disorders are lower than the nation, although the suicide rate in Rankin and Madison counties exceeds state and national benchmarks.

Across Mississippi and within Baptist’s Central Mississippi Service Area, residents report less excessive drinking and experience fewer negative outcomes related to alcohol and drugs compared to national averages. Among service area counties, Rankin and Madison counties report more risk factors and deaths associated with alcohol and drugs, and exceed the state for these measures.

Alzheimer’s disease is more prevalent in Mississippi and Baptist’s Central Mississippi Service Area than the United States. The death rate is two to three times higher in Leake, Madison and Attala counties. Community input reflected service needs for Alzheimer’s care ranging from home care, adult day services and respite care for patients and caregivers.

Living with behavioral health conditions can reduce an individual’s life expectancy, particularly if they have co-occurring chronic conditions, such as heart disease or diabetes, or engage in such risky health behaviors as tobacco, alcohol or drug use. Behavioral health disorders can reduce a patient’s ability to effectively manage other chronic diseases, increasing disease complications and the need for medical care.

Cancer

The incidence of cancer of all types in Baptist’s Central Mississippi Service Area is generally consistent with national rates, including when stratified by race. Leake and Yazoo counties are the exceptions with cancer rates that exceed the national rate by 47 to 65 points. Both counties have a higher incidence of colorectal and lung cancer when compared to state and national trends.

While cancer incidence rates are consistent with the nation, more people die from cancer in this region, suggesting later stage diagnosis.

Despite incidence rates that are in line with the nation, the death rate due to cancer is higher than the national rate in five out of six Central Mississippi counties. This trend may reflect later stage diagnosis, which is consistent with lower preventive screening rates across the region. Disparities exist among Black/African American residents when it comes to getting recommended screenings, which leads to higher death rates. Community feedback suggests that historically negative outcomes among this community have pushed attitudes away from preventive measures and associated cancer diagnosis with certain death. These attitudes are slowly changing due to targeted outreach within the Black/African American community, faith-based initiatives, and increased mortality among cancer patients.

Chronic Disease

People living in the Central Mississippi Service Area are generally more likely to smoke, less likely to engage in physical activity and more likely to be obese than the typical American. In addition, many people living in the service area are food insecure, which is a significant contributor to obesity, increased stress and related issues.

Central Mississippi Service Area residents engage in more risk behaviors than the typical American, which contribute to higher rates of chronic disease.

These risk factors contribute to higher death rates for cancer, heart disease, chronic lower respiratory disease, stroke, diabetes and Alzheimer's disease across Central Mississippi.

Access to care, poverty and related health and socioeconomic factors contribute to undiagnosed chronic conditions that are often left untreated until symptoms interfere with daily activities.

Maternal and Child Health

Pregnant women in the Central Mississippi Service Area are more likely to receive late prenatal care. Accessing early prenatal care has a positive effect on the health of both mothers and babies by identifying underlying risks and preventing negative birth outcomes.

Pregnant women in the Central Mississippi Service Area are generally more likely to receive late prenatal care and experience poorer birth outcomes.

Baptist's Central Mississippi Service Area has more low birth weight babies, premature deliveries, teen births and pregnant women who report smoking compared to the nation. When stratified by race, Black/African American women are less likely than their White peers to receive prenatal care within the first trimester, and are more likely to have low birth weight and premature babies. While data gaps exist related to Neonatal Abstinence Syndrome (NAS), past data compared with national trends suggest that NAS births are likely occurring across the region at two to five times the rates of a decade ago.

Implementation Plan

Each of Baptist's four hospitals in Central Mississippi has developed an Implementation Plan that will guide community health improvement activities for the 2019–2022 cycle. Each plan details the resources and strategies each hospital will undertake to address priority areas and unique needs within each service area. Where applicable, Baptist's four Central Mississippi hospitals will coordinate efforts and leverage system resources to reduce health disparities. Each hospital's Implementation Plan, along with 2019 CHNA reports, can be found on Baptist Memorial Health Care's website at <https://www.baptistonline.org/about/chna>.

Board Approval

Baptist Memorial Health Care's board of directors approved the CHNA report and Implementation Plan on Tuesday, Sept. 24, 2019.

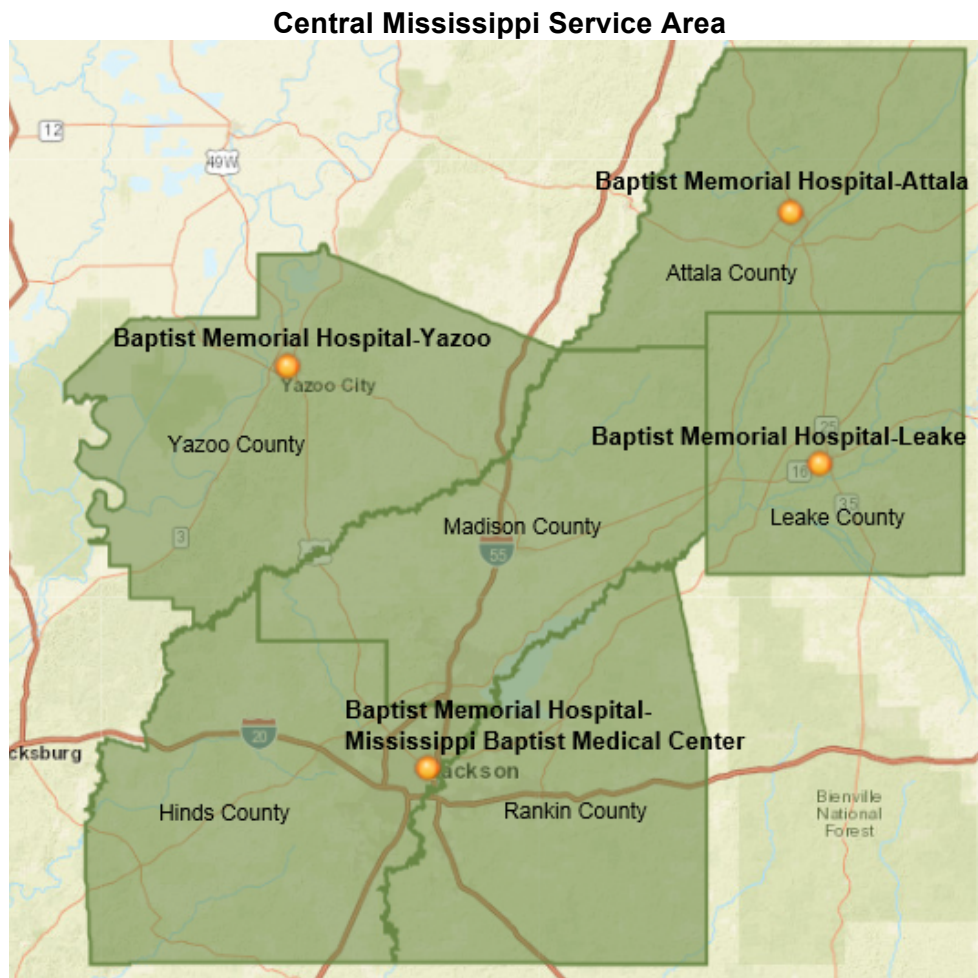
**Full Report of 2019 CHNA
Central Mississippi Service Area**

Baptist's Central Mississippi Service Area

CHNA Hospital Partners and Study Service Area

Baptist Memorial Health Care operates the following four hospitals in the Central Mississippi Service Area. All of these hospitals collaborated on the 2019 CHNA. The study encompassed Attala, Hinds, Leake, Madison, Rankin and Yazoo counties.

- Baptist Attala
- Baptist Leake
- Baptist Yazoo
- Mississippi Baptist Medical Center



Central Mississippi Service Area Demographic Data Analysis

Background

Analyses of demographic and socioeconomic data are essential to understanding health trends and determining key drivers of health status. Socioeconomic indicators play a significant role in community and individual health. Known as **social determinants of health**, they are defined as factors within the environment in which people live, work and play that can affect health and quality of life. Social determinants of health are often the root causes of **health disparities**. Healthy People 2020 define a health disparity as “a particular type of health difference that is closely linked with social, economic or environmental disadvantage.”

Social determinants of health are factors within the environment in which people live, work and play that can affect health and quality of life.

Central Mississippi Service Area data are shown with state and national data sets to demonstrate broad trends and areas of strength and opportunity. Demographic analysis by ZIP Code provides a detailed view of population statistics. All reported data were provided by Environmental Systems Research Institute (ESRI) Business Analyst, 2018 and the U.S. Census Bureau unless otherwise noted.

Population Overview

The 2018 total population of the Central Mississippi Service Area is 573,557; Hinds County accounts for more than 40% of the population. The Madison County population experienced the most growth from 2010 (16%) and is projected to increase 9% through 2023. The Rankin County population increased approximately 8% from 2010 and is projected to increase by 5% through 2023. The populations in the remaining counties are projected to decrease by roughly 2% through 2023.

Population Growth

	2018 Population	% Growth from 2010	% Growth by 2023
Attala County	19,195	-1.9%	-1.9%
Hinds County	241,686	-1.5%	-2.4%
Leake County	22,284	-6.4%	-1.7%
Madison County	110,172	15.7%	8.8%
Rankin County	152,523	7.7%	5.3%
Yazoo County	27,697	-1.3%	-1.5%
Mississippi	3,051,594	2.8%	1.4%

2018 Total Population by Race

	White	Black or African American	Asian	Hispanic or Latino (any race)	Language Other than English Spoken at Home*
Attala County	54.9%	42.6%	0.4%	2.2%	1.7%
Hinds County	24.6%	72.4%	0.9%	1.6%	3.0%
Leake County	51.0%	38.7%	0.4%	5.0%	6.8%
Madison County	56.7%	37.9%	2.7%	2.7%	5.4%
Rankin County	75.7%	19.9%	1.3%	2.9%	4.2%
Yazoo County	38.5%	57.6%	0.6%	5.8%	4.9%
Mississippi	57.7%	37.7%	1.1%	3.2%	3.9%
United States	70.0%	12.9%	5.7%	18.3%	21.1%

*Data are reported for 2012–2016 based on availability.

The racial and ethnic makeup of the Central Mississippi Service Area counties differs from the overall national profile. Specifically, the proportion of the population that is Black/African American is much higher, while the proportion that is Asian or Hispanic/Latino is much lower. The proportion of Whites is lower than the national percentage in all counties except Rankin County, where the proportion of Whites is slightly higher than the nation. Nearly all residents in the six counties speak English as their primary language, compared to 4 out of 5 people in the nation in general.

The percent of population change by race and ethnicity for the Central Mississippi Service Area is generally consistent with the population change anticipated in the nation, which is marked by a decrease in the proportion of Whites and an increase in the proportion of people of color. The Black/African American population is projected to experience the greatest growth, particularly in Hinds County. The exception is Leake County, which will experience a slight decline in the Black/African American population and a stable White population.

2010–2023 Population Change as a Percentage of Total Population by Race

	White		Black/African American		Asian		Hispanic/Latino	
	2010	2023	2010	2023	2010	2023	2010	2023
Attala County	56.2%	53.9%	42.0%	43.0%	0.3%	0.5%	1.7%	2.6%
Hinds County	28.4%	22.4%	69.1%	74.4%	0.8%	1.0%	1.5%	1.7%
Leake County	49.5%	49.7%	40.6%	39.3%	0.2%	0.5%	4.3%	5.1%
Madison County	57.0%	55.8%	38.2%	38.2%	2.1%	3.2%	3.0%	2.7%
Rankin County	77.3%	75.7%	18.8%	19.9%	1.1%	1.3%	2.7%	2.9%
Yazoo County	40.0%	37.3%	57.1%	58.2%	0.5%	0.7%	4.6%	6.3%
Mississippi	59.1%	56.8%	37.0%	38.0%	0.9%	1.3%	2.8%	3.6%
United States	72.4%	68.2%	12.6%	13.0%	4.8%	6.4%	16.4%	19.8%

All communities in Baptist's Central Mississippi Service Area tend to have a slightly greater percentage of the population under age 14 and a slightly smaller percentage of the population age 65 or older than the nation in general. The exception is Attala County, where the proportion of the population 65 years old or older is greater than the other geographies, including Mississippi and the nation. Attala has the highest median age of any county in the service area at 40.3 years.

2018 Population by Age

	Under 14 years	15–24 years	25–34 years	35–54 years	55–64 years	65+ years	Median Age
Attala County	21.0%	11.3%	11.7%	23.1%	13.2%	19.6%	40.3
Hinds County	20.3%	15.2%	14.7%	23.9%	12.1%	13.9%	34.9
Leake County	22.5%	12.6%	13.2%	23.9%	12.2%	15.7%	36.4
Madison County	21.5%	12.9%	12.7%	26.9%	12.8%	13.3%	37.2
Rankin County	19.6%	12.1%	14.8%	27.0%	12.2%	14.3%	37.4
Yazoo County	20.0%	11.7%	16.9%	26.7%	11.3%	13.4%	35.8
Mississippi	19.8%	13.4%	13.8%	24.6%	12.8%	15.6%	37.4
United States	18.6%	13.3%	13.9%	25.3%	13.0%	16.0%	38.3

Income and Poverty Status

Regarding income and poverty, none of the counties in the Central Mississippi Service Area reflect national averages. Madison and Rankin counties are similar to each other in that the median income in both counties exceeds the national median and the percent of people in poverty, including children, is below the national percent. In addition, both counties have fewer than 1 in 10 households receiving Supplemental Nutrition Assistance Program (SNAP) benefits.

Conversely, Attala, Hinds, Leake and Yazoo counties all have more than 1 in 4 people living in poverty, including 1 out of 3 children, and the median household income is below the national and state medians. Roughly 1 in 5 or more households in these counties receive SNAP benefits, exceeding state and national percentages.

2012–2016 Household Income and Poverty Status

	Median Household Income	People in Poverty	Children in Poverty	Households with Food Stamp/ SNAP Benefits
Attala County	\$33,018	24.4%	32.2%	24.1%
Hinds County	\$38,773	25.5%	37.5%	20.1%
Leake County	\$32,657	27.1%	41.4%	18.8%
Madison County	\$65,924	12.7%	17.1%	9.9%
Rankin County	\$59,370	9.6%	10.8%	8.7%
Yazoo County	\$27,560	34.5%	46.1%	30.6%
Mississippi	\$40,528	22.3%	31.5%	18.1%
United States	\$55,322	15.1%	21.2%	13.1%

Similarly, none of the six counties mirror national percentages for occupation and unemployment indicators. Madison and Rankin counties have a greater proportion of their workforces engaged in white-collar jobs than the state or national average, and both have lower numbers of unemployed than the state or the nation. Conversely, Attala, Hinds, Leake and Yazoo counties have greater proportions of workers engaged in blue-collar jobs than the nation, and have higher unemployment. Estimated 2018 unemployment rates for Attala, Leake and Yazoo counties is 9% or higher, but as of October 2018, all three counties reported an unemployment rate of approximately 5%.

2018 Population by Occupation and Unemployment

	White-Collar Workforce	Blue-Collar Workforce	Unemployment Rate (2018 estimate)	Unemployment Rate (October 2018)
Attala County	49.0%	51.0%	9.2%	5.2%
Hinds County	57.0%	43.0%	6.1%	4.2%
Leake County	49.0%	51.0%	9.6%	4.7%
Madison County	71.0%	29.0%	2.9%	3.2%
Rankin County	67.0%	33.0%	3.2%	3.1%
Yazoo County	51.0%	49.0%	12.9%	4.8%
Mississippi	55.0%	45.0%	6.4%	4.2%
United States	61.0%	39.0%	4.8%	3.5%

Note: Unemployment data are estimated for 2018 as the most recent actual rate reported by the Bureau of Labor Services is October 2018.

Housing Measures

Residents in Baptist’s Central Mississippi Service Area are more likely to own than rent their home when compared to the nation in general, with the exception of residents in Hinds and Yazoo counties. Renters in Hinds and Yazoo counties are also the most likely to be considered housing-cost burdened, spending more than 30% of their income on rent. Approximately 60% of renters in these two counties are housing-cost burdened compared to 51% across the state and nation.

While the median home value is lower than the national median in all six counties, there is great variation in the median home value between the counties. For example, the median home value in Madison County (\$214,056) is nearly three times greater than the median home value in Yazoo County (\$76,391). Despite having the lowest median home value, a higher percentage of home owners in Yazoo County are considered housing-cost burdened, spending more than 30% of their income on mortgage-related expenses.

2018 Population by Household Type

	Renter-Occupied	Owner-Occupied	Median Home Value
Attala County	27.6%	72.4%	\$83,790
Hinds County	43.3%	56.7%	\$119,988
Leake County	27.6%	72.4%	\$92,099
Madison County	29.3%	70.8%	\$214,056
Rankin County	21.8%	78.2%	\$161,654
Yazoo County	38.5%	61.5%	\$76,391
Mississippi	33.0%	67.0%	\$118,021
United States	36.9%	63.1%	\$218,492

2012-2016 Housing-Cost Burden

	Percent of Renters Paying 30% or More of Income on Rent	Percent of Mortgages Costing 30% or More of Household Income
Attala County	48.9%	32.6%
Hinds County	59.3%	32.1%
Leake County	46.1%	32.5%
Madison County	45.3%	24.1%
Rankin County	42.1%	19.7%
Yazoo County	60.6%	37.2%
Mississippi	51.6%	29.9%
United States	51.1%	30.8%

Education Measures

Educational attainment varies widely between the counties. Rankin and Hinds counties are generally consistent with the nation in all education categories. Nearly half of all adults 25 years old or older in Madison County have completed a bachelor’s degree or higher, exceeding the national average. In Attala, Leake and Yazoo counties, more than 1 in 5 adults have less than a high school diploma, and less than 16% have completed a bachelor’s degree or higher.

2018 Population (25 Years or Over) by Educational Attainment

	Less than a High School Diploma	High School Graduate/GED	Bachelor’s Degree or Higher
Attala County	21.2%	30.4%	15.8%
Hinds County	12.6%	25.1%	29.4%
Leake County	21.3%	37.8%	13.1%
Madison County	8.7%	16.2%	47.3%
Rankin County	9.1%	27.4%	30.8%
Yazoo County	21.5%	39.4%	13.7%
Mississippi	15.5%	30.8%	22.2%
United States	12.3%	27.0%	31.8%

Health Disparities

Across Central Mississippi, Black/African American and Hispanic/Latino residents experience poorer socioeconomic indicators, including poverty, unemployment and educational attainment, compared to their White peers. Poverty is one of the greatest areas of disparity. Black/African American and Hispanic/Latino residents experience poverty at a rate that is double or more than that of White residents. Disparities in poverty are most evident in Attala, Leake and Yazoo counties.

2012–2016 Poverty by Race

	White		Black/African American		Hispanic/Latino	
	Count	Percentage	Count	Percentage	Count	Percentage
Attala County	1,161	11.3%	3,254	40.3%	82	22.1%
Hinds County	7,016	11.3%	51,610	30.6%	1,240	35.4%
Leake County	1,985	17.1%	3,558	39.0%	464	48.2%
Madison County	2,627	4.6%	9,090	24.0%	874	32.0%
Rankin County	9,063	8.2%	4,047	15.1%	616	16.5%
Yazoo County	1,644	18.4%	6,407	44.6%	82	87.2%
Mississippi	242,180	14.1%	377,645	35.0%	24,294	30.5%

The percent unemployed is highest among Blacks/African Americans and approximately double or more than unemployment among Whites. In comparison to the state, Blacks/African Americans in Madison and Rankin counties have a lower unemployment rate, while Blacks/African Americans in Attala and Yazoo counties have a higher unemployment rate.

2012–2016 Unemployment by Race

	White		Black/African American		Hispanic/Latino	
	Count	Percentage	Count	Percentage	Count	Percentage
Attala County	8,501	6.0%	5,967	18.0%	207	0.0%
Hinds County	54,876	4.1%	131,328	13.1%	2,541	4.1%
Leake County	9,434	7.1%	7,027	14.5%	443	0.0%
Madison County	45,905	3.1%	29,193	9.3%	1,802	8.1%
Rankin County	90,155	4.2%	22,716	7.5%	2,615	2.7%
Yazoo County	8,735	7.6%	12,411	24.6%	970	0.0%
Mississippi	1,426,046	6.5%	842,349	14.8%	59,534	7.9%

Across all six counties and the state, Blacks/African Americans and Hispanics/Latino are less likely to have attained a bachelor's degree or higher than Whites. In comparison to the state, Blacks/African Americans and Hispanics/Latino living in Attala, Leake and Yazoo counties are the least likely to attain higher education. Approximately 10% or fewer of Black/African American and Hispanic/Latino residents living in these three counties have attained a bachelor's degree or higher compared to approximately 15% statewide.

2012–2016 Bachelor’s Degree or Higher by Race

	White		Black/African American		Hispanic/Latino	
	Count	Percentage	Count	Percentage	Count	Percentage
Attala County	1,400	18.7%	393	7.9%	18	9.9%
Hinds County	20,405	42.8%	21,843	21.1%	419	21.9%
Leake County	1,246	15.2%	510	9.3%	0	0.0%
Madison County	23,263	57.4%	5,925	25.4%	346	21.8%
Rankin County	24,534	31.0%	4,249	22.8%	445	21.1%
Yazoo County	1,359	17.5%	904	8.9%	95	10.4%
Mississippi	299,029	24.5%	97,953	14.6%	5,992	12.9%

ZIP Code Analysis

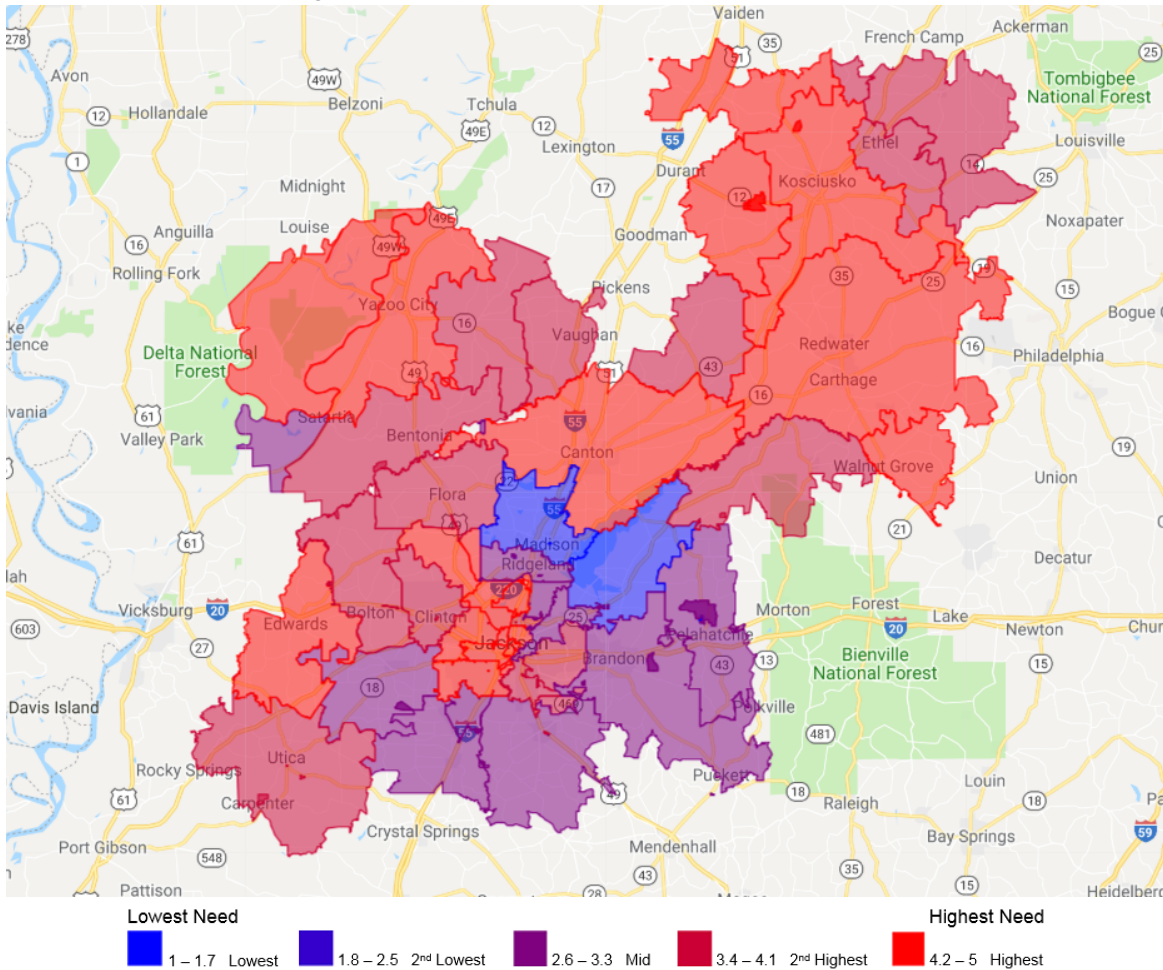
ZIP Code of residence is a strong predictor of health outcomes and disparities. The Community Need Index (CNI) was developed by Dignity Health and Truven Health Analytics to illustrate the potential for health disparity at the ZIP Code-level. The CNI scores ZIP Codes on a scale of 1.0 (low need) to 5.0 (high need) based on data indicators across five socioeconomic barriers listed below.

- > Income: Poverty among elderly households, families with children and single female-headed families with children
- > Culture/Language: Minority populations and English-language barriers
- > Education: Population over 25 years old without a high school diploma
- > Insurance coverage: Unemployment rate among population 16 years old or older and population without health insurance
- > Housing status: Householders renting their home

The weighted average CNI score for the Central Mississippi Service Area is 3.6, indicating a higher than average overall community need.

The CNI score map on the following page reflects similar data findings as detailed within the county-level analysis and provides a closer look at health disparities. A full analysis of socioeconomic factors is included for each ZIP Code with a CNI score of 3.4 or greater, which is useful in pinpointing high-risk populations and prioritizing communities and neighborhoods on which to focus community health improvement efforts.

Community Need Index for Central Mississippi Service Area



The following tables list the social determinants of health that contribute to ZIP Code CNI scores and are often indicative of health disparities. ZIP Codes with a CNI score of 3.4 or greater are shown in comparison to their respective county and the state, and are presented in descending order by CNI score. Cells highlighted in **yellow**, in the following charts, are more than two percentage points higher than the county statistic, but not necessarily statistically significant.

The tables below indicate that there is variability within and between the counties in the Central Mississippi Service Area. In Attala County, roughly 1 out of 4 households and 1 in 3 children is living in poverty. Poverty percentages are notably higher in Sallis (39160), where 1 in 3 households and 50% of children live in poverty. Sallis also has the lowest education levels, highest uninsured rate and one of the highest unemployment rates of any ZIP Code in the county.

In Hinds County, household poverty levels range from 13.1% (39056, Clinton) to 46.2% (39203, Jackson). Residents of 39203, in Jackson, also have the lowest education levels and highest uninsured rate of any ZIP Code in the county. Residents of other Jackson ZIP Codes have better socioeconomic indicators than residents of ZIP Code 39203, but still have among the

highest CNI scores in the county and experience greater socioeconomic disparity compared to the county and state overall.

One out of 5 households in Leake County is at or below the poverty level, and roughly 20% of all adults have not completed a high school diploma. Additionally, a higher percentage of job seekers are unemployed compared to the state and the nation. Residents of ZIP Code 39094, Lena, experience some of the greatest disparity in the county with nearly 50% of children living in poverty and 1 in 4 adults age 25 or older not attaining at least a high school diploma.

Madison and Rankin counties have generally positive socioeconomic indicators with overall lower unemployment, lower levels of poverty and a greater percentage of adults having completed high school than the other counties. However, socioeconomic disparity among residents of different ZIP Codes is evident, particularly in Madison County. Among high CNI-scoring ZIP Codes in Madison County, as many as 1 in 4 households and nearly 2 in 5 children live in poverty, and as many as 1 in 5 adults have not attained at least a high school diploma. In Rankin County, socioeconomic indicators for high CNI-scoring ZIP Codes are better than or on par with state indicators.

In Yazoo County, 1 in 3 households and nearly 50% of children live in poverty. Additionally, 22% of adults have not completed a high school diploma and 17% of residents are uninsured. Yazoo City (39194) residents experience the greatest socioeconomic disparity and are the youngest population in the county. Approximately 1 in 3 residents of other high CNI-scoring ZIP Codes are 55 years old or older.

Attala County
Social Determinants of Health Indicators for ZIP Codes With CNI Score ≥3.4

	Households in Poverty	Households Receiving Food Stamps/ SNAP	Children in Poverty	Language Other than English Spoken at Home	Unemployment	Less Than HS Diploma	Without Health Insurance	CNI Score
Attala County	23.7%	24.1%	32.2%	1.7%	9.2%	21.2%	12.3%	4.5
39090, Kosciusko	25.3%	27.2%	36.2%	1.8%	8.9%	20.5%	12.2%	4.8
39160, Sallis	32.5%	23.6%	50.4%	1.8%	11.3%	29.9%	20.7%	4.4
39192, West	23.4%	18.5%	37.9%	0.1%	5.9%	20.9%	10.6%	4.4
39108, McCool	22.6%	21.9%	38.1%	1.5%	14.2%	14.3%	12.9%	3.8
39067, Ethel	15.3%	19.9%	19.7%	1.0%	9.7%	20.9%	12.6%	3.8
Mississippi	21.2%	18.1%	31.5%	3.9%	6.4%	15.5%	14.6%	

Attala County
Demographic Indicators for ZIP Codes With CNI Score ≥3.4

	White	Black/ African American	Hispanic /Latino	18–24	25–34	35–44	45–54	55–64	65+
Attala County	54.9%	42.6%	2.2%	7.6%	11.8%	11.1%	12.1%	13.2%	19.6%
39090, Kosciusko	52.4%	44.8%	2.4%	7.7%	11.9%	11.2%	11.5%	12.6%	19.7%
39160, Sallis	38.7%	60.0%	1.3%	7.6%	12.4%	11.4%	13.4%	13.9%	17.9%
39192, West	55.0%	43.3%	1.1%	7.7%	11.9%	10.4%	12.7%	14.7%	18.9%
39108, McCool	65.9%	32.7%	1.0%	7.2%	11.4%	10.7%	13.0%	15.0%	21.3%
39067, Ethel	68.3%	29.2%	3.0%	7.0%	11.2%	11.1%	12.8%	15.1%	19.5%
Mississippi	57.7%	37.7%	3.2%	9.8%	13.8%	12.3%	12.4%	12.8%	15.6%

**Hinds County
Social Determinants of Health Indicators for ZIP Codes With CNI Score ≥3.4**

	Households in Poverty	Households Receiving Food Stamps/ SNAP	Children in Poverty	Language Other than English Spoken at Home	Unemployment	Less Than HS Diploma	Without Health Insurance	CNI Score
Hinds County	22.9%	20.1%	37.5%	3.0%	6.1%	12.6%	15.1%	4.1
39203, Jackson	46.2%	37.9%	55.5%	2.0%	10.8%	28.8%	24.2%	5.0
39209, Jackson	34.1%	35.8%	57.6%	1.6%	8.1%	20.4%	18.6%	5.0
39213, Jackson	38.2%	32.1%	62.6%	0.7%	9.8%	22.3%	17.6%	5.0
39204, Jackson	35.3%	38.4%	54.7%	3.3%	11.3%	18.5%	20.8%	4.8
39206, Jackson	26.5%	17.9%	40.5%	2.8%	5.0%	11.4%	16.9%	4.6
39201, Jackson	28.9%	1.4%	0.0%	7.2%	1.3%	19.0%	19.1%	4.4
39212, Jackson	20.7%	23.8%	38.7%	2.1%	8.4%	10.5%	14.6%	4.4
39066, Edwards	21.9%	18.5%	38.4%	1.5%	5.3%	15.5%	13.2%	4.2
39202, Jackson	26.6%	11.7%	20.6%	3.4%	5.9%	9.0%	15.5%	4.2
39041, Bolton	22.4%	19.1%	19.0%	0.7%	4.4%	12.4%	12.1%	4.0
39216, Jackson	15.9%	10.2%	44.3%	2.1%	5.4%	6.9%	15.4%	4.0
39175, Utica	19.2%	14.2%	26.8%	2.3%	8.5%	13.9%	16.1%	3.6
39056, Clinton	13.1%	9.2%	17.1%	8.7%	2.9%	7.4%	11.5%	3.4
Mississippi	21.2%	18.1%	31.5%	3.9%	6.4%	15.5%	14.6%	

**Hinds County
Demographic Indicators for ZIP Codes With CNI Score ≥3.4**

	White	Black/ African American	Hispanic /Latino	18–24	25–34	35–44	45–54	55–64	65+
Hinds County	24.6%	72.4%	1.6%	11.2%	14.7%	12.2%	11.7%	12.1%	13.9%
39203, Jackson	2.0%	96.4%	0.7%	30.9%	11.7%	8.8%	10.5%	10.0%	9.9%
39209, Jackson	5.6%	92.4%	1.4%	10.2%	15.0%	11.3%	11.2%	12.7%	12.0%
39213, Jackson	1.6%	97.2%	0.5%	8.7%	12.7%	10.5%	11.1%	13.6%	18.6%
39204, Jackson	6.7%	90.9%	1.7%	11.9%	15.9%	11.7%	11.0%	9.9%	8.8%
39206, Jackson	8.0%	90.1%	1.2%	9.8%	15.9%	13.0%	10.4%	11.0%	14.6%
39201, Jackson	27.2%	70.5%	1.4%	15.0%	24.7%	15.9%	24.0%	9.8%	7.3%
39212, Jackson	13.4%	84.5%	1.2%	10.9%	15.5%	13.0%	12.4%	10.6%	8.9%
39066, Edwards	21.1%	77.3%	1.3%	8.3%	12.5%	11.1%	11.9%	16.0%	16.9%
39202, Jackson	48.8%	47.0%	1.9%	24.2%	18.3%	11.2%	9.8%	11.1%	11.2%
39041, Bolton	28.8%	69.5%	1.2%	7.5%	12.5%	11.3%	12.5%	17.0%	17.6%
39216, Jackson	62.6%	33.9%	1.4%	7.9%	17.3%	12.2%	11.4%	12.3%	21.6%
39175, Utica	33.7%	63.5%	2.4%	8.1%	12.3%	11.5%	12.3%	15.7%	18.3%
39056, Clinton	51.1%	41.8%	1.7%	9.3%	14.7%	12.6%	12.2%	12.4%	16.5%
Mississippi	57.7%	37.7%	3.2%	9.8%	13.8%	12.3%	12.4%	12.8%	15.6%

Leake County
Social Determinants of Health Indicators for ZIP Codes With CNI Score ≥3.4

	Households in Poverty	Households Receiving Food Stamps/ SNAP	Children in Poverty	Language Other than English Spoken at Home	Unemployment	Less Than HS Diploma	Without Health Insurance	CNI Score
Leake County	25.6%	18.8%	41.4%	6.8%	9.6%	21.3%	17.1%	4.3
39189, Walnut Grove	22.6%	9.6%	32.0%	4.9%	9.0%	19.2%	10.0%	4.6
39051, Carthage	26.4%	20.6%	43.3%	8.3%	9.6%	20.9%	18.8%	4.4
39094, Lena	19.9%	16.1%	47.3%	0.4%	9.7%	24.2%	15.0%	3.6
Mississippi	21.2%	18.1%	31.5%	3.9%	6.4%	15.5%	14.6%	

Leake County
Demographic Indicators for ZIP Codes With CNI Score ≥3.4

	White	Black/ African American	Hispanic /Latino	18–24	25–34	35–44	45–54	55–64	65+
Leake County	51.0%	38.7%	5.0%	8.3%	13.2%	12.1%	11.7%	12.2%	15.7%
39189, Walnut Grove	59.6%	35.6%	3.9%	7.3%	12.7%	12.0%	11.6%	12.2%	14.9%
39051, Carthage	49.8%	37.6%	5.6%	8.6%	13.4%	12.2%	11.6%	11.8%	15.5%
39094, Lena	57.5%	40.5%	1.4%	7.8%	12.7%	11.6%	13.6%	15.2%	17.6%
Mississippi	57.7%	37.7%	3.2%	9.8%	13.8%	12.3%	12.4%	12.8%	15.6%

Madison County

Social Determinants of Health Indicators for ZIP Codes With CNI Score ≥3.4

	Households in Poverty	Households Receiving Food Stamps/ SNAP	Children in Poverty	Language Other than English Spoken at Home	Unemployment	Less Than HS Diploma	Without Health Insurance	CNI Score
Madison County	12.3%	9.9%	17.1%	5.4%	2.9%	8.7%	8.1%	3.0
39046, Canton	23.5%	21.9%	43.1%	4.4%	3.8%	19.1%	11.7%	5.0
39045, Camden	23.9%	29.6%	14.9%	0.1%	8.6%	21.6%	13.6%	4.0
39071, Flora	17.5%	17.9%	35.3%	1.6%	5.3%	12.9%	12.7%	4.0
Mississippi	21.2%	18.1%	31.5%	3.9%	6.4%	15.5%	14.6%	

Madison County

Demographic Indicators for Zip Codes With CNI Score ≥3.4

	White	Black/ African American	Hispanic/ Latino	18–24	25–34	35–44	45–54	55–64	65+
Madison County	56.7%	37.9%	2.7%	8.8%	12.7%	13.6%	13.3%	12.8%	13.3%
39046, Canton	28.2%	67.3%	3.9%	8.9%	14.1%	12.6%	11.9%	11.8%	13.0%
39045, Camden	14.1%	85.3%	0.2%	9.2%	13.7%	10.0%	13.0%	14.7%	17.2%
39071, Flora	49.8%	48.4%	1.7%	8.1%	11.2%	12.6%	13.5%	14.4%	15.0%
Mississippi	57.7%	37.7%	3.2%	9.8%	13.8%	12.3%	12.4%	12.8%	15.6%

**Rankin County
Social Determinants of Health Indicators for ZIP Codes With CNI Score ≥3.4**

	Households in Poverty	Households Receiving Food Stamps/ SNAP	Children in Poverty	Language Other than English Spoken at Home	Unemployment	Less Than HS Diploma	Without Health Insurance	CNI Score
Rankin County	9.3%	8.7%	10.8%	4.2%	3.2%	9.1%	10.5%	2.8
39208, Pearl	13.2%	13.8%	19.9%	5.0%	4.9%	12.6%	13.7%	3.8
39218, Richland	10.2%	14.9%	17.8%	13.2%	2.6%	12.7%	18.2%	3.6
Mississippi	21.2%	18.1%	31.5%	3.9%	6.4%	15.5%	14.6%	

**Rankin County
Demographic Indicators for ZIP Codes With CNI Score ≥3.4**

	White	Black/ African American	Hispanic/ Latino	18–24	25–34	35–44	45–54	55–64	65+
Rankin County	75.7%	19.9%	2.9%	8.3%	14.8%	13.9%	13.1%	12.2%	14.3%
39208, Pearl	65.4%	27.6%	6.2%	9.5%	17.0%	14.6%	12.8%	10.7%	13.1%
39218, Richland	75.6%	17.5%	5.2%	8.4%	14.8%	14.0%	12.4%	11.8%	12.1%
Mississippi	57.7%	37.7%	3.2%	9.8%	13.8%	12.3%	12.4%	12.8%	15.6%

Yazoo County
Social Determinants of Health Indicators for ZIP Codes With CNI Score ≥3.4

	Households in Poverty	Households Receiving Food Stamps/ SNAP	Children in Poverty	Language Other than English Spoken at Home	Unemployment	Less Than HS Diploma	Without Health Insurance	CNI Score
Yazoo County	34.5%	30.6%	46.1%	4.9%	12.9%	21.5%	16.8%	4.7
39194, Yazoo City	39.8%	38.7%	53.4%	6.5%	16.2%	21.8%	18.4%	5.0
39039, Benton	25.4%	15.2%	18.9%	0.6%	7.1%	17.6%	11.1%	4.0
39179, Vaughan	32.4%	15.2%	24.4%	0.0%	4.6%	20.2%	17.3%	4.0
39040, Bentonia	19.2%	11.8%	18.3%	0.8%	6.6%	23.4%	12.7%	3.6
Mississippi	21.2%	18.1%	31.5%	3.9%	6.4%	15.5%	14.6%	

Yazoo County
Demographic Indicators for ZIP Codes With CNI Score ≥3.4

	White	Black/ African American	Hispanic/ Latino	18–24	25–34	35–44	45–54	55–64	65+
Yazoo County	38.5%	57.6%	5.8%	8.2%	16.9%	14.8%	11.9%	11.4%	13.4%
39194, Yazoo City	32.7%	62.5%	7.4%	8.5%	18.6%	15.8%	11.7%	10.0%	11.7%
39039, Benton	51.9%	46.7%	1.1%	7.6%	12.2%	12.0%	12.8%	15.6%	18.7%
39179, Vaughan	35.2%	64.4%	1.0%	7.5%	12.2%	12.0%	12.4%	15.0%	17.5%
39040, Bentonia	64.1%	34.2%	0.8%	7.0%	12.0%	12.3%	11.6%	14.7%	18.2%
Mississippi	57.7%	37.7%	3.2%	9.8%	13.8%	12.3%	12.4%	12.8%	15.6%

Statistical Analysis of Health Indicators

Health indicators were analyzed across a number of health issues, including access to care, health behaviors and outcomes, chronic disease morbidity and mortality, mental health and substance use disorder trends and maternal and child health measures.

Data were compiled from secondary sources, including the Mississippi Department of Health, the Centers for Disease Control and Prevention (CDC), the University of Wisconsin County Health Rankings & Roadmaps program, among other sources. A comprehensive list of data sources can be found in Appendix A.

Health data focus on county-level reporting, which is generally the most recent and consistent data available. Health data for Baptist's service counties are compared to state and national averages and Healthy People 2020 (HP 2020) goals, where applicable, to provide benchmark comparisons. Healthy People is a U.S. Department of Health and Human Services health promotion and disease prevention initiative that sets science-based, 10-year national objectives for improving the health of all Americans.

Age-adjusted rates are referenced throughout the report to depict the burden of disease among residents. Age-adjusted rates are summary measures adjusted for differences in age distributions so that data from one year to another, or between one geographic area and another, can be compared as if the communities reflected the same age distribution.

The Behavioral Risk Factor Surveillance System (BRFSS) is a telephone survey of residents 18 years old or older conducted nationally by states as required by the CDC. A consistent survey tool is used across the United States to assess health risk behaviors, prevalence of chronic health conditions, access to care, preventive health measures and other health indicators. BRFSS results included in this report were provided by the Mississippi Department of Health.

The most recent data available at the time of this study were used unless otherwise noted.

Access to Health Care

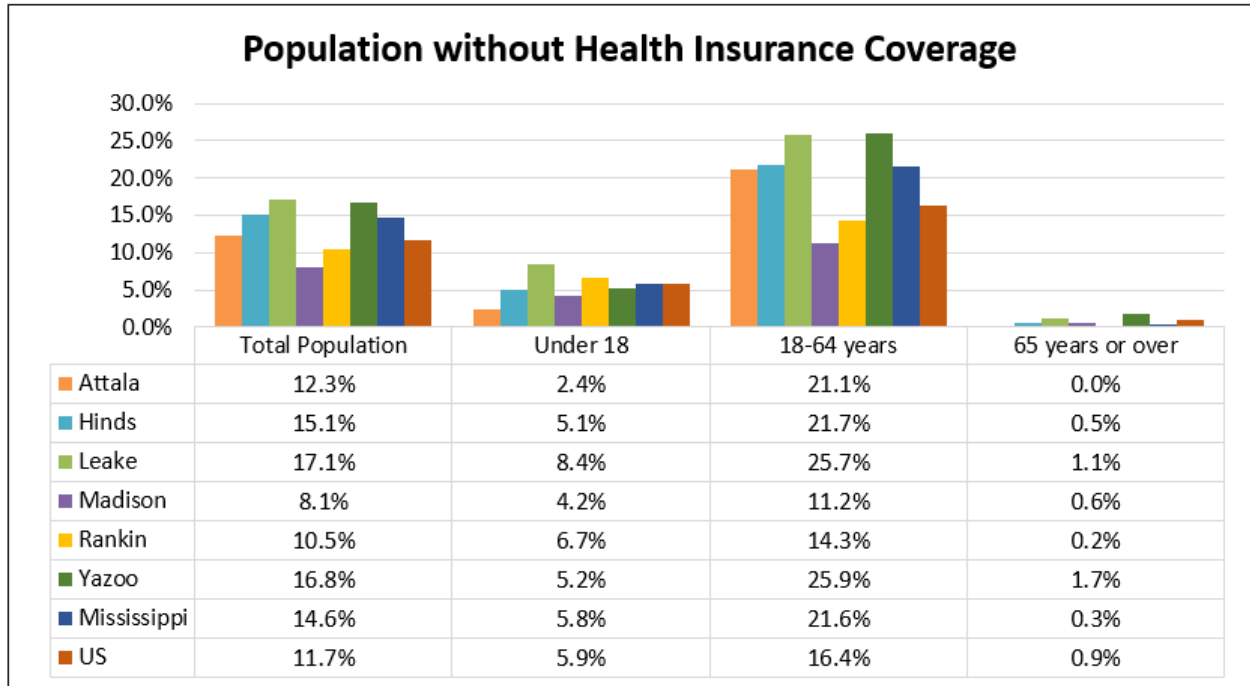
According to the University of Wisconsin County Health Rankings & Roadmaps program, counties in the Central Mississippi Service Area received the following rankings for clinical care out of 82 counties in Mississippi. The rankings are based on a number of indicators, including health insurance coverage and provider access, with a rank of No. 1 being the best in the state.

2018 Clinical Care County Health Rankings	
No. 1	Madison County (No. 1 in 2015)
No. 4	Hinds County (No. 8 in 2015)
No. 6	Rankin County (No. 4 in 2015)
No. 25	Attala County (No. 20 in 2015)
No. 45	Yazoo County (No. 50 in 2015)
No. 80	Leake County (No. 81 in 2015)

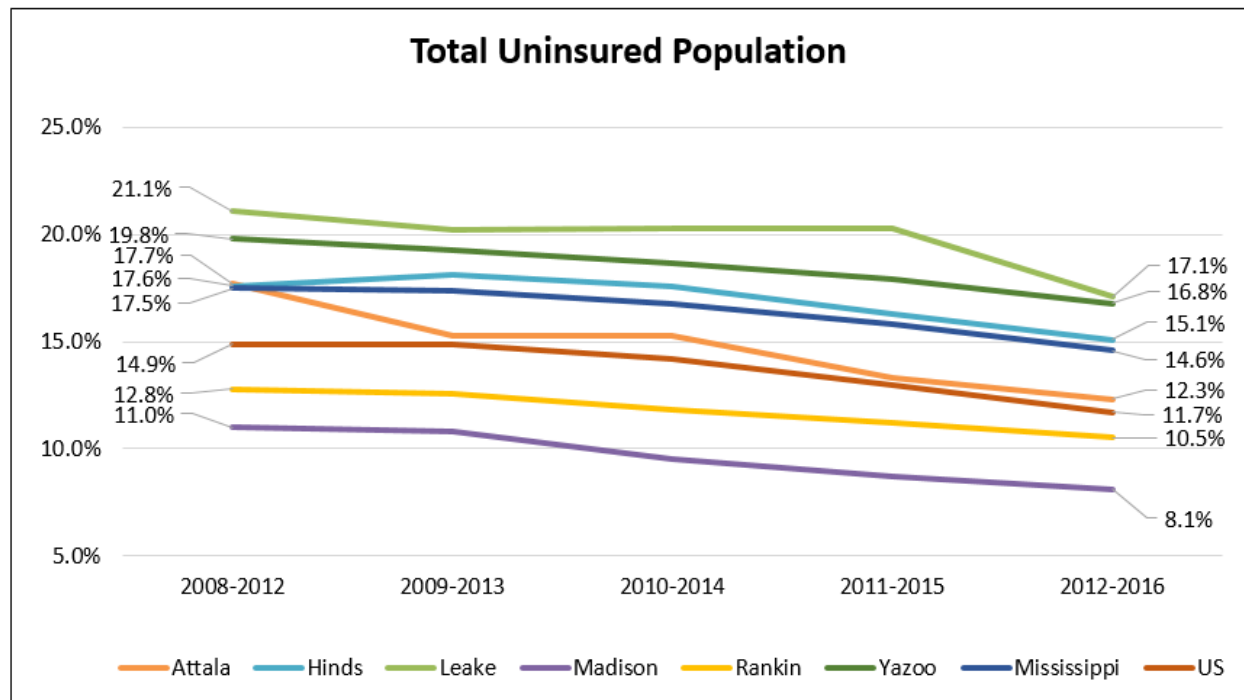
Health Insurance Coverage

The proportion of the population without health insurance varies but is declining across the Central Mississippi Service Area. Hinds, Leake and Yazoo counties exceed the state and national percent uninsured, while Attala, Madison and Rankin counties are either at or below the state and national percentages. When broken down by age, Leake and Rankin counties exceed the state and nation in the percentage of uninsured children, while Attala, Hinds, Leake and Yazoo counties exceed the state or the nation in the proportion of uninsured adults between ages 18–64.

The percent of uninsured residents is declining across the Central Mississippi Service Area; however Hinds, Leake and Yazoo counties remain higher than the state and nation.

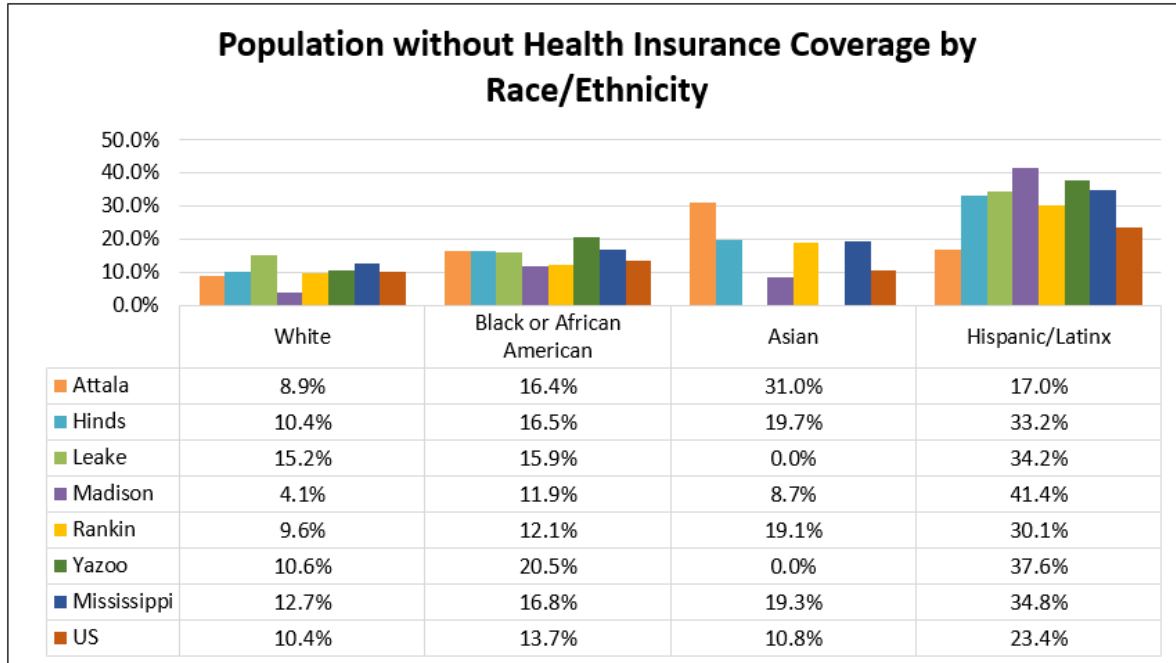


Source: U.S. Census Bureau, 2012–2016



Source: U.S. Census Bureau, 2008–2012 to 2012–2016

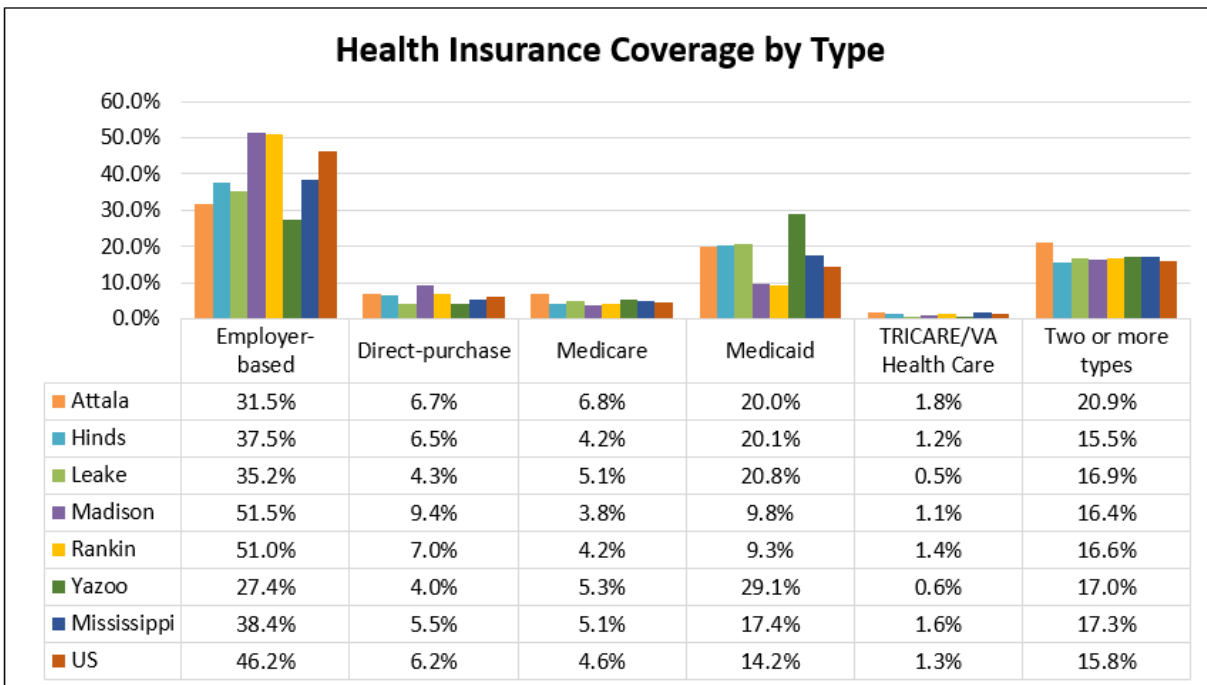
When stratified by race, the percent uninsured is generally consistent with the state and/or the nation. The exception is Madison County where the percent of uninsured Whites is much lower than any other group or geography. Yazoo County also has a higher percentage of uninsured Black/African American residents, who comprise nearly 60% of the total county population.



Source: U.S. Census Bureau, 2012–2016

Most people in all six counties of the Central Mississippi Service Area are covered by employer-based health insurance, consistent with the nation. The exception is Yazoo County, where residents are more likely to be covered by Medicaid.

The highest percentage of Yazoo County residents are insured by Medicaid, contrary to state and national trends.



Source: U.S. Census Bureau, 2012–2016

Residents of Jackson experience greater socioeconomic disparity, as evidenced by higher Community Need Index scores. Having health insurance is a first step in being able to access health care that can improve wellness and reduce disparity. The following table depicts the percent uninsured for specific population groups within the city.

Jackson, Mississippi, Uninsured Percentages

Uninsured Children	Uninsured Adults	Uninsured Whites	Uninsured Black/African American	Uninsured Hispanic/Latino	Uninsured Low-Income Households	Uninsured High-Income Households
3.0%	19.2%	7.6%	16.2%	NA	18.4%	7.4%

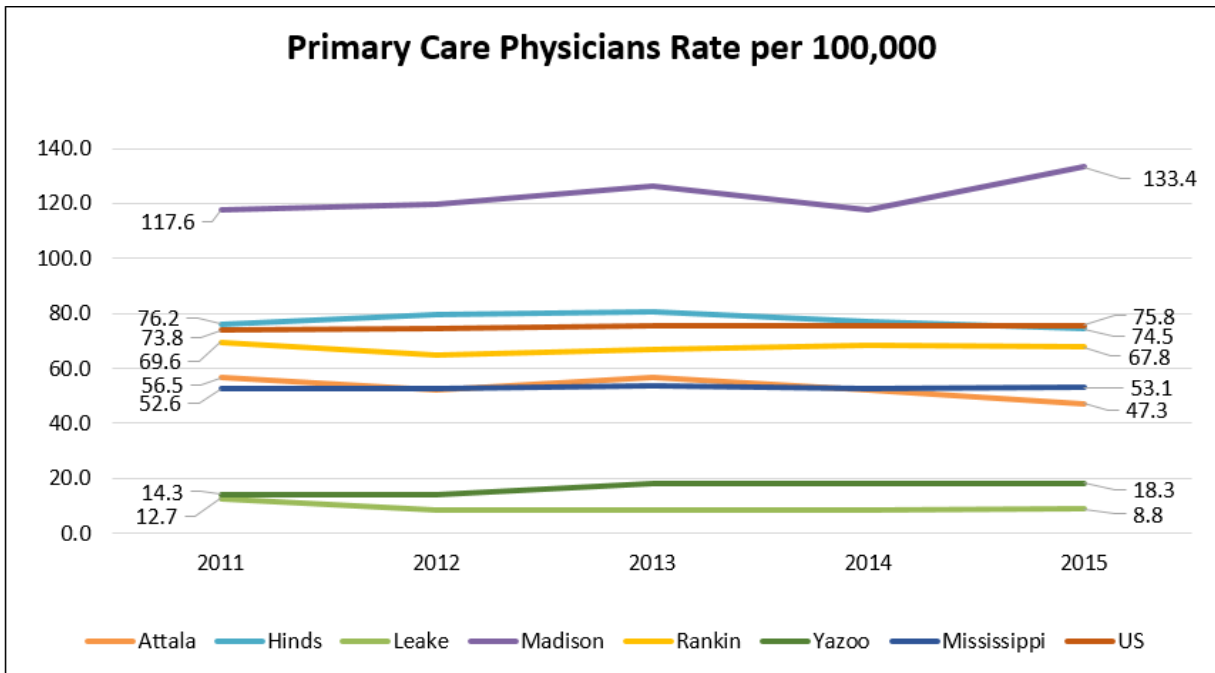
Source: U.S. Census Bureau, 2017 (WalletHub publication)

Provider Access

Provider rates are measured by the number of providers per 100,000 people and are measured against state and national benchmarks for primary, dental and mental health care.

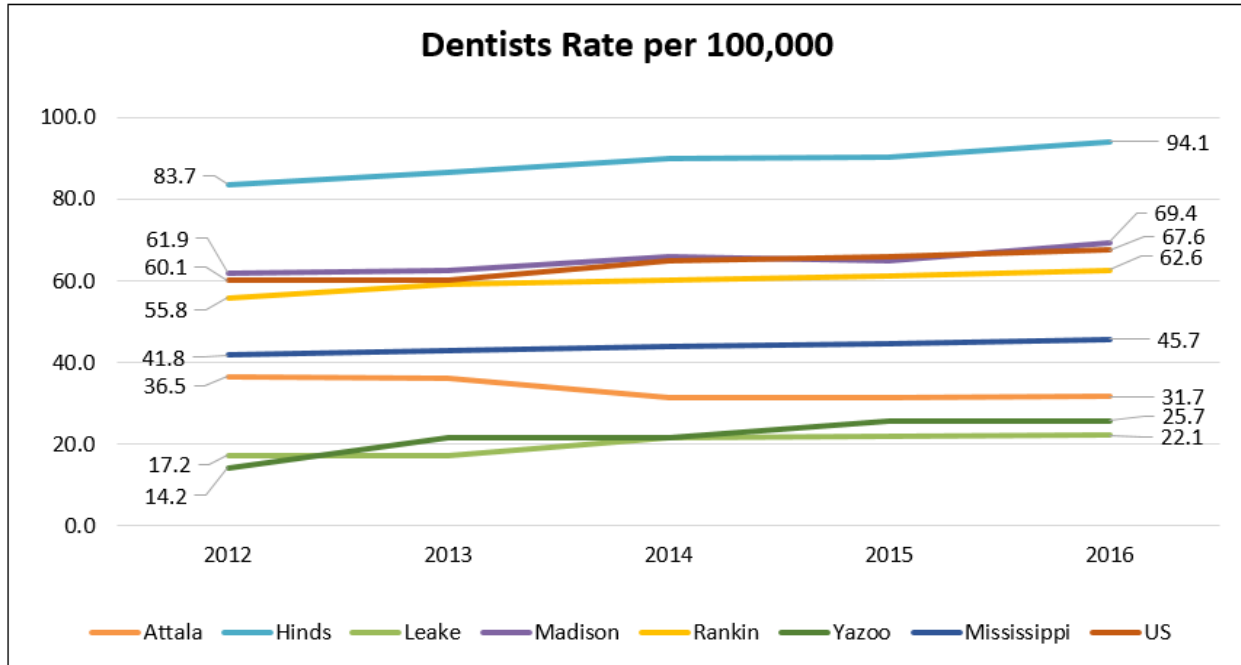
All counties except Madison and Hinds have notably lower primary care physician and dentist rates than the country.

Madison County exceeds the national rate of primary care physicians per 100,000 people, making primary care more accessible than in the nation in general. The rate of primary care physicians per 100,000 in Hinds County is consistent with the national rate. All other counties and the state of Mississippi have a lower rate than the nation, with Yazoo (18.3) and Leake County (8.8) far below the national rate of 75.8. The data indicate similar findings for the availability of dental providers.



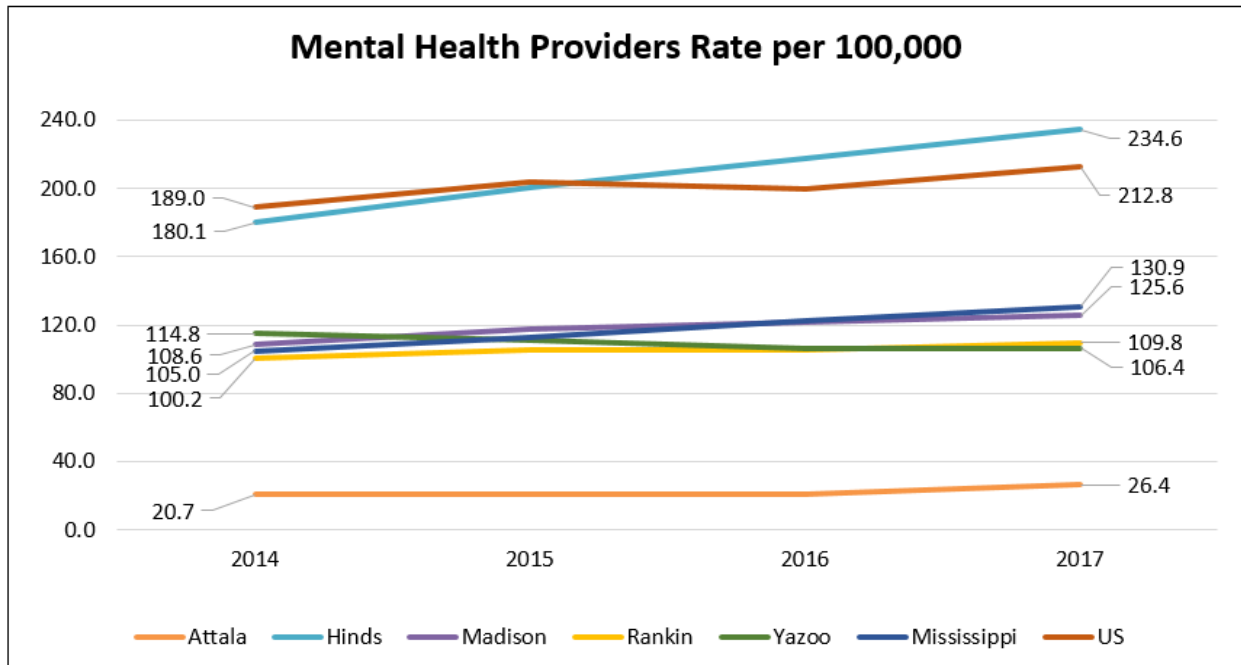
Source: Health Resources & Services Administration, 2011–2015

Note: Providers are identified by the location of their preferred professional/business mailing address. Provider rates do not take into account providers who serve multiple counties or who have satellite clinics.



Source: Health Resources & Services Administration, 2012–2016

Hinds County exceeds the national rate of mental health providers per 100,000, but all other counties have fewer available mental health providers. In Attala County, the rate of mental health providers is nearly 10 times lower than the national rate.



Source: Centers for Medicare & Medicaid Services, 2014–2017

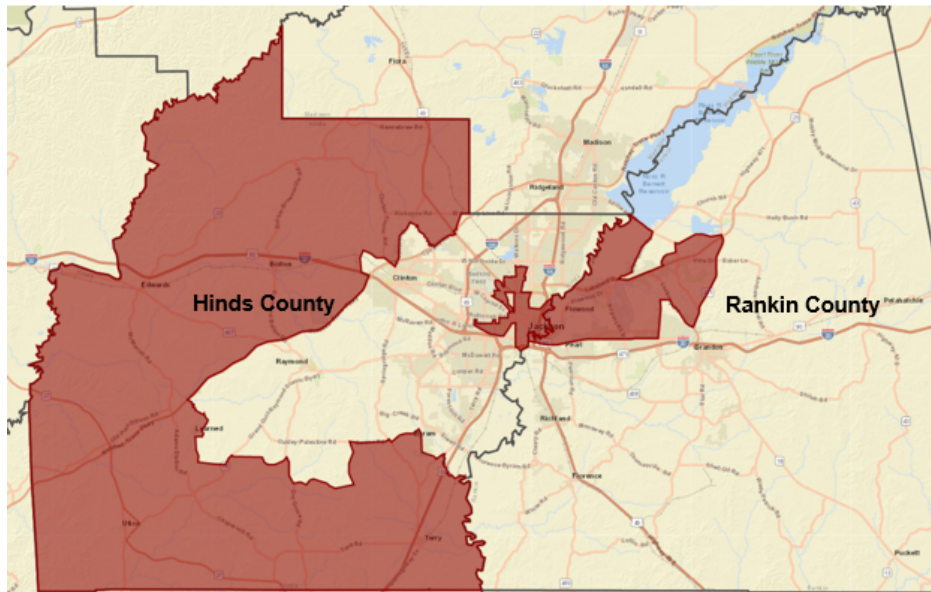
Note: An error occurred in the County Health Rankings method for identifying mental health providers in 2013. Data prior to 2014 are not shown. Leake County is not shown due to limited data availability.

The Health Resources & Services Administration (HRSA) is responsible for designating Health Professional Shortage Areas (HPSAs), as well as Medically Underserved Areas (MUAs). Shortage areas are determined by a defined ratio of total health professionals versus the total population. Medically Underserved Areas are designated as having too few primary care providers, high infant mortality, high poverty or a large elderly population. The following HPSAs and MUAs are located in the Central Mississippi Service Area.

**Health Professional Shortage Areas and Medically Underserved Areas
in the Central Mississippi Service Area**

Geographic Area	Medically Underserved Area	Health Professional Shortage Area(s)
Attala County (All)	x	Dental care, mental health care (high-need area); Low-income population (primary care)
Hinds County (All)		Low-income population (primary care, dental care)
Hinds County Service Area (defined by census tract — see map below)	x	
Leake County (All)	x	Primary care, dental care, mental health care (high-need area)
Madison County (All)	x	
Northern Madison County		Dental care (high-need area); Low-income population (primary care)
Rankin County Service Area (defined by census tract — see map below)	x	
Southern Rankin County		Low-income population (primary care)
Yazoo County (All)	x	Primary care, dental care, mental health care (high-need area)

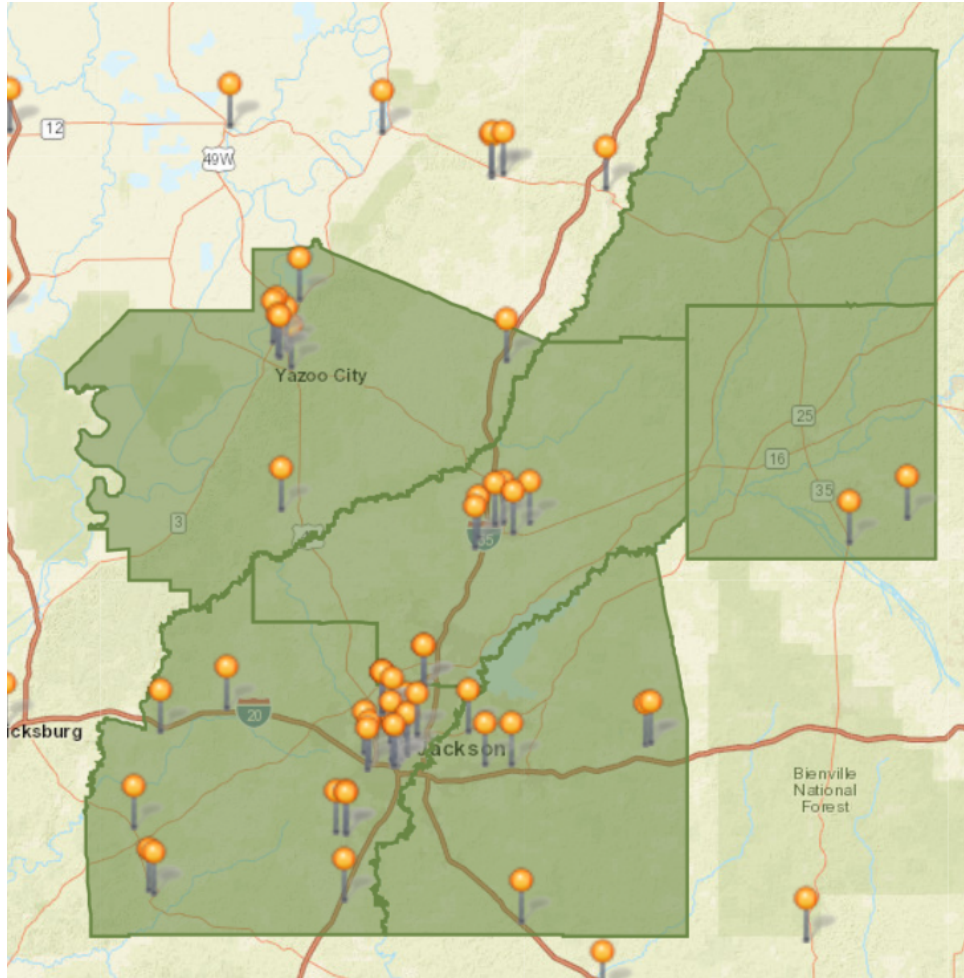
Medically Underserved Areas in Hinds and Rankin Counties by Census Tract



Source: Health Resources & Services Administration, 2018

The Health Resources & Services Administration also plays a role in designating Federally Qualified Health Centers (FQHCs). Federally Qualified Health Centers are defined as “community-based health care providers that receive funds from the HRSA Health Center Program to provide primary care services in underserved areas.” Services are provided on a sliding fee scale based on patients’ ability to pay. A map of FQHC locations within the Central Mississippi Service Area is below. A listing of FQHCs within the service area can be found in Appendix C.

FQHC Locations In and Around the Central Mississippi Service Area



Overall Health Status

According to the University of Wisconsin County Health Rankings & Roadmaps program, Central Mississippi Service Area counties received the following rankings for health outcomes out of 82 counties in Mississippi. Health outcomes are measured in relation to premature death (before age 75) and quality of life, with a ranking of No. 1 being the best in the state.

2018 Health Outcomes County Health Rankings

- No. 1 Rankin County (No. 4 in 2015)**
- No. 3 Madison County (No. 5 in 2015)**
- No. 39 Hinds County (No. 34 in 2015)**
- No. 45 Attala County (No. 60 in 2015)**
- No. 54 Leake County (No. 38 in 2015)**
- No. 62 Yazoo County (No. 29 in 2015)**

Rankin and Madison counties rank the highest in the service area for health outcomes. Both counties have premature death rates and quality of life indicators, such as adults with poor physical and mental health, that are better than or comparable to national indicators. In Attala, Hinds, Leake and Yazoo counties, residents are more likely to experience premature death, self-report “poor” or “fair” health status and self-report more “poor physical and mental health days” than the national average.

The premature death rate for Leake and Yazoo counties is nearly double the national death rate.

**Health Outcomes Indicators
(Red = Higher Than the State or Nation)**

	Premature Death Rate per 100,000	Adults With “Poor” or “Fair” Health Status	30-Day Average — Poor Physical Health Days	30-Day Average — Poor Mental Health Days
Attala County	11,453	22.4%	4.2	4.1
Hinds County	10,389	22.1%	4.1	4.2
Leake County	12,386	25.1%	4.5	4.5
Madison County	7,498	15.9%	3.4	3.5
Rankin County	6,994	14.7%	3.3	3.4
Yazoo County	12,453	27.1%	4.7	4.4
Mississippi	10,234	22.2%	4.4	4.4
United States	6,700	16.0%	3.7	3.8

Source: National Center for Health Statistics, 2014–2016; Centers for Disease Control and Prevention, 2016

Health Behaviors

Individual health behaviors include risky behaviors, such as tobacco use and obesity, or positive behaviors, such as exercise, good nutrition and stress management. Health behaviors may increase or reduce the likelihood of disease or early death. The prevalence of these health behaviors is provided below, with benchmark comparisons, as available.

Smoking

Smoking is a significant contributor to heart disease, cancer, stroke, respiratory health, low birth weight, early death and other conditions. Healthy People 2020 set a national target of no more than 12% of adults reporting smoking. While Madison and Rankin counties mirror the national percentage of adult smokers, they are still above the Healthy People 2020 target. In Attala, Hinds, Leake and Yazoo counties, at least 1 in 5 adults report tobacco use. While most counties in the Central Mississippi Service Area demonstrated a slight decrease in the percent of smokers, the percent of adult smokers in Yazoo County increased from 2014 to 2016.

All counties exceed the Healthy People 2020 goal for adult smokers.

Yazoo County has the highest percentage of adult smokers; the percentage increased from 2014 to 2016.

Tobacco Use Among Adults

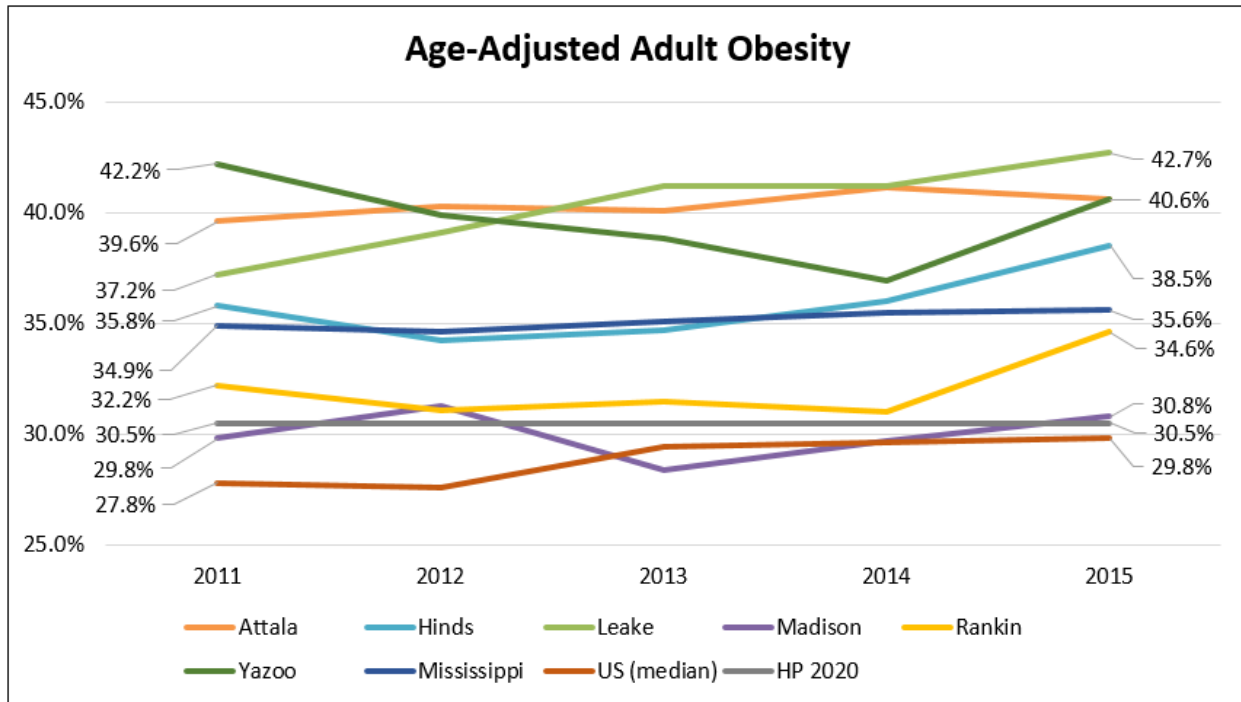
	Adult Smoking	
	2014	2016
Attala County	19.8%	18.7%
Hinds County	21.2%	19.3%
Leake County	22.3%	22.2%
Madison County	16.8%	15.1%
Rankin County	17.6%	16.3%
Yazoo County	23.0%	25.0%
Mississippi	23.0%	22.7%
United States	17.0%	17.0%
Healthy People 2020	12.0%	12.0%

Source: Centers for Disease Control and Prevention, 2014 and 2016; Healthy People 2020

Obesity

Overweight and obesity are associated with greater risk for a variety of diseases, including heart disease and diabetes, and contribute to decreased quality of life. The Healthy People 2020 target for adult obesity is no more than 30.5% of the population. The nation in general has met this target. None of the counties in the Central Mississippi Service Area have met the Healthy People 2020 target or national benchmark. Obesity percentages increased in nearly all counties from 2011 to 2015; percentages are highest in Attala, Leake and Yazoo counties.

Obesity increased in all counties except Yazoo from 2011 to 2015; no counties meet the Healthy People 2020 goal for obesity.



Source: Centers for Disease Control and Prevention, 2011–2015

Healthy Eating and Food Insecurity

Food insecurity, defined as being without a consistent source of sufficient and affordable nutritious food, negatively impacts the opportunity for healthy eating and healthy weight management. Food insecurity reflects a variety of social factors, including employment, income, access to healthy food options, transportation, housing and other factors.

The proportion of food insecure residents, including children, in Rankin and Madison counties is generally comparable to national percentages and better than Mississippi in general. However, residents in Attala, Hinds, Leake and Yazoo counties experience greater food insecurity than the nation and Mississippi in general. Children in Leake and Yazoo counties also experience greater food insecurity than both the state and the nation.

The four counties with the highest obesity percentages — Attala, Hinds, Leake and Yazoo — also have the highest food insecurity percentages.

Access to free and reduced-price lunch for low-income school children can improve food insecurity for households with children. Eligibility for free lunch includes households with an income at or below 130% of the poverty threshold, while eligibility for reduced-price lunch includes households with an income between 130% and 185% of the poverty threshold.

In Madison and Rankin counties, roughly half of all children are eligible for free or reduced-price lunch, fewer than in Mississippi in general. Children in Attala County are equally likely to qualify for free or reduced-price lunch as children in Mississippi in general, with 3 out of 4 qualifying.

Nearly all children in Hinds, Leake and Yazoo counties qualify for free or reduced-price lunch.

In Hinds, Leake and Yazoo counties, nearly all children — more than 9 out of 10 — qualify for free or reduced-price lunch.

**Food Insecurity
(Red = Higher Than the State or Nation)**

	All Residents	Children
Attala County	21.0%	24.3%
Hinds County	25.2%	23.9%
Leake County	20.6%	25.9%
Madison County	15.4%	17.3%
Rankin County	12.1%	16.7%
Yazoo County	26.8%	28.3%
Mississippi	20.1%	24.4%
United States	12.9%	17.5%

Source: Feeding America, 2016

Children Eligible for Free or Reduced-Price Lunch

	Percent
Attala County	76.2%
Hinds County	90.2%
Leake County	91.1%
Madison County	51.7%
Rankin County	47.2%
Yazoo County	96.7%
Mississippi	74.9%

Source: National Center for Education Statistics, 2015–2016

Healthy Living

Healthy habits, such as regular exercise, are important for establishing and maintaining a healthy lifestyle. Access to physical activity opportunities promotes regular exercise. This includes access to parks, gyms, pools and other safe venues designed to facilitate activity.

Five out of the six counties in Baptist’s Central Mississippi Service Area have less access to spaces for physical activity than the nation in general. Madison County residents have comparable physical activity access as the rest of the country but the lowest percentage of physically inactive adults in the service area. However, the proportion of inactive adults in all six counties is greater than the nation in general.

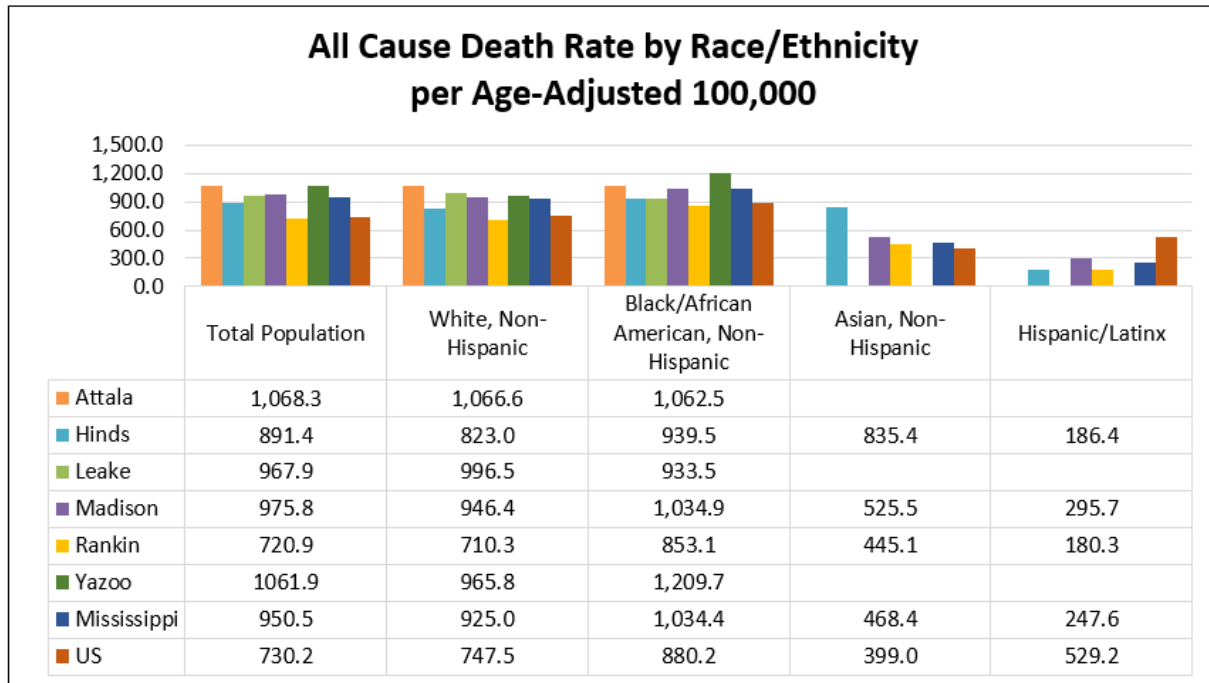
Physical Activity
(Red = Lower Access and Higher Inactivity Than the State and/or Nation)

	Access to Physical Activity	Physically Inactive Adults
Attala County	33.6%	39.5%
Hinds County	72.8%	32.5%
Leake County	21.8%	36.2%
Madison County	86.7%	28.1%
Rankin County	70.9%	32.0%
Yazoo County	45.3%	38.2%
Mississippi	57.7%	34.0%
United States	83.0%	23.0%

Source: Business Analyst, Delorme Map Data, ESRI, & U.S. Census Tigerline Files, 2010 & 2016; Centers for Disease Control and Prevention, 2014

Mortality

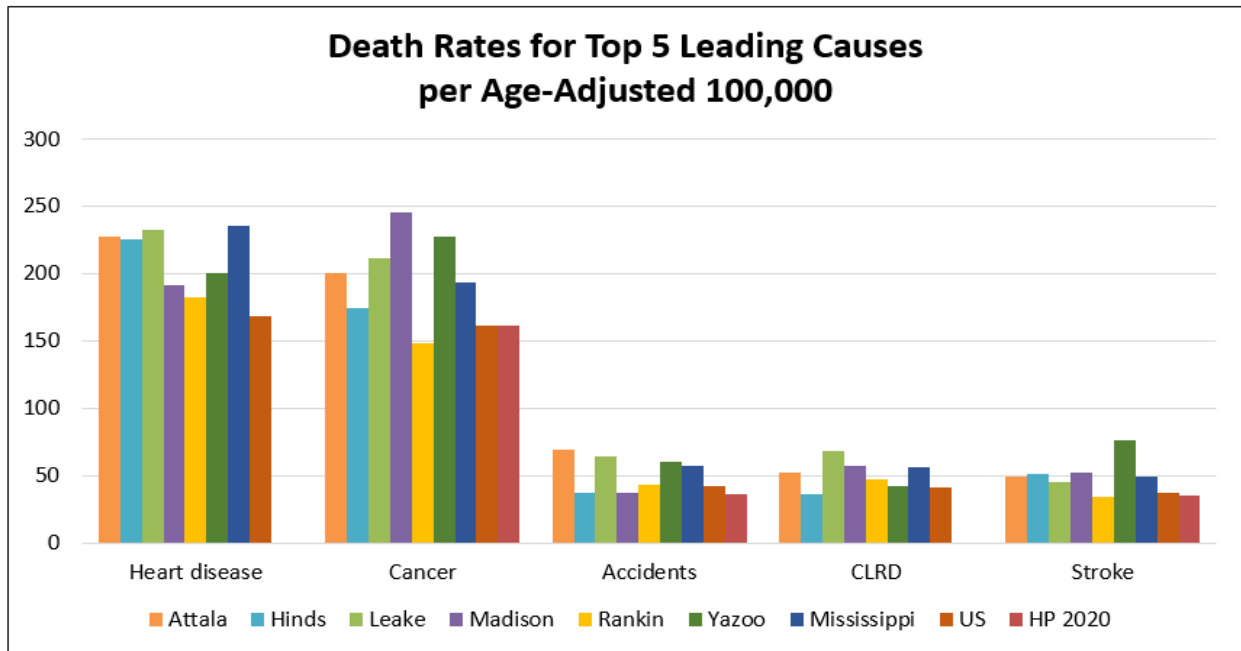
The following graph depicts the all cause age-adjusted death rate by county and by race/ethnicity. Death rates for White, Black/African American or Asian residents in Baptist’s Central Mississippi Service Area are higher than the nation in general. The exceptions are a lower death rate for White or Black/African American residents in Rankin County.



Source: Centers for Disease Control and Prevention, 2012–2016

Note: Asian and Hispanic/Latino death rates are not available for Attala, Leake and Yazoo counties due to low counts.

The top five causes of death in the nation, in rank order, are heart disease, cancer, accidents, chronic lower respiratory disease (CLRD) and stroke. The following chart profiles death rates for the top five causes by county and for Mississippi. The rate of death for each of these five leading causes is generally higher in all of the counties in the Central Mississippi Service Area than in the nation. Analysis by condition is included below.



Source: Centers for Disease Control and Prevention, 2012–2016; Healthy People 2020

Chronic Diseases

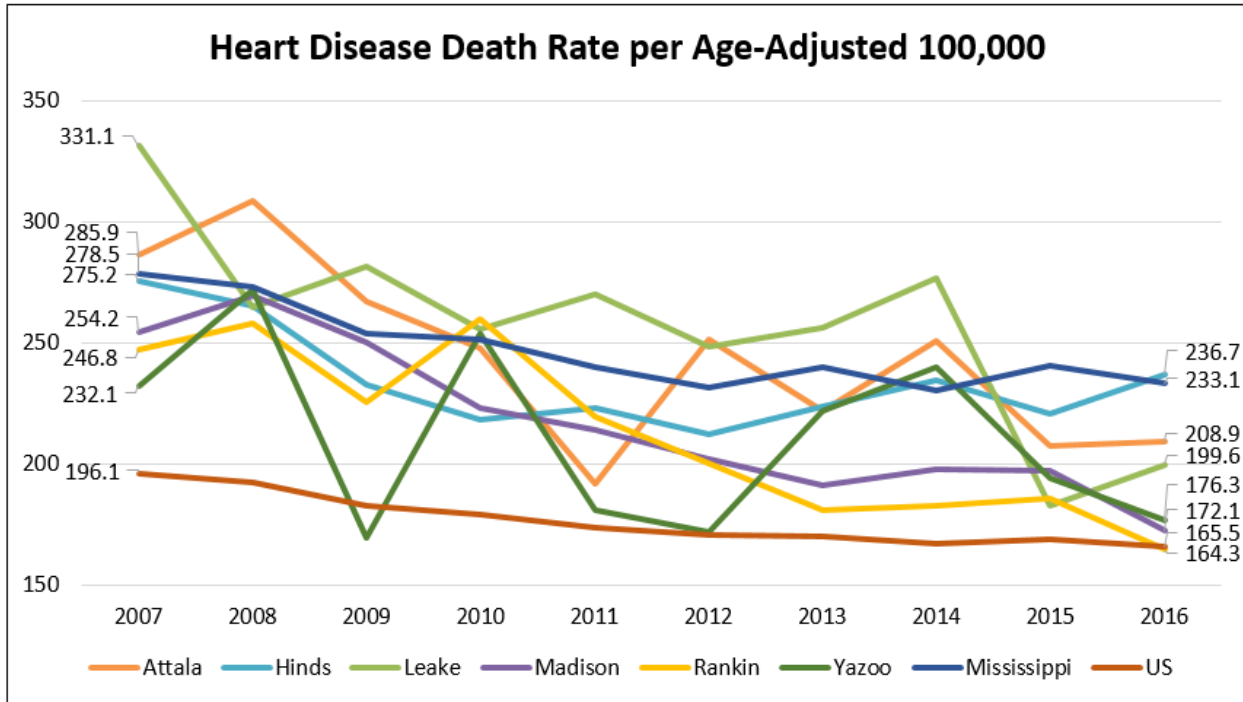
Chronic diseases are the leading causes of death and disability in the nation and disease rates continue to increase. Chronic diseases are often preventable through reduced health risk behaviors, such as not smoking and limiting alcohol use, increased physical activity, good nutrition and early detection of risk factors.

Heart Disease

Heart disease is a leading cause of death in the nation, and within the Central Mississippi Service Area. Consistent with the nation, heart disease rates have generally declined over the past 10 years.

While heart disease death rates have been variable, the current rate of death is higher than the national rate in all geographies within the Central Mississippi Service Area except Rankin County.

Heart disease death rates in the Central Mississippi service area are generally declining, but are higher in all counties except Rankin in comparison to the nation.



Source: Centers for Disease Control and Prevention, 2007–2016

When stratified by race, the heart disease death rate among Whites exceeds the national rate in all six counties, but it is lower than the statewide rate in every county except Leake County. The heart disease death rate among Blacks/African Americans is higher than the national rate in every county except Madison County, but lower than the statewide rate. In nearly every county, Blacks/African Americans have a higher rate of heart disease death than Whites.

Heart Disease Death Rates per Age-Adjusted 100,000 by Race

	White, Non-Hispanic Death Rate	Black/African American, Non-Hispanic Death Rate	Hispanic/Latino Death Rate
Attala County	225.4	225.2	NA*
Hinds County	188.3	256.6	NA*
Leake County	240.5	228.5	NA*
Madison County	186.0	199.8	NA*
Rankin County	176.8	236.1	NA*
Yazoo County	190.9	212.9	NA*
Mississippi	226.5	260.6	46.6
United States	170.9	212.6	118.2

Source: Centers for Disease Control and Prevention, 2012–2016

*Hispanic/Latino death rates are not available at the county level due to low counts.

Coronary Heart Disease and Stroke

Coronary heart disease (CHD) is characterized by the buildup of plaque inside the coronary arteries. Several types of heart disease, including coronary heart disease, are risk factors for stroke. All counties except Yazoo meet the Healthy People 2020 target for CHD; the Yazoo County rate is similar to the state rate.

All counties except Yazoo meet the Healthy People 2020 goal for CHD.

None of the six counties in the Central Mississippi Service Area meet the Healthy People 2020 target for stroke. The Rankin County rate is the lowest in the service area and comparable to the national rate.

No counties meet the Healthy People 2020 goal for stroke.

Coronary Heart Disease and Stroke Death Rates
(Red = Higher Than the Nation)

	Coronary Heart Disease Death per Age-Adjusted 100,000	Stroke Death per Age-Adjusted 100,000
Attala County	85.8	53.8
Hinds County	81.1	51.4
Leake County	72.1	49.8
Madison County	81.8	50.9
Rankin County	74.0	35.8
Yazoo County	106.2	76.2
Mississippi	107.7	50.7
United States	99.6	36.9
Healthy People 2020	103.4	34.8

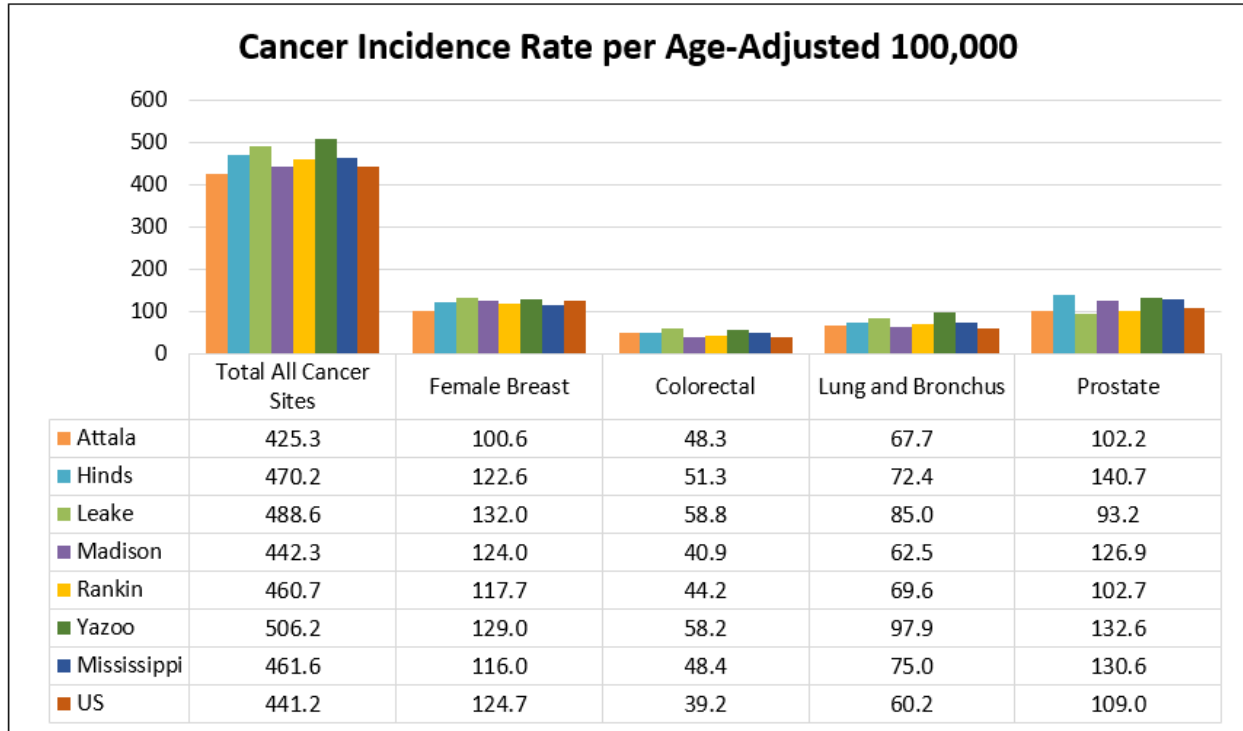
Source: Centers for Disease Control and Prevention, 2014–2016

Cancer

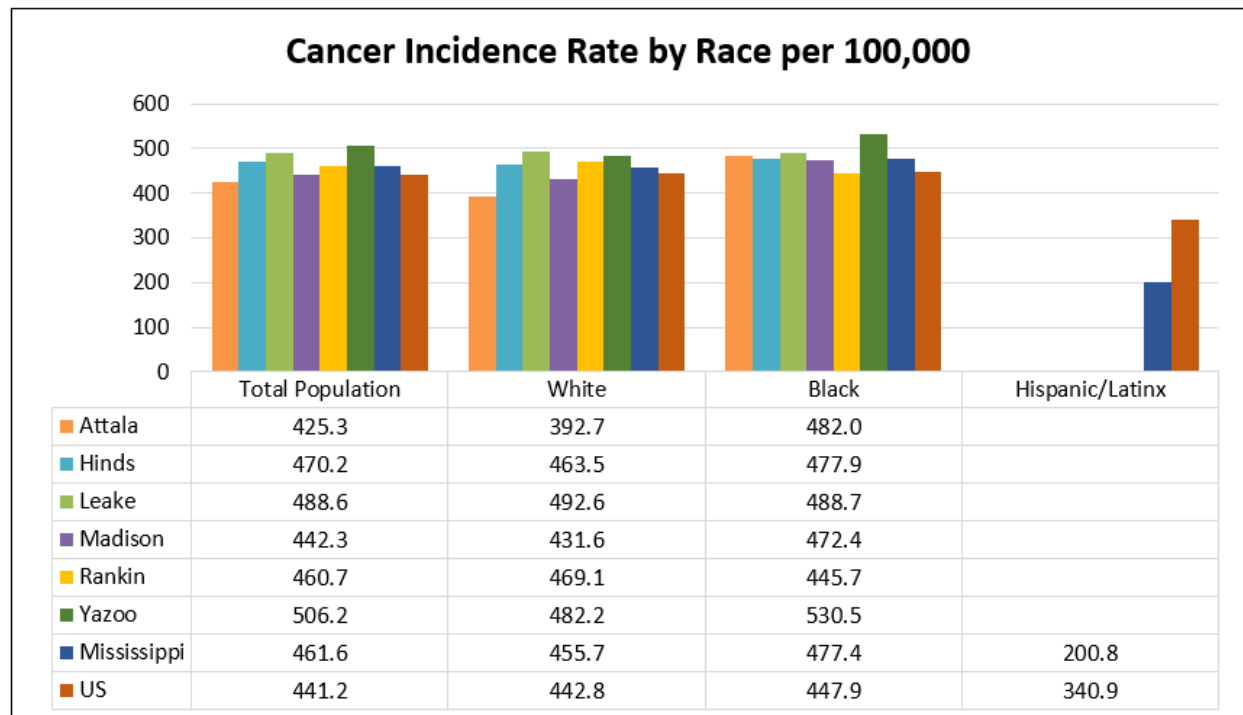
Cancer remains a leading cause of death, but if detected early, can often be effectively treated. The incidence of cancer of all types in Baptist’s Central Mississippi Service Area is generally consistent with national rates, including when stratified by race. Leake and Yazoo counties are the exceptions with rates of cancer that exceed the national rate by 47 to 65 points. Both counties have a higher incidence of colorectal and lung cancer when compared to state and national trends.

Cancer incidence in the service area is consistent with national trends in all counties except Leake and Yazoo, but cancer death rates are higher in five out of six counties indicating delayed detection and treatment.

Despite lower incidence rates, the rate of death due to cancer is higher than the nation in five out of six counties and does not meet the Healthy People 2020 target. The exception is Rankin County, where the rate of death from cancer meets the Healthy People 2020 target. When stratified by race, the rate of death from cancer is lower in both Rankin and Hinds counties for both Whites and Blacks/African Americans. This represents an opportunity to adopt interventions from Rankin and Hinds counties to address early detection, effective treatment and consistent screening for cancers in other counties.

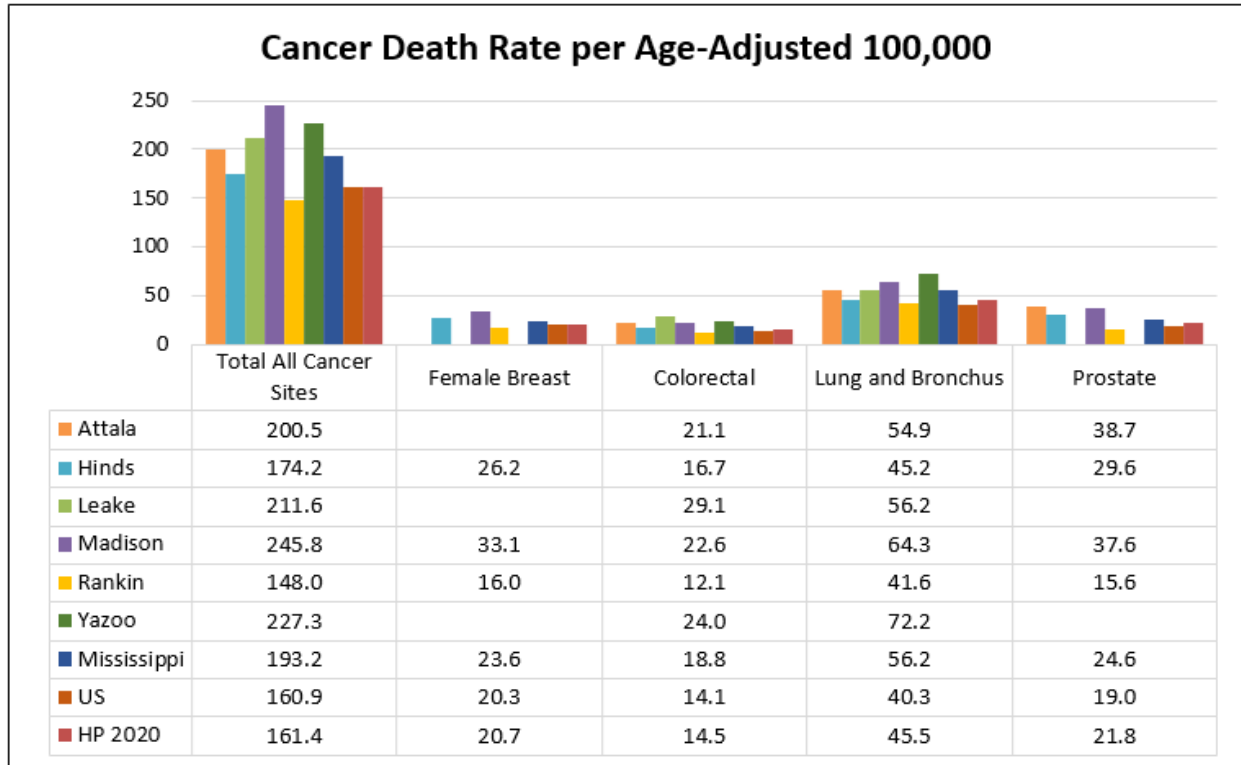


Source: National Cancer Institute, 2011–2015



Source: National Cancer Institute, 2011–2015

Note: Data for Latino residents are not reported due to low counts.



Source: Centers for Disease Control and Prevention, 2012–2016; Healthy People 2020

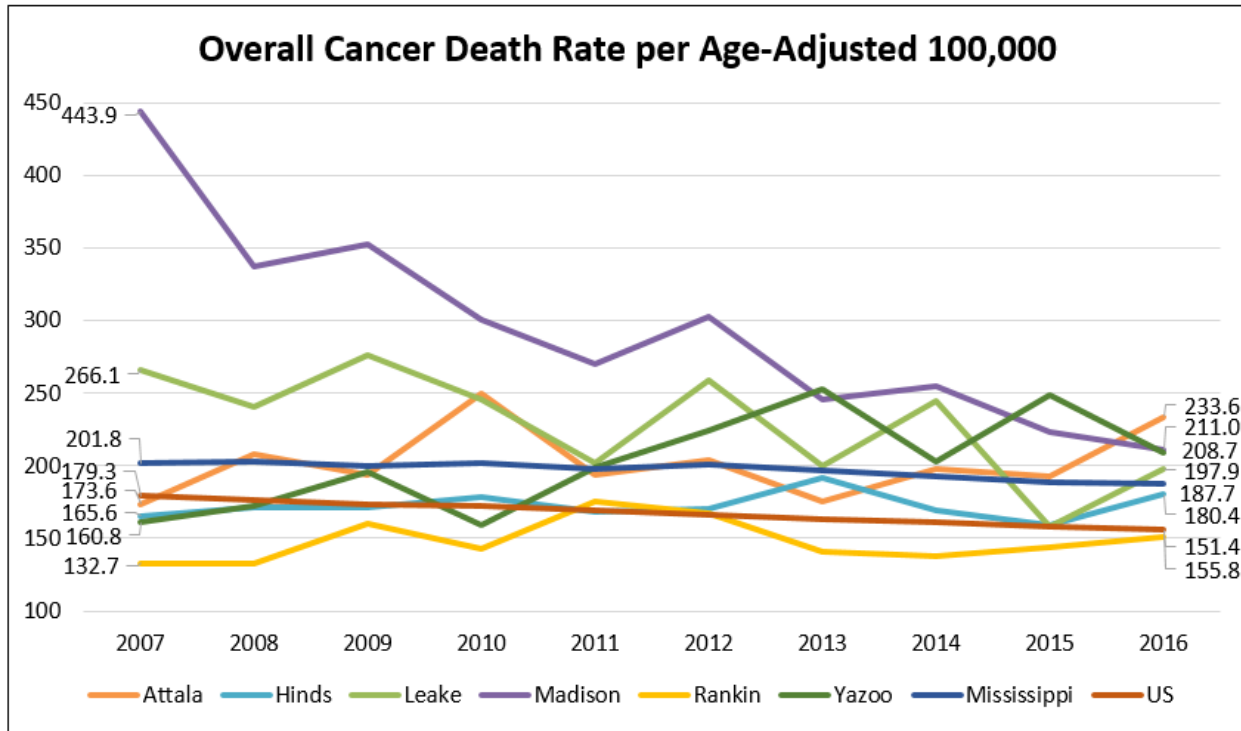
Note: Female breast cancer death rates are not available for Attala, Leake and Yazoo counties due to low counts. Prostate cancer death rates are not available for Leake and Yazoo counties due to low counts.

Cancer Death Rates per Age-Adjusted 100,000 by Race (Red = Higher Than the Nation)

	White, Non-Hispanic Death Rate	Black/African American, Non-Hispanic Death Rate	Hispanic/Latino Death Rate
Attala County	185.3	241.2	NA*
Hinds County	159.3	188.1	NA*
Leake County	197.5	233.8	NA*
Madison County	232.5	282.1	NA*
Rankin County	145.2	174.7	NA*
Yazoo County	208.0	263.2	NA*
Mississippi	186.3	216.7	48.9
United States	165.7	190.0	112.6

Source: Centers for Disease Control and Prevention, 2012–2016

*Hispanic/Latino death rates are not available at the county level due to low counts.



Source: Centers for Disease Control and Prevention, 2007–2016

Chronic Lower Respiratory Disease

Chronic lower respiratory disease (CLRD) is the third most common cause of death in the nation. CLRD encompasses such diseases as chronic obstructive pulmonary disorder (COPD), emphysema and asthma, all of which contribute to lower quality of life and increased risk of early death.

The rate of death from CLRD in the Central Mississippi Service Area is generally commensurate with national levels — except in Attala, Leake, Madison and Rankin counties where it is higher. When stratified by race, the rate of CLRD death among Blacks/African Americans is similar to or lower than state and national rates, or too few to calculate reliable rates. The rate of death due to CLRD among Whites is higher than the national rate in all counties. In Leake County, the rate of death among Whites is nearly twice the national rate.

The rate of death due to CLRD among Whites is higher in all counties compared to the nation; in Leake County it is nearly twice the national rate.

**Chronic Lower Respiratory Disease (CLRD) Death Rates
per Age-Adjusted 100,000 by Race
(Red = Higher Than the Nation)**

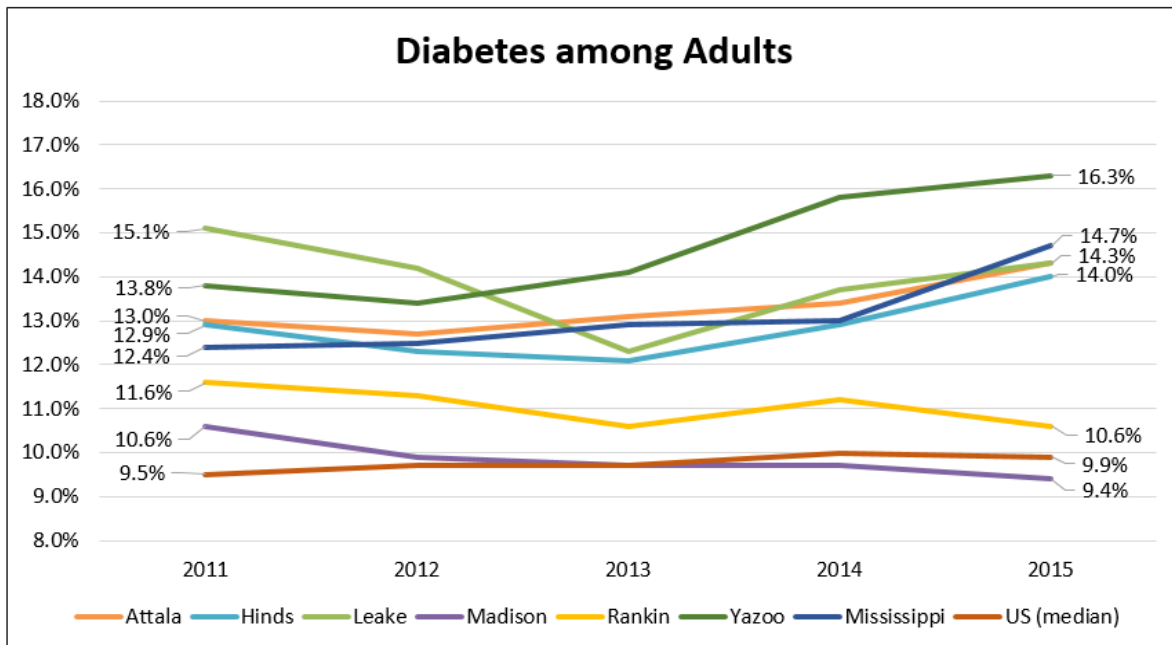
	Total Population	White, Non-Hispanic Death Rate	Black/African American, Non-Hispanic Death Rate	Hispanic/Latino Death Rate
Attala County	51.9	62.0	NA*	NA*
Hinds County	36.3	48.8	24.5	NA*
Leake County	68.6	83.1	NA*	NA*
Madison County	57.6	63.1	39.5	NA*
Rankin County	47.4	52.2	17.6	NA*
Yazoo County	42.4	54.3	NA*	NA*
Mississippi	56.1	65.0	34.0	NA*
United States	41.2	46.3	29.7	17.8

Source: Centers for Disease Control and Prevention, 2012–2016
*Data are not available due to low counts.

Diabetes

According to the American Diabetes Association, diabetes and prediabetes affect more than 110 million Americans and cost the nation \$322 billion per year. Type 2 diabetes, the most common form, is preventable, and if diagnosed early, can often be reversed through improved diet and increased exercise.

Fifteen percent of Mississippi adults have been diagnosed with diabetes, higher than the national percentage of 10%. In Baptist’s Central Mississippi Service Area, Madison and Rankin counties have a similar prevalence of diabetes as the nation, but all other counties are similar to the state. Yazoo County has the highest prevalence of adult diabetes at 16%.



Source: Centers for Disease Control and Prevention, 2011–2015
 The rate of death due to diabetes in all six counties exceeds the national rate. In Yazoo County, the rate of death is five times greater than the national rate. When stratified by race, the rate of death due to diabetes is higher than the national rate for Whites in all counties, and is higher than the national rate for Blacks/African Americans in all counties except Hinds.

The diabetes death rates in all six counties exceed the national rate. In Yazoo County, the rate is five times greater.

**Diabetes Death Rates per Age-Adjusted 100,000 by Race
 (Red = Higher Than the Nation)**

	Total Population	White, Non-Hispanic Death Rate	Black/African American, Non-Hispanic Death Rate	Hispanic/Latino Death Rate
Attala County	44.4	29.1	79.6	NA*
Hinds County	29.9	19.7	38.5	NA*
Leake County	25.9	NA*	NA*	NA*
Madison County	36.7	26.1	65.5	NA*
Rankin County	21.7	19.1	42.6	NA*
Yazoo County	117.2	83.1	164.1	NA*
Mississippi	32.0	22.6	56.5	NA*
United States	21.1	18.6	38.6	25.6

Source: Centers for Disease Control and Prevention, 2012–2016

*Data are reported as available due to low counts. Hispanic/Latino death rates are not available at the county level due to low counts.

Chronic Conditions Among Seniors

According to the CDC, “Among Medicare fee-for-service beneficiaries, people with multiple chronic conditions account for 93% of total Medicare spending.” The tables below indicate the percentages of Medicare beneficiaries within the Central Mississippi Service Area who have been diagnosed with specific chronic conditions, followed by the average number of chronic disease diagnosis by county.

Seniors in all counties report a lower prevalence of high cholesterol and ischemic heart disease (coronary artery disease) than the state and nation. Overall, prevalence of cancer is also slightly lower in all counties except Attala. It should be noted that higher cancer mortality for the overall population may contribute to lower prevalence of cancer within the senior population.

Medicare beneficiaries in the Central Mississippi Service Area is more likely than the typical American to be diagnosed with Alzheimer’s disease.

Alzheimer’s disease presents the greatest disparity within the service area, with all counties reporting higher prevalence among seniors than the nation. Arthritis, hypertension and stroke are also more prevalent in the service area when compared to national averages. Medicare beneficiaries in Hinds and Madison counties have the fewest diagnosed chronic diseases listed below. Madison County data are consistent with related health and socioeconomic data, while

Hinds County population data suggest that access to care, including screening and treatment rates, may be a factor in recording diagnosis.

**Chronic Conditions Among Medicare Beneficiaries 65 Years Old or Older
(Red = Higher Than the Nation; Green = Lower Than the Nation)**

	Attala County	Hinds County	Leake County	Madison County	Rankin County	Yazoo County	MS	US
Alzheimer's	15.3%	13.7%	14.0%	13.3%	11.5%	12.3%	12.6%	11.3%
Arthritis	33.4%	30.9%	38.5%	33.6%	32.2%	35.0%	34.4%	31.3%
Asthma	7.1%	6.1%	7.6%	5.8%	7.1%	8.7%	7.3%	7.6%
Cancer	8.4%	7.9%	7.0%	8.0%	7.8%	7.8%	8.1%	8.9%
COPD	12.1%	9.0%	12.2%	9.1%	11.8%	11.1%	12.3%	11.2%
Depression	13.2%	13.3%	14.7%	14.0%	15.6%	11.8%	13.7%	14.1%
Diabetes	31.0%	28.0%	30.1%	23.0%	25.9%	28.9%	29.6%	26.8%
Heart Failure	16.8%	12.8%	15.9%	12.2%	12.7%	18.7%	16.2%	14.3%
High Cholesterol	39.8%	38.3%	31.7%	38.8%	41.9%	30.5%	43.8%	47.8%
Hypertension	66.4%	61.7%	63.3%	57.2%	61.8%	62.4%	64.6%	58.1%
Ischemic Heart Disease	27.1%	22.7%	27.3%	25.4%	26.0%	25.8%	30.0%	28.6%
Stroke	4.4%	4.9%	4.6%	4.6%	4.4%	3.9%	4.4%	4.2%

Source: Centers for Medicare & Medicaid Services, 2015

**Number of Chronic Conditions Among Medicare Beneficiaries 65 Years Old or Older
(Green = Lower Than the State and the Nation)**

	Attala County	Hinds County	Leake County	Madison County	Rankin County	Yazoo County	MS	US
0 to 1	30.7%	34.7%	34.0%	37.0%	33.4%	36.2%	29.9%	32.3%
2 to 3	30.7%	31.0%	29.3%	29.8%	31.4%	30.2%	30.9%	30.0%
4 to 5	21.1%	20.0%	19.7%	19.1%	20.4%	18.9%	22.5%	21.6%
6 or more	17.5%	14.3%	17.1%	14.0%	14.8%	14.7%	16.8%	16.2%

Source: Centers for Medicare & Medicaid Services, 2015

Regular screenings are essential for the early detection and management of chronic conditions. The following table lists diabetes and mammogram screening rates among Medicare enrollees.

Seniors in Leake County are least likely to receive recommended screenings for diabetes or breast cancer.

Screening rates for diabetes and breast cancer among Medicare beneficiaries in Attala, Hinds, Madison and Rankin counties are consistent with Mississippi and the nation.

Medicare enrollees in Yazoo County are equally likely to be screened for diabetes, but less likely to have a mammogram to detect breast cancer. Leake County seniors are less likely to be screened for diabetes or receive a mammogram than their counterparts in the other Central Mississippi Service Area counties, the state or the nation.

**Chronic Disease Screenings Among Medicare Enrollees
(Red = Lower than the Nation)**

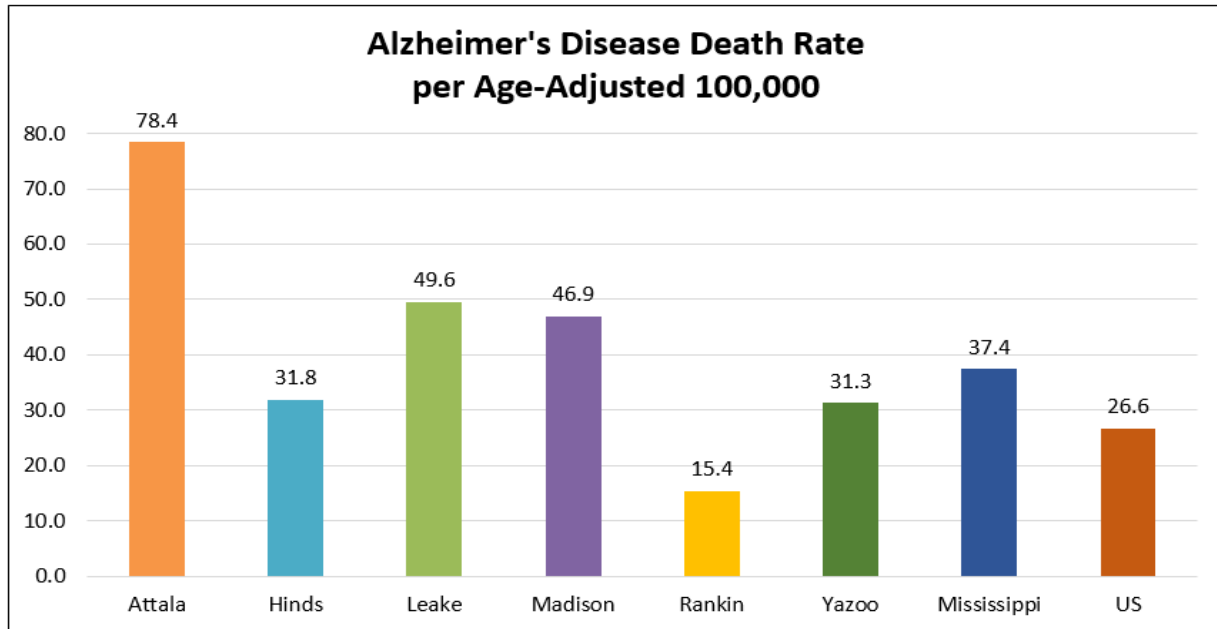
	Diabetes Screening (65–75 Years) Annual HbA1c Test	Breast Cancer Screening (Females 67–69 Years) Mammogram in Past Two Years
Attala County	86.1%	60.0%
Hinds County	86.6%	61.0%
Leake County	78.5%	55.9%
Madison County	84.2%	66.9%
Rankin County	86.5%	65.4%
Yazoo County	85.0%	50.4%
Mississippi	84.1%	57.3%
United States	85.0%	63.0%

Source: Dartmouth Atlas of Health Care, 2014

Alzheimer's disease is a type of dementia that causes problems with memory, thinking and behavior. Symptoms usually develop slowly and get worse over time, becoming severe enough to interfere with daily tasks. The disease weakens the body's defense mechanisms, increasing susceptibility to catastrophic infection and other causes of death related to frailty. Alzheimer's is the sixth leading cause of death in the United States. While there is no cure, treatment is focused on helping people maintain mental function, manage behavioral symptoms and slow or delay the symptoms of the disease.

The Alzheimer's death rate in Attala, Leake and Madison counties is nearly double to triple the national rate.

Mississippi as a whole has a higher incidence of Alzheimer's disease than the nation. With approximately 11–15 percent of Medicare beneficiaries diagnosed with Alzheimer's, most counties in the Central Mississippi Service Area are consistent with or trend higher than the state average for incidence of the disease.



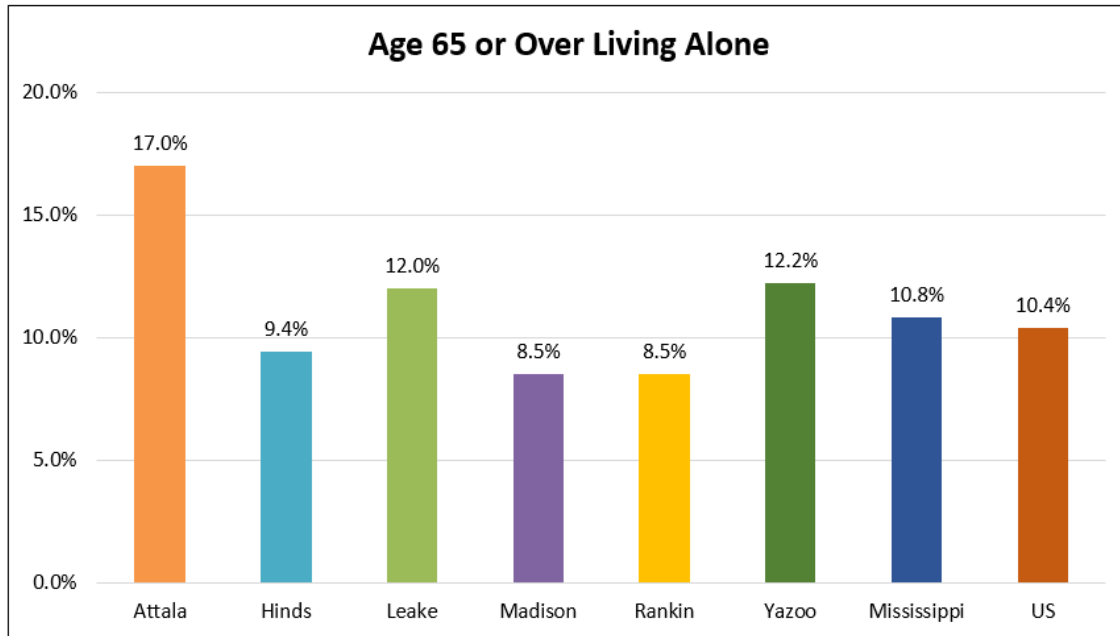
Source: Centers for Disease Control and Prevention, 2012–2016

Categorizations for cause of death can vary among reporting entities. Given the propensity for Alzheimer’s to increase risk factors for other diseases, cause of death for individuals with the disease is not always attributed solely to Alzheimer’s. Additional exploration of procedures for categorization of cause of death may further illuminate trends.

Alzheimer’s disease is more prevalent in Mississippi and the Central Mississippi Service Area than the United States, and the death rate is two to three times higher in some counties.

Comparing these data, death rates due to Alzheimer’s disease are lowest in Rankin County. The death rates in Leake and Madison counties are nearly double the national rate, while Attala County is nearly triple the national rate.

As seniors age, they are at risk for isolation due to physical limitations and decreasing social circles. One indicator of isolation is the percentage of seniors 65 years old or older who live alone. Seniors living in Hinds, Madison and Rankin counties are less likely to live alone than seniors in Mississippi or the nation in general. Seniors living in Leake and Yazoo counties are slightly more likely to live alone than other seniors in the state or nation, while almost 1 in 5 seniors in Attala County are likely to live alone.



Source: American Community Survey, 2012–2016

Behavioral Health

Mental Health

Mental and behavioral health disorders include a wide range of conditions, including disorders from psychoactive substance use, anxiety disorders, schizophrenia and other delusional disorders and mood or personality disorders. These disorders are not induced by alcohol and other psychoactive substances, but they may result from substance abuse.

Overall, residents across the Central Mississippi Service Area report more poor mental health days per month, which is in line with the Mississippi state average and higher than the national average. Rankin and Madison counties are the exception with fewer poor mental health days per month than the state or national averages.

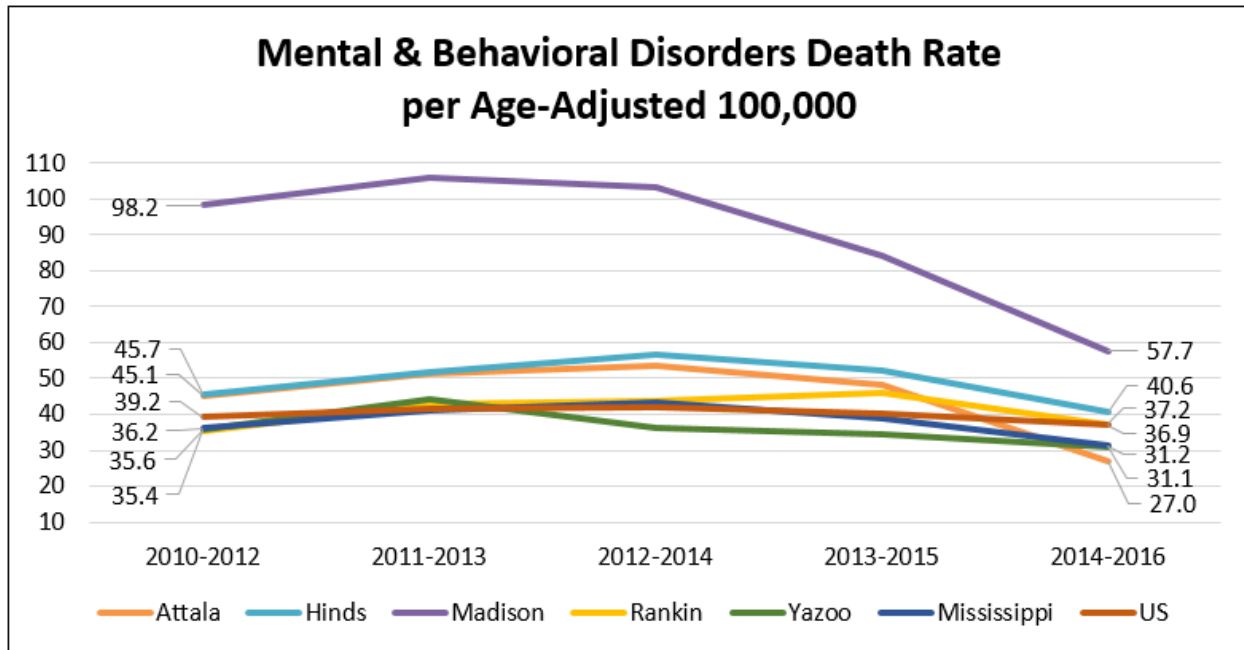
Conversely, the Mississippi state average for death from mental and behavioral disorders is lower than the nation. However, the Central Mississippi Service Area counties more closely align with the nation on this measure — with all reported counties exceeding the state average, except Yazoo County. Madison County presents the greatest concern with a death rate of 78 per 100,000 people; nearly twice that of the nation (39.3) and two and a half times the state rate (36.2). Hinds County death rates are also elevated at 42 per 100,000.

Living with behavioral health conditions can reduce an individual’s life expectancy, particularly if they have co-occurring chronic conditions, such as heart disease or diabetes, or engage in such risky health behaviors as tobacco, alcohol or drug use. Behavioral health disorders can reduce a patient’s ability to effectively manage other chronic diseases, increasing disease complications and the need for medical care.

**Mental Health Measures (5-Year Trends)
(Red = Higher Than the State or the Nation)**

County	Suicide Deaths	Suicide Rate per Age-Adjusted 100,000	Mental & Behavioral Disorders Deaths	Mental & Behavioral Disorders Death Rate per Age-Adjusted 100,000	30-Day Average — Poor Mental Health Days
Attala County	12	NA*	56	38.4	4.1
Hinds County	106	8.8	540	46.2	4.2
Leake County	17	NA*	14	NA*	4.5
Madison County	61	11.9	380	78.0	3.5
Rankin County	106	14.1	270	39.0	3.4
Yazoo County	12	NA*	54	36.2	4.4
Mississippi	1,992	13.2	5,697	36.2	4.4
United States	213,733	13.0	724,640	39.3	3.8
HP 2020	NA**	10.2	NA**	NA**	NA**

Source: Centers for Disease Control and Prevention, 2012–2016; Healthy People 2020
 *Rates are not available due to low counts. **Healthy People 2020 data is not available for all measures.

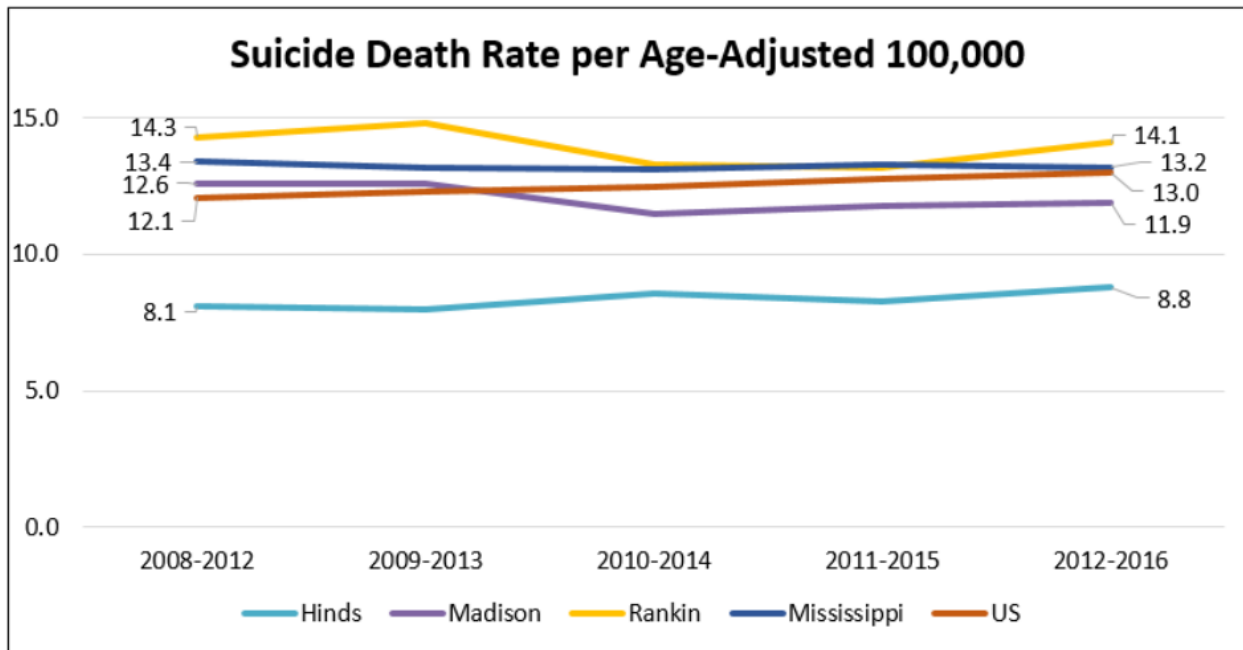


Source: Centers for Disease Control and Prevention, 2010–2012 to 2014–2016
 Note: Mental and behavioral disorder deaths are trended as three-year aggregates to depict a more current state of disease.

A myriad of barriers — including stigma, availability of providers, ability to afford or otherwise access care, among other individual and social constraints — can keep individuals from getting help with behavioral health needs.

Suicide is far from the top cause of death for those struggling with a behavioral health condition, but it is an important measure of community behavioral health and well-being. Mississippi is in line with the national average for the suicide rate, but both the state (13.2) and national (13.0) rates exceed the Healthy People 2020 goal of 10.2.

Rankin County has the highest rate of suicide (14.1) in the Central Mississippi Service Area and exceeds benchmarks. Madison County is the next highest (11.9) and is lower than the state and nation, but does not meet the Healthy People 2020 goal. Hinds is the only other county with reportable suicide data; the county suicide rate is lower than state and national rates and meets the Healthy People 2020 with 8.8 deaths per 100,000. There has been little fluctuation in all rates since 2008.



Source: Centers for Disease Control and Prevention, 2008–2012 to 2012–2016
 Attala, Leake and Yazoo counties are not trended due to data availability.
 Suicide deaths are trended as five-year aggregates due to low death counts.

Substance Use Disorder

Excessive drinking includes heavy drinking (two or more drinks per day for men; one or more drinks per day for women) and binge drinking (five or more drinks on one occasion for men; four or more drinks on one occasion for women). Mississippi tends to have fewer adults reporting excessive drinking than the nation, and the same holds true for adults within the Central Mississippi Service Area. Madison and Rankin counties report the highest percentage of adults who drink excessively, surpassing the state percentage. Madison County also has the highest percentage of driving under the influence (DUI)-related deaths in the service area; the percentage exceeds the state percentage.

Mississippi and service area residents report less risk factors and better outcomes for alcohol and drug use compared to national measures.

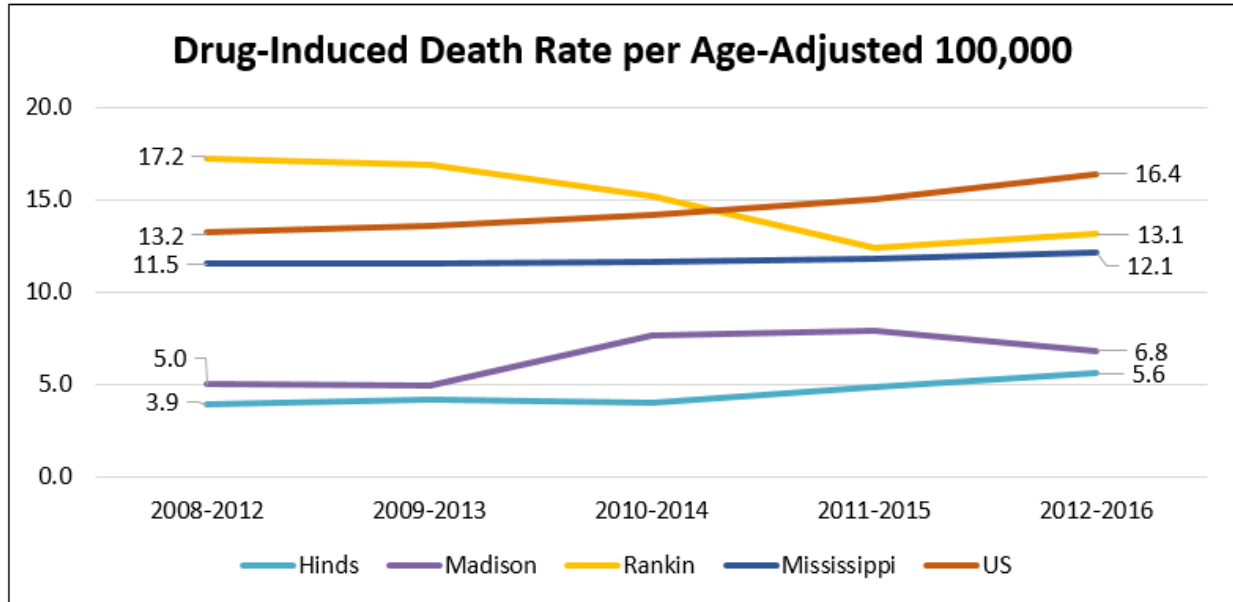
Drug-induced deaths include all deaths for which drugs are the underlying cause, including drug overdoses and deaths from medical conditions resulting from chronic drug use. Where the data are available, the drug-induced death rate per 100,000 is lower than the national rate in all counties in the Central Mississippi Service Area. Death rates for the state and service areas have been stable or decreasing, counter to the national trend. While having an overall decrease in the past five years, Rankin County’s rate for drug-induced deaths is the highest in the Central Mississippi Service Area and exceeds the state’s rate.

Substance Use Disorder Measures

	Excessive Drinking (Adults)	Percent of Driving Deaths From DUI	Drug-Induced Deaths	Drug-Induced Death Rate per Age-Adjusted 100,000
Attala County	12.2%	7.7%	NA*	NA*
Hinds County	12.4%	18.2%	70	5.6
Leake County	12.2%	25.0%	15	NA*
Madison County	15.4%	29.8%	34	6.8
Rankin County	15.7%	22.9%	101	13.1
Yazoo County	12.3%	25.7%	17	NA*
Mississippi	13.7%	22.7%	1,759	12.1
United States	18.0%	29.0%	262,672	16.4

Source: Centers for Disease Control and Prevention, 2012–2016 & 2016; National Highway Traffic Safety Administration, 2012–2016

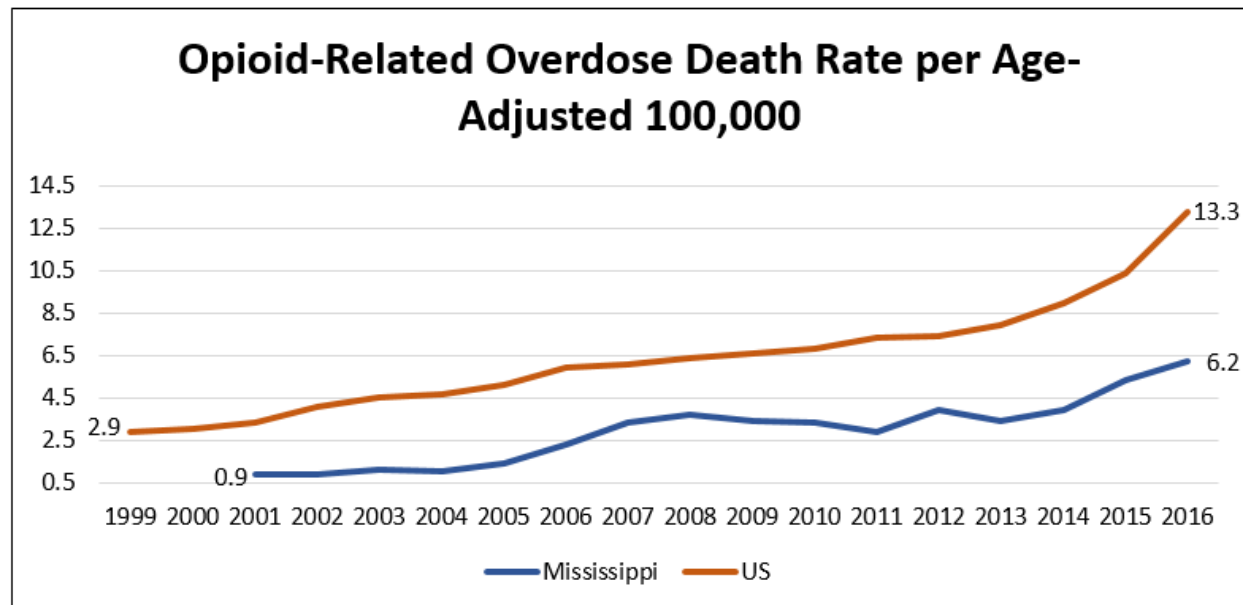
*Data are not available due to low counts.



Source: Centers for Disease Control and Prevention, 2008–2012 to 2012–2016
 *Data trended by county as available.

Opioids

A significant contributor to the number of drug-induced deaths across the nation and within the Central Mississippi Service Area is opioid overdose. According to the National Institute on Drug Abuse, in 2016, there were 180 opioid-related overdose deaths in Mississippi — a rate of 6.2 deaths per 100,000 persons compared to the national death rate of 13.3. Between 2013 and 2016, the number of deaths in Mississippi from heroin overdose increased from 10 to 33; deaths from synthetic opioid overdose increased from 24 to 45; and deaths from prescription opioid overdose increased from 66 to 103.



Source: Centers for Disease Control and Prevention, 1999–2016

Medication-assisted treatment (MAT) has been found to be an effective treatment for people struggling with opioid addiction. MAT uses FDA-approved medications, including buprenorphine (Suboxone[®], Subutex[®]), methadone and extended release naltrexone (Vivitrol[®]), in combination with counseling and behavioral therapies to provide a “whole-patient” approach to the treatment of substance use disorders. There are 24 facilities in Mississippi providing some form of MAT; six of these facilities are within the Central Mississippi Service Area as shown below.

Opioid Treatment Services

	Facilities Providing Medication-Assisted Treatment
Attala County	0
Hinds County	2
Leake County	0
Madison County	2
Rankin County	2
Yazoo County	0
Mississippi	24
United States	5,470

Source: American Foundation for AIDS Research, 2018

Neonatal Abstinence Syndrome (NAS)

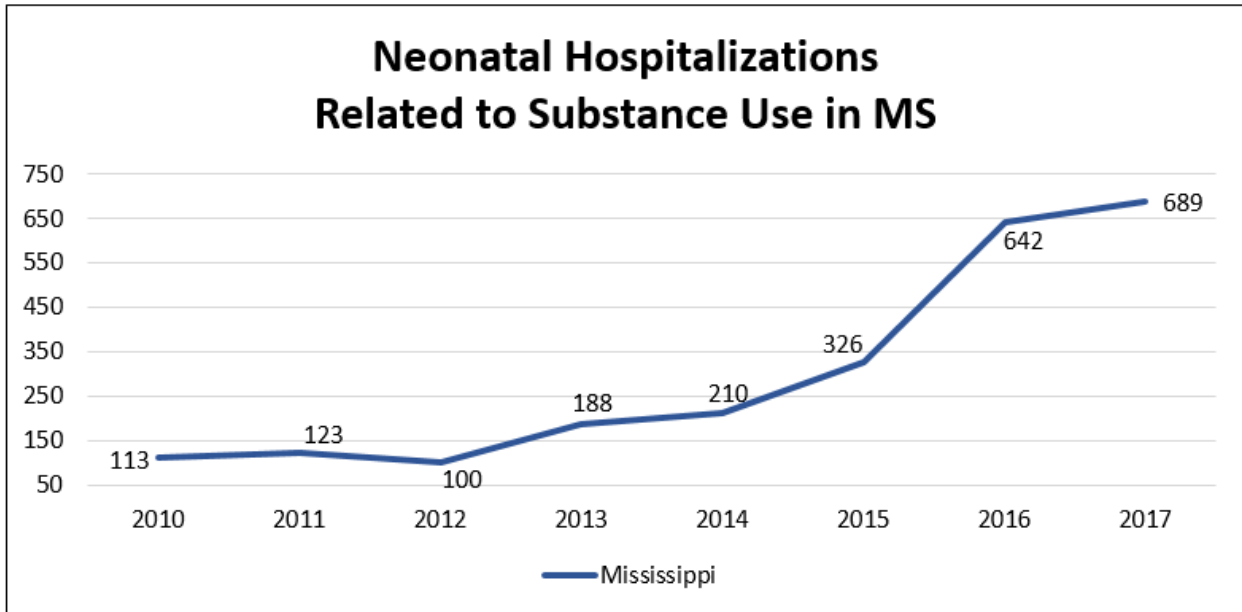
Neonatal abstinence syndrome (NAS) is a group of conditions caused when a baby withdraws from certain drugs he or she has been exposed to in the womb. Although most commonly associated with opioid exposure, other substances can also cause NAS, including antidepressants and benzodiazepines. In addition to the specific difficulties of withdrawal after birth, problems in the baby may include premature birth, seizures, respiratory distress, birth defects, poor growth and other developmental problems.

Due to a variety of challenges in screening infants for NAS, data is not consistently collected among health providers or state entities. Some states have mandated NAS reporting, yet data is likely underreported given the aforementioned challenges.

In May 2019, the Mississippi Department of Health published the Neonatal Hospitalizations Related to Substance Use in Mississippi: Surveillance Report, 2010–2017. The Department of Health identified the following key findings within the report:

- > In Mississippi, neonatal hospital stays related to substance use spiked from 113 in 2010 to 689 in 2017.
- > During 2016–2017, neonatal stays associated with substance use were nearly three times as costly as all other neonatal stays (\$32,451 versus \$12,555). Medicaid was responsible for 77.0% of total hospital charges. Hospital charges increased by 16.6%, from \$19,936,930 in 2016 to \$23,255,948 in 2017.

- > During 2016–2017, comorbidities were highly prevalent among infant stays related to substance exposure — 26.7% had coexisting respiratory conditions, 26.7% had a coexisting low birth weight and 13.9% had a coexisting congenital disease.
- > During 2016–2017, several clusters of high hospitalization rates for infants affected by substance use were identified — the northeastern corner of the state, the Gulf Coast area and the Pine Belt region of southeast Mississippi.

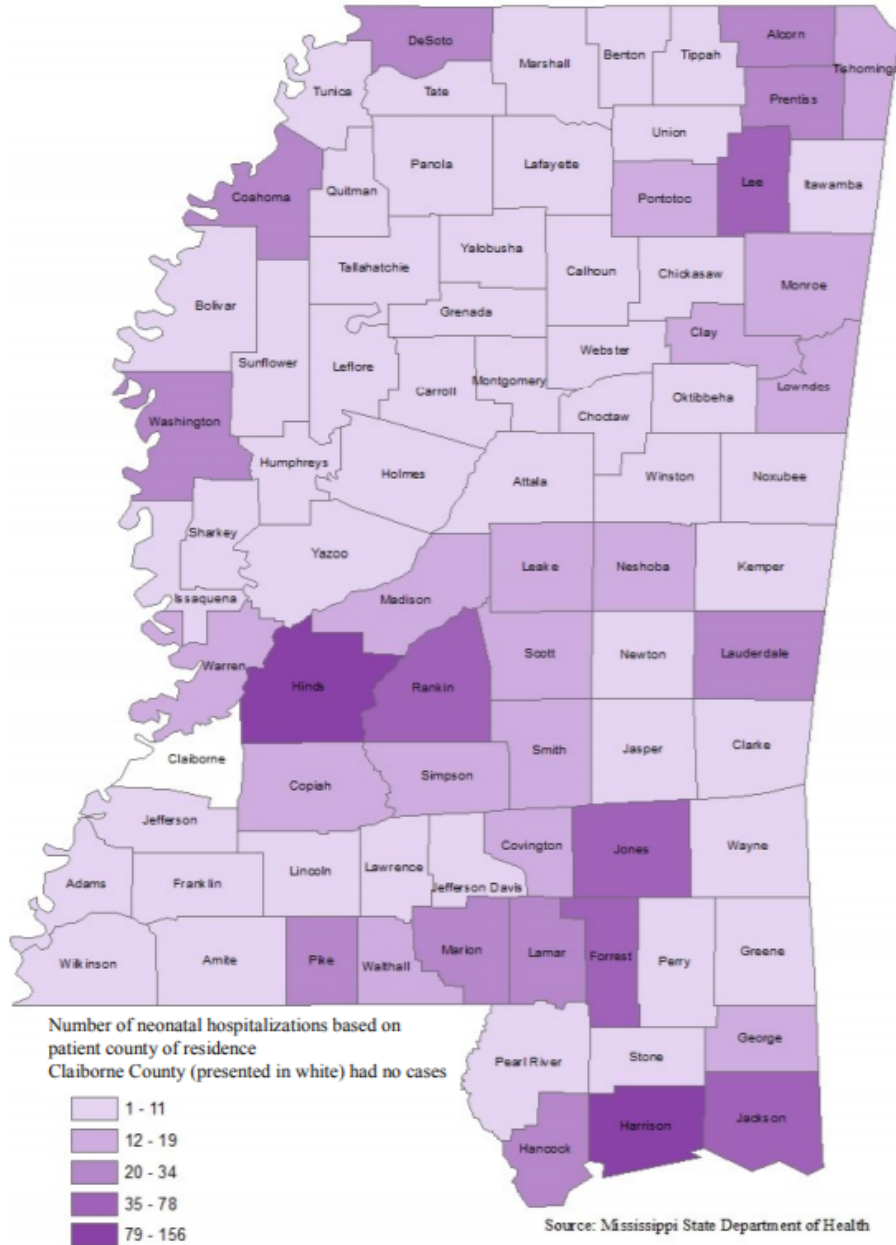


Source: Mississippi Department of Health, 2010–2017

Note: The increase in the number of infant hospitalizations due to substance exposure in 2015 may be attributed to the implementation of new diagnostic codes that allowed for coding of non-specific drug abuse versus specific coding for only three different substances: narcotics, hallucinogens and cocaine.

The statewide rate for infant hospitalizations related to substance use was 16.5 in 2016 and 17.9 in 2017 per 1,000 live births, representing an 8.5% increase. Rates reflect Mississippi residents only and are based on patient’s county of residence. The following map shows the number of neonatal hospitalizations related to substance use by county.

**Neonatal Hospitalizations Related to Substance Use in MS,
Combined Data for 2016–2017**



The table below shows the number of neonatal hospitalizations related to substance use and the rate per 1,000 live births for Mississippi counties that reported 20 or more cases. Of the 17 Mississippi counties that reported 20 or more cases, Hinds County ranked No. 11 and Rankin County ranked No. 16 based on hospitalization rates per 1,000 live births.

**Neonatal Hospitalizations Related to Substance Use
for Counties With More Than 20 Cases**

	Number of Neonatal Hospitalizations Related to Substance Use	Rate per 1,000 Live Births
Alcorn	34	39.9
Prentiss	25	39.8
Marion	22	37.1
Lee	78	32.8
Coahoma	23	31.0
Pike	33	30.0
Harrison	156	28.5
Hancock	22	24.1
Forrest	43	21.5
Jones	39	21.3
Hinds	132	21.1
Lamar	32	19.8
Washington	21	16.2
Lauderdale	29	14.8
Jackson	40	12.1
Rankin	38	10.7
DeSoto	25	5.8

Source: Mississippi Department of Health, 2016–2017

Maternal and Infant Health

Total Births

Birth rates among the Central Mississippi Service Area counties are consistent with the state birth rate. Attala, Hinds and Leake counties report the highest birth rates despite also reporting the highest projected population decline over the next five years. The population decline is likely impacted by higher premature death rates and/or individuals leaving communities due to socioeconomic drivers. Consistent with the racial and ethnic makeup, Hinds and Yazoo counties have the highest percentage of births to non-White mothers. In 2016, 70–75 percent of births in both counties were to Black/African American, non-Hispanic mothers.

Birth rates in Attala, Hinds, Leake and Yazoo counties are consistent with the state birth rate despite projected population declines by 2023.

2016 Births by Race

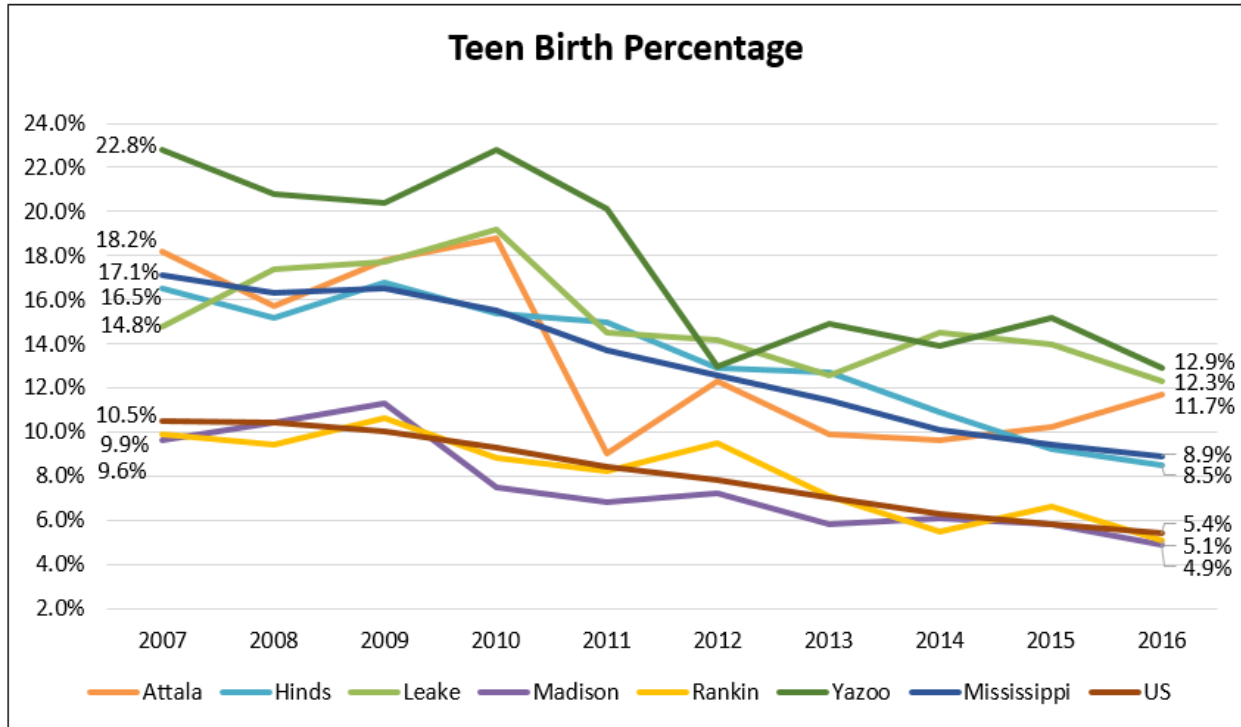
	Total Births	Birth Rate per 1,000	Percent of Total Births to White, Non-Hispanic Mothers	Percent of Total Births to Black/African American, Non-Hispanic Mothers	Percent of Total Births to Hispanic Mothers
Attala County	247	13.0	47.4%	51.8%	0.8%
Hinds County	3,121	12.9	20.6%	75.3%	2.5%
Leake County	309	13.7	35.3%	44.7%	10.4%
Madison County	1,312	12.5	49.8%	38.6%	6.4%
Rankin County	1,805	12.0	73.0%	20.7%	3.5%
Yazoo County	318	11.7	28.3%	69.5%	0.6%
Mississippi	37,928	12.7	51.2%	41.8%	4.4%

Source: Mississippi Department of Health, 2016

Births to Teens

Nationally, the percent of live births to teens under 19 years old has been decreasing since 2007, which is generally reflected in the Central Mississippi Service Area. The percent of births to teens in Rankin and Madison counties is similar to the national percentages over time. While still higher than the national average, the percent of births to teens in Hinds County is similar to the state percentages over time. Attala, Leake and Yazoo counties have experienced greater variability in the percentage of births to teens, yet the proportion of births to teens has remained high, more than double the national percent.

Births to teens are decreasing across the service area, but Attala, Leake and Yazoo counties births are double the national average.



Source: Centers for Disease Control and Prevention, 2007–2016; Mississippi Department of Health, 2007–2016

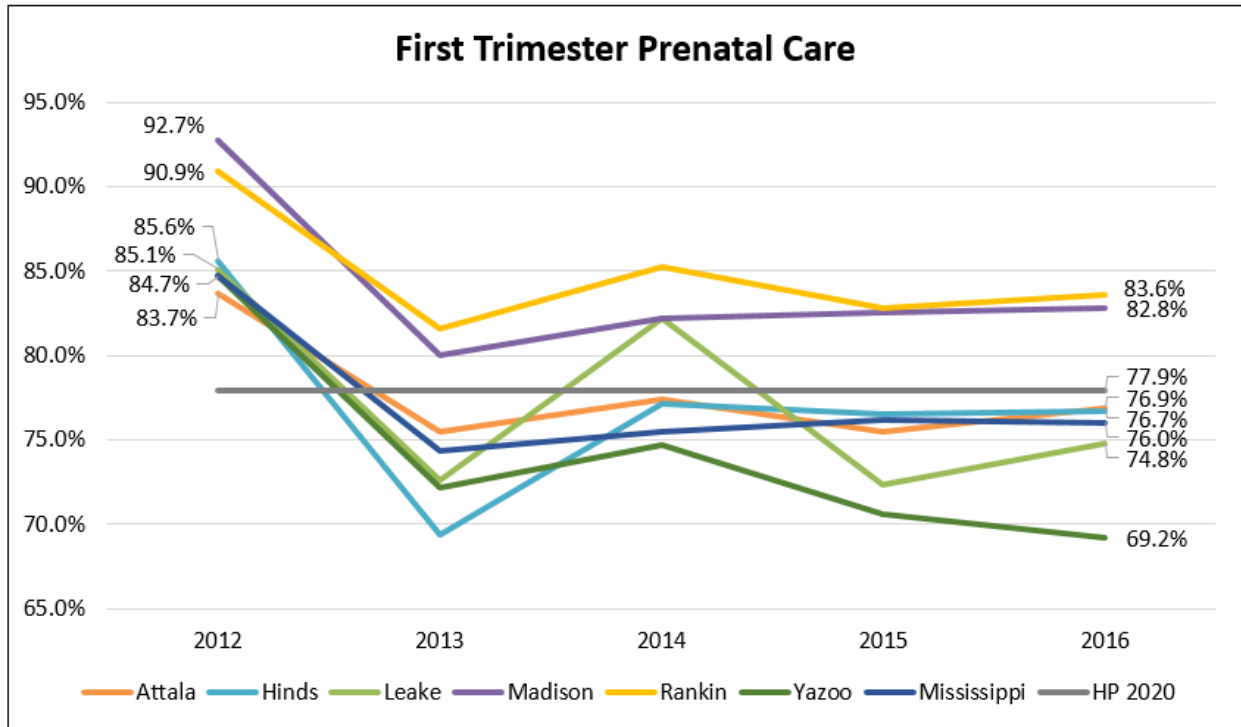
Prenatal Care

Engaging in prenatal care within the first trimester of pregnancy increases the chances that a mother will have a healthy pregnancy and a healthy birth. Entry into prenatal care after the first trimester can suggest barriers to care, such as lack of information, lack of access to health care, transportation challenges or behavioral health needs.

Healthy People 2020 sets a target of 77.9% of all pregnant women engaging in prenatal care in the first trimester of pregnancy. Both Madison and Rankin counties meet this target. Attala, Hinds and Leake counties have not yet met the Healthy People 2020 target, but are showing upward trends since 2015. Conversely, Yazoo County is trending downward.

Only Madison and Rankin counties meet the Healthy People 2020 target for first trimester prenatal care.

Note: In 2013, the Mississippi Department of Health started using the clinical estimate of gestation, instead of gestational age based upon last menstrual period, which was used in previous years. This change in methodology accounts for the decrease in women receiving first trimester prenatal care from 2012 to 2013.



Source: Mississippi Department of Health, 2012–2016; Healthy People 2020
 *Starting in 2016, all of the U.S. reported data based on the 2003 US Certificate of Live Birth, providing national indicators for timing of prenatal care. In 2016, 77.1% of mothers across the nation access first trimester prenatal care. Data prior to 2016 are not reported.

Low Birth Weight and Premature Birth

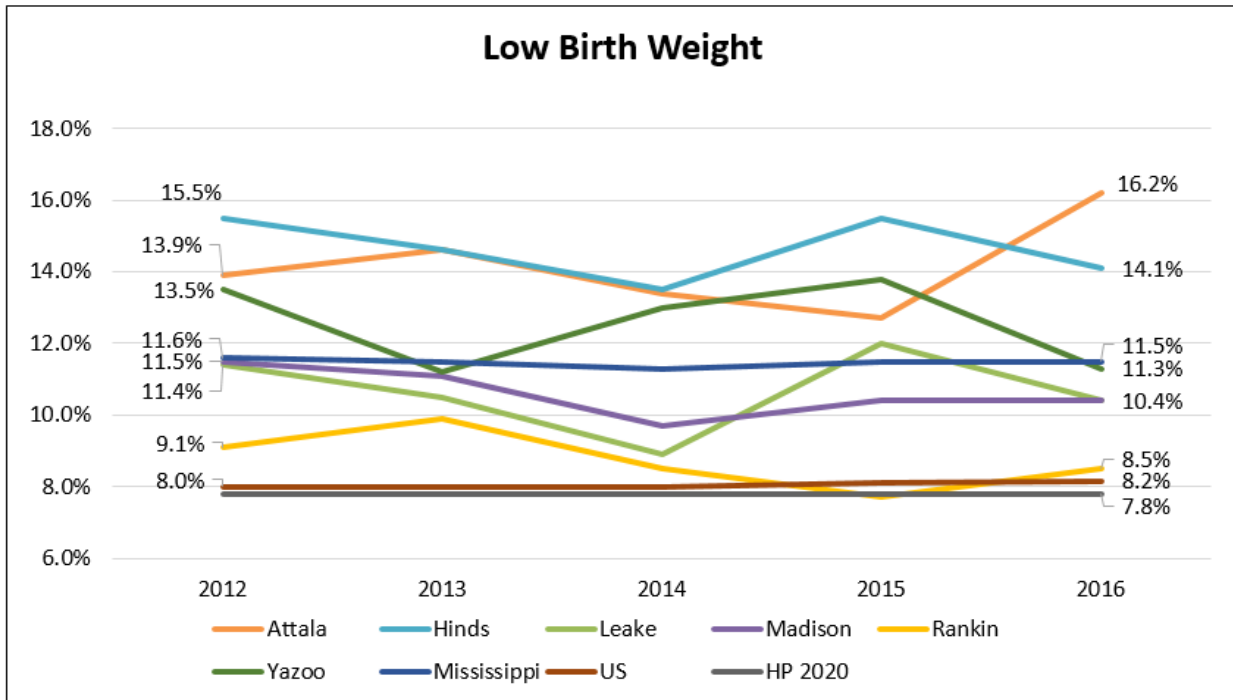
Delayed prenatal care can contribute to low birth weight and premature births. Premature birth is defined as birth before 37 weeks of pregnancy, and can contribute to infant death or disability. Low birth weight is defined as a birth weight of less than 5 pounds, 8 ounces. It is often a result of premature birth, fetal growth restrictions or birth defects. It can be associated with a variety of negative birth outcomes.

Healthy People 2020 sets a target of no more than 7.8% of all newborns born with a low birth weight. None of the counties in the Central Mississippi Service Area have met the Healthy People 2020 target, but most appear to be moving toward the target. Attala County has the highest percentage of low birth weight babies; the percentage is trending upward and it is double the national percent.

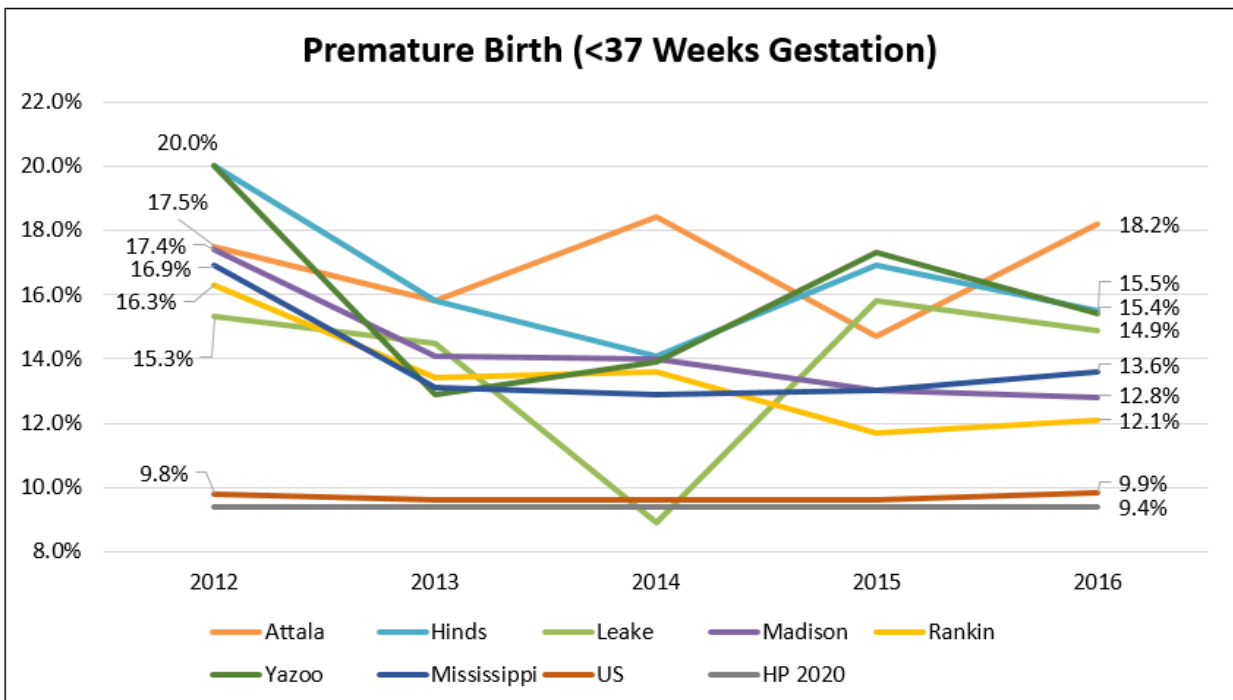
The Central Mississippi Service Area counties do not meet the Healthy People 2020 goal for low birth weight.

Healthy People 2020 sets a target for fewer than 9.4% of all births occurring before 37 weeks gestation. While there has been variability in the percent of premature births among the Central Mississippi Service Area counties, none of the counties meet this target. Attala County has the highest disparity among the region with nearly 1 in 5 babies born before 37 weeks.

Attala County has the highest percentage of low birth weight and premature births.



Source: Centers for Disease Control and Prevention, 2012–2016; Mississippi Department of Health, 2012–2016; Healthy People 2020

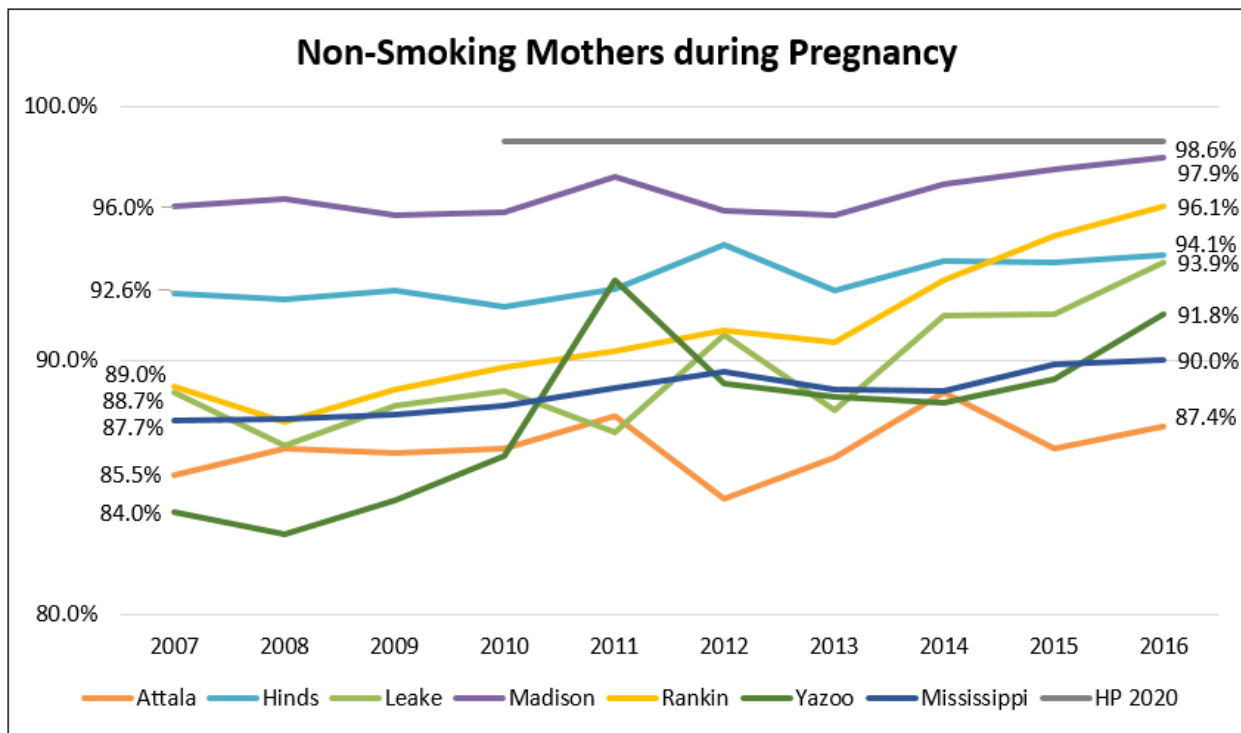


Source: Centers for Disease Control and Prevention, 2012–2016; Mississippi Department of Health, 2012–2016; Healthy People 2020

Smoking During Pregnancy

Smoking during pregnancy is associated with a variety of negative birth outcomes, including low birth weight and premature birth. Healthy People 2020 sets a target of reducing the number of pregnant women who smoke to 1.4%. None of the counties in the Central Mississippi Service Area meet the Healthy People 2020 target, but Madison County is close at 97.9%. Rankin, Hinds, Leake and Yazoo counties report fewer pregnant women who smoke than Mississippi and are moving toward the Healthy People 2020 target. Attala County reports the smallest percentage of non-smoking mothers during pregnancy, which likely contributes to its high percent of low birth weight and preterm births.

Nearly 20% of Attala County mothers report smoking during pregnancy, which likely contributes to its high percent of low birth weight and preterm births.

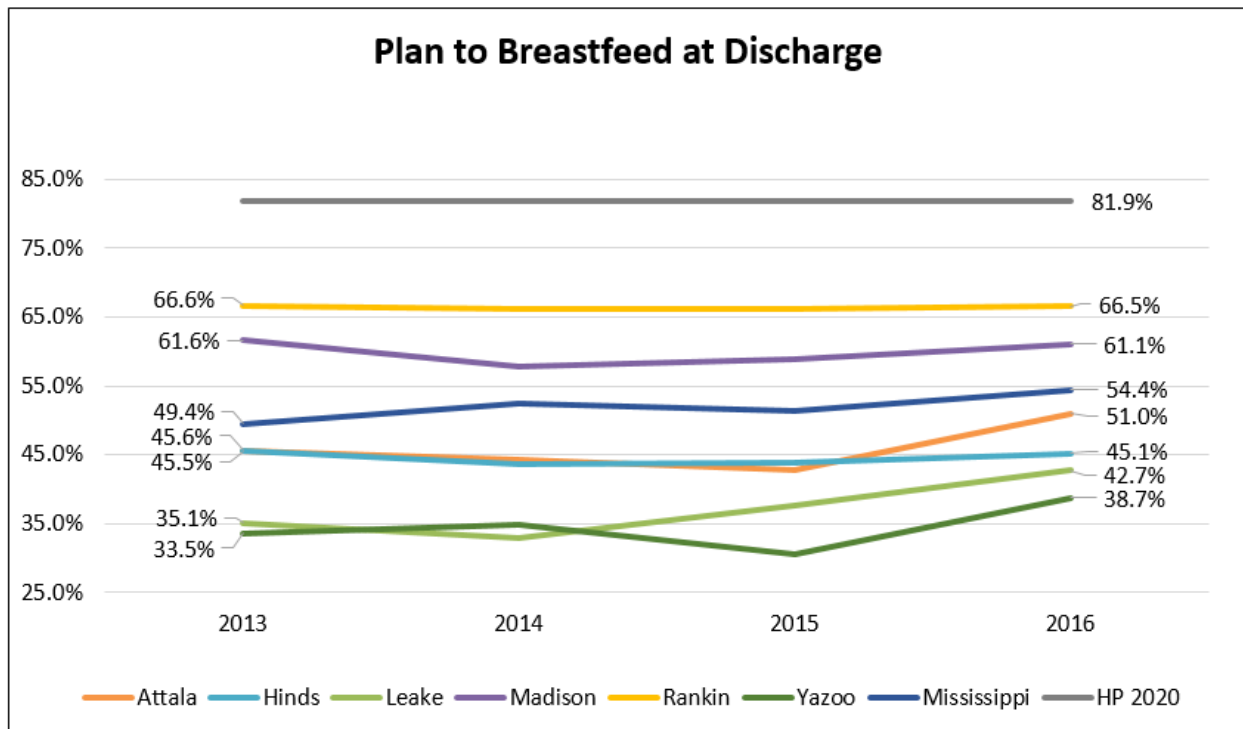


Source: Mississippi Department of Health, 2007–2016; Healthy People 2020
 *Starting in 2016, all of the US reported data based on the 2003 US Certificate of Live Birth, providing national indicators for tobacco use during pregnancy. In 2016, 92.8% of mothers across the nation reported not smoking during pregnancy. Data prior to 2016 are not reported.

Breastfeeding

Breastfeeding is recommended to ensure healthy nutritional intake for babies and to promote bonding between mother and child. Healthy People 2020 sets a target for 81.9% of all mothers to have initiated breastfeeding at the time of delivery discharge. None of the counties in the Central Mississippi Service Area have met this target. The percentage of breastfed infants remained stable in Rankin, Madison and Hinds counties, and increased in Attala, Leake and Yazoo counties.

The Central Mississippi Service Area counties are below the Healthy People 2020 goal for breastfeeding by 15 percentage points or more.



Source: Mississippi Department of Health, 2013–2016; Healthy People 2020

Maternal and Child Health Disparities

Maternal and child health indicators are presented in the tables below by race and ethnicity for each county in the Central Mississippi Service Area. The indicators show that Black/African American mothers are more likely to have premature births and low birth weight babies than White mothers, and are less likely to access prenatal care in the first trimester. White mothers, particularly in Attala County, are more likely to smoke during pregnancy. Hispanic/Latina mothers also experience disparity in accessing first trimester care, but percentages are based on low counts.

Maternal and Child Health Indicators by Race

	Attala County	Hinds County	Leake County	Madison County	Rankin County	Yazoo County
Mothers With First Trimester Care						
Total Population	76.9%	76.7%	74.8%	82.8%	83.6%	69.2%
White, Non-Hispanic	82.9%	80.4%	81.7%	92.0%	86.6%	86.7%
Black/African American, Non-Hispanic	71.9%	75.4%	71.0%	72.4%	75.1%	61.5%
Hispanic/Latina	50.0%	79.5%	68.8%	73.8%	78.1%	100.0%
Low Birth Weight Infants						
Total Population	16.2%	14.1%	10.4%	10.4%	8.5%	11.3%
White, Non-Hispanic	9.4%	6.7%	9.2%	5.8%	6.8%	5.6%
Black/African American, Non-Hispanic	22.7%	16.3%	14.5%	17.2%	14.2%	14.0%
Hispanic/Latina	0.0%	9.0%	0.0%	9.5%	6.3%	0.0%
Non-Smoking Mothers during Pregnancy						
Total Population	98.8%	94.1%	93.9%	97.9%	96.1%	91.8%
White, Non-Hispanic	83.8%	92.7%	87.2%	98.3%	95.0%	90.0%
Black/African American, Non-Hispanic	90.6%	94.2%	97.8%	96.8%	98.7%	92.3%
Hispanic/Latina	100.0%	100.0%	96.9%	100.0%	100.0%	100.0%
Premature Births						
Total Population	18.2%	15.5%	14.9%	12.8%	12.1%	15.4%
White, Non-Hispanic	15.4%	8.9%	11.9%	10.7%	11.5%	13.3%
Black/African American, Non-Hispanic	20.3%	17.5%	21.0%	15.8%	16.1%	16.3%
Hispanic/Latina	50.0%	7.7%	3.1%	11.9%	9.4%	0.0%

Source: Mississippi Department of Health, 2016

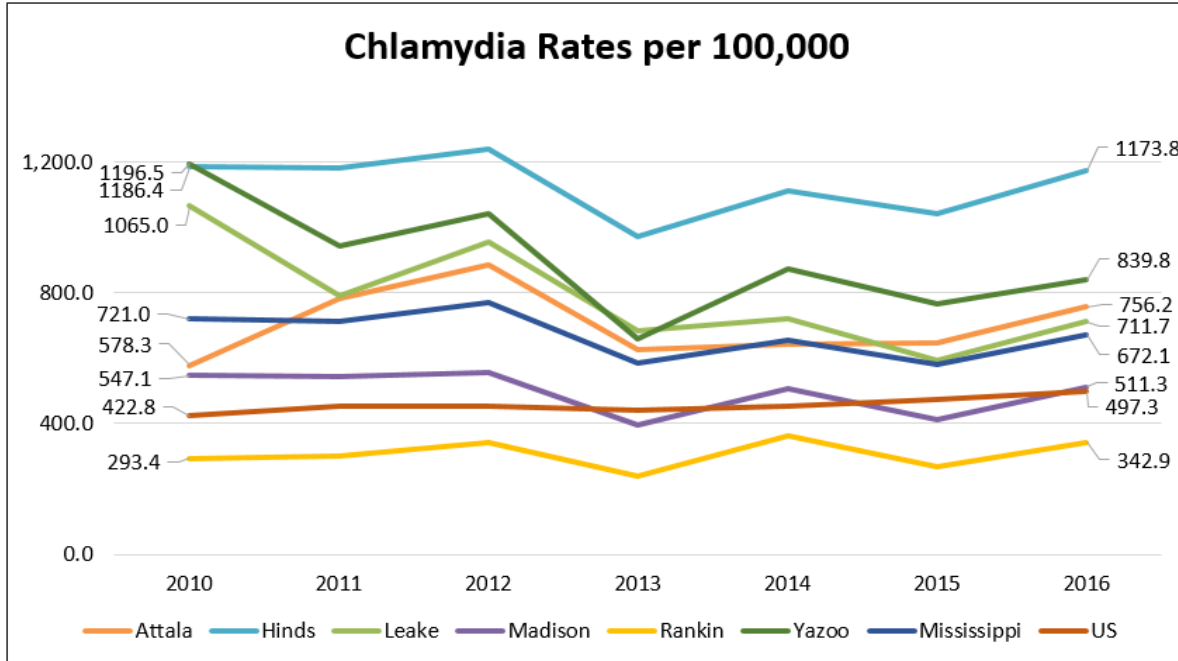
Notifiable Diseases

Sexually Transmitted Infections

Sexually transmitted infections (STIs) that require reporting to the CDC, state and local health bureaus upon detection include chlamydia, gonorrhea and HIV.

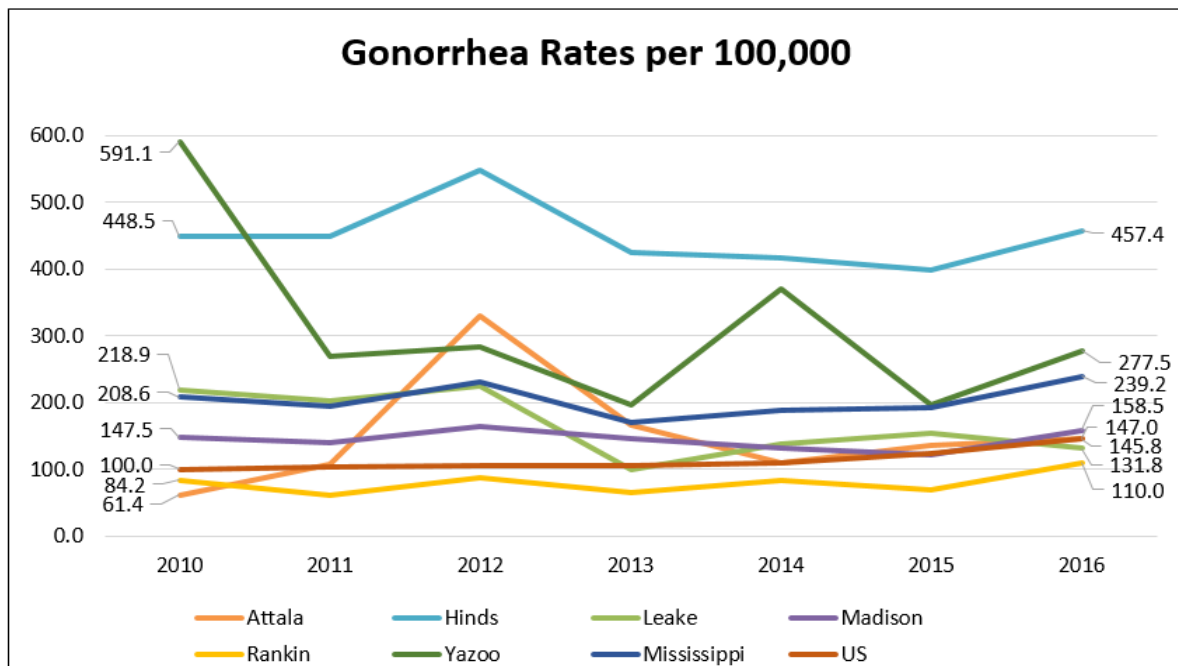
Chlamydia is both preventable and treatable, but if left untreated can lead to serious complications and decreased quality of life. The rate of chlamydia infection in Rankin and Madison counties is similar to or lower than the national rate, but appears to be increasing. In the four other counties of the Central Mississippi Service Area, the rate of chlamydia infection is far above the national rate and increasing. Of particular concern is the rate of chlamydia infection in Hinds County, which is more than double the national rate and consistent with other health disparities experienced by county residents, particularly in Jackson. Across Mississippi, chlamydia rates are highest among Blacks/African Americans and young adults 15 to 24 years old.

Chlamydia infection rates are increasing in all counties and exceed the national rate in all counties except Rankin.



Source: Centers for Disease Control and Prevention, 2010–2016

Gonorrhea is also preventable, treatable and can contribute to serious health complications and reduced quality of life. The rate of gonorrhea infection in Attala, Madison, Leake and Rankin counties is similar to the national rate. Yazoo and Hinds counties have infection rates that exceed both state and national rates. The Hinds County rate is three times greater than the national rate and growing. Similar to chlamydia infection rates, gonorrhea is most prevalent among Blacks/African Americans and young adults 15 to 24 years old.



Source: Centers for Disease Control and Prevention, 2010–2016

HIV prevalence is the number of people living with HIV infection at a given time, such as at the end of a year. According to the CDC, “At the end of 2015, an estimated 1.1 million persons aged 13 and older were living with HIV infection in the U.S., including an estimated 162,500 (15%) persons whose infections had not been diagnosed.” While there is no cure for HIV, it is preventable and treatable as a chronic disease if diagnosed early.

The rate of HIV prevalence in Attala, Leake and Madison counties is below national and state rates, and the number of cases in each county is relatively small. The rate of HIV prevalence in Rankin County is lower than the statewide rate and similar to the national rate. Yazoo and Hinds counties have higher prevalence rates of HIV than the state and nation. The prevalence rate of HIV infection in Hinds County is three times higher than the national rate.

HIV Prevalence

	Cases	Rate Per 100,000
Attala County	32	205.7
Hinds County	2,349	1,175.3
Leake County	38	204.6
Madison County	246	290.0
Rankin County	449	364.3
Yazoo County	117	518.9
Mississippi	9,236	374.0
United States	971,524	362.3

Source: Centers for Disease Control and Prevention, 2015

Secondary data findings were analyzed as part of the 2019 CHNA to inform health priorities. Secondary data is valuable for tracking and benchmarking community health status indicators, as well as for identifying emerging community needs.

Key Informant Survey Findings

Background

A Key Informant Survey was conducted with community representatives within the Central Mississippi Service Area to solicit information about health needs among residents. A total of 40 individuals responded to the survey, including health and social service providers; community and public health experts; civic, religious and social leaders; policy makers; elected officials; and others representing minority, low-income or other underserved populations. A list of the represented community organizations and the key informants' respective titles is included in Appendix B. Key informant's names are withheld for confidentiality.

Survey participants were asked a series of questions about their perceptions of community health status, health drivers, barriers to care, community infrastructure and gaps in services. A summary of findings from their responses is included below.

Summary of Findings

- > The top five community health concerns among key informants were diabetes, cancer, drug/alcohol abuse, heart disease and stroke and overweight/obesity. Diabetes was most chosen within the respondent's top five selections; drug or alcohol abuse was most selected as the top health issue with 28.5% of respondents selecting it as No. 1.
- > Respondents ranked the top five contributing factors to health needs as health habits, poverty, ability to afford health care, drug or alcohol abuse and availability of healthy food options. Participants' comments indicated that poor health habits were often driven by the high cost of "healthy options" and the lack of infrastructure to support health needs.
- > Perceptions related to availability of health services within the community generally scored between 2.00 and 3.33 out of 5.00, indicating overall disagreement or neutrality. Substance use disorder and mental health providers were considered the least available services.
- > Substance abuse services were rated as the top missing community resource by 68% of informants.
- > Community dimensions that affect social determinants of health scored between 2.32 and 2.84 out of 5.00, indicating "poor" or "average" ratings. Health care and education were seen as the strongest dimensions.
- > Approximately 60% of key informants' organizations currently collaborate with Baptist and more than 80% expressed interest in future collaboration.

Survey Participants

More than 40% of key informants indicated that they served all populations across the Central Mississippi Service Area. The most commonly served special population groups were Blacks/African Americans, children/youth, families and low-income or poor individuals. “Other” was selected by one respondent and indicated as “Rural Mississippi Residents.”

Populations Served by Key Informants

	Percent of Informants*	Number of Informants
Not Applicable (serve all populations)	42.5%	17
Black/African American	37.5%	15
Children/Youth	37.5%	15
Families	37.5%	15
Low-Income/Poor	37.5%	15
Seniors/Elderly	35.0%	14
Men	30.0%	12
Women	30.0%	12
White	25.0%	10
Disabled	17.5%	7
Uninsured/Underinsured	17.5%	7
American Indian/Alaska Native	15.0%	6
Hispanic/Latino	15.0%	6
Homeless	7.5%	3
LGBTQ+ Community	7.5%	3
Asian/Pacific Islander	5.0%	2
Immigrant/Refugee	5.0%	2
Other	2.5%	1

*Key informants were able to select multiple populations. Percentages do not add up to 100%.

Health Perceptions

Choosing from a wide-ranging list of health issues, key informants were asked to rank order what they perceived as the top five health concerns affecting the population(s) they serve. An option to “write in” any issue not included on the list was provided. The informants were then asked to similarly rank order what they saw as the top five contributing factors for their selected health concerns. The top 10 responses for each question are depicted in the tables below. The tables are rank ordered by the percentage of respondents that selected the issue within the top five health concerns. The number of informants that selected the issue as the No. 1 health concern is also shown.

Nearly three-quarters of informants chose diabetes among the top five community health concerns. Cancer, drug or alcohol abuse and heart disease and stroke were also selected as top health concerns with approximately two-thirds of informants selecting them among their top five choices. It is worth noting that 28% of informants selected drug or alcohol abuse as the No. 1 health concern in the community, the highest of any health issue. Overweight/Obesity rounded out the top five health concerns with 51% of informants selecting it as an issue.

Top 10 Health Concerns Affecting Residents

Ranking	Health Concern	Top 5 Health Concerns Selected by Informants		Top (No. 1) Health Concern Selected by Informants	
		Percent*	Count	Percent	Count
1	Diabetes	74.4%	29	15.4%	6
2	Cancer	64.1%	25	10.3%	4
3	Drug or alcohol abuse	61.5%	24	28.2%	11
4	Heart disease and stroke	61.5%	24	20.5%	8
5	Overweight/Obesity	51.3%	20	10.3%	4
6	Mental health conditions	38.5%	15	2.6%	1
7	Alzheimer's disease/dementia	28.2%	11	2.6%	1
8	Respiratory disease	17.9%	7	2.6%	1
9	Teenage pregnancy	15.4%	6	0.0%	0
10	Infectious diseases	12.8%	5	0.0%	0

*Key informants were able to select multiple health concerns. Percentages do not add up to 100%.

There is general agreement as to the top five health concerns affecting residents in the Central Mississippi Service Area as evidenced by consistency among respondents' selections for the top five health concerns and their No. 1 selections. Further, these findings correlate with the top selected contributing factors to health concerns.

Nearly three-quarters of respondents selected health habits as a top contributing factor to health concerns, with 1 in 4 naming health habits as the top contributor to health concerns among residents. Ability to afford care, drug or alcohol abuse, availability of healthy food options, inadequate or lack of health insurance, availability of healthy food options and health literacy rounded out the top five ranking (with a three-way tie for fifth place) for contributing factors to health concerns.

It is worth noting that nearly half of informants selected poverty and ability to afford health care among their top five choices, but fewer than 1 in 5 informants saw these needs as the No. 1 contributing factor to health concerns.

Social determinants of health, which include poverty, are shown to be among the strongest predictors of health outcomes. Advocacy about the relationship between social needs and health indicators may be an important step in engaging community partners in collaboration for community health improvement and policy change.

Top 10 Contributing Factors to Community Health Concerns

Ranking	Contributing Factor	Top 5 Contributors Selected by Informants		Top (No. 1) Contributor Selected by Informants	
		Percent*	Count	Percent	Count
1	Health habits (diet, physical activity)	73.7%	28	23.7%	9
2	Poverty	47.4%	18	7.9%	3
3	Ability to afford health care (doctor visits, prescriptions, deductibles, etc.)	44.7%	17	18.4%	7
4	Drug/Alcohol use	39.5%	15	15.8%	6
5	Availability of healthy food options	28.9%	11	5.3%	2
6	Inadequate or no health insurance	28.9%	11	2.6%	1
7	Health literacy (ability to understand health information)	28.9%	11	0.0%	0
8	Lack of preventive health care (screenings, annual check-ups)	26.3%	10	2.6%	1
9	Education attainment	21.1%	8	2.6%	1
10	Cultural beliefs/preferences	18.4%	7	5.3%	2

*Key informants were able to select multiple contributing factors. Percentages do not add up to 100%.

To expand upon their quantitative responses to the previous questions, informants’ were invited to provide free-form comments about the topics. Verbatim comments are included below by overarching theme.

Access to Care

- > *“There is a shortage of family care physicians in this community. Some problems exist with the ability to make appointments, and many neglect health concerns because of lack of insurance, inability to pay high prescription costs, adequate transportation to a doctor/medical facility, etc. We also need more nursing home beds that are affordable. The high cost of groceries prevent many families from obtaining healthy foods, such as fruits, vegetables, and poor food choices lead to many diseases.”*

Health Habits and Chronic Disease

- > *“People need to eat healthier. Even if they exercise but eat poorly, it will have an effect on their health in the long run. There are no healthy options to eat out in Yazoo City. People need to start cooking from scratch again. Pesticide use in agricultural areas around us contributes to high rates of cancers, especially in infants.”*
- > *“Within the city culture, overcoming immature parenting to encourage healthy living/eating lifestyles is an issue, as well as encouraging laziness. Also with diabetes among younger age groups, the issue is not following physicians, ignoring medication — the patients’ choice or perhaps they’re not fully capable of understanding the disease.”*

Mental Health and Substance Abuse

- > *“As a school counselor and LPC, I think that more options and availability are needed. Families in this area often drive to other counties to receive assistance. There are many teens who would benefit from counseling services, but their families find it difficult to obtain and pay for those services. There are also limited inpatient options for teens in Central Mississippi.”*
- > *“Our community does not have enough providers who help with mental health, nor are there enough providers in our surrounding communities that accept patients for this type of problem. There is a very high incidence of alcohol and drug abuse in our community with prescription-type drugs that are obtainable on the streets, not always obtained legally and are abused. This also falls back into the mental health system and to the legal system, where there are not enough resources to prevent this activity from happening and affecting our community.”*

Social Determinants of Health

- > *“There is a great deal of poverty in our community, and the public education system is below average. Many residents do not deal with health issues until they become serious. The emergency room is sometimes the first stop.”*
- > *“Our community is mixed. Most of the white community our church engages are middle class and have access to health care and health insurance. But the majority of the African American communities around us do not have that kind of access, mainly due to poverty. Alcohol abuse is a problem across the racial threshold.”*
- > *“The quality of our health is directly related to race, housing and transportation. Our availability of healthy food options depends on our family income and education/marketing.”*

Health Care Access

Key informants were asked to rate their agreement to statements pertaining to the health of the community and access to care using a scale of (1) “strongly disagree” to (5) “strongly agree.”

Approximately 53% of informants “disagreed” or “strongly disagreed” that their community is healthy, while 20% of informants “agreed” and none “strongly agreed” that their community is healthy. Access to adequate and timely health services is a key contributor to the health of a community.

Cultural sensitivity among providers and the number of providers accepting Medicaid received the highest mean scores among health care access indicators. However, informants had differing perspectives on the number of providers accepting Medicaid. Approximately 43% of informants “agreed” or “strongly agreed” that there were a sufficient number of providers accepting Medicaid, but one-quarter of respondents “disagreed” or “strongly disagreed.”

The number of providers treating substance use disorder and mental health conditions received the lowest mean scores. Approximately 70% of informants “disagreed” or “strongly disagreed” that there are a sufficient number of substance use disorder providers, while 63% “disagreed” or “strongly disagreed” that there are a sufficient number of mental health providers.

Access to primary care and preventive screenings are also top concerns for the service area. Approximately 68% of informants indicated that residents do not receive recommended preventive screenings and checkups, and approximately 40% indicated that residents do not have health insurance, a regular primary care provider or transportation for medical appointments or other services.

Resident Health Care Access in Descending Order by Mean Score

	Informants Strongly Disagree	Informants Disagree	Informants Neither Agree nor Disagree	Informants Agree	Informants Strongly Agree	Mean Score (1–5)
Providers in our community are culturally sensitive to race, ethnicity and cultural preferences of patients.	10.0%	7.5%	30.0%	45.0%	7.5%	3.33
There are a sufficient number of providers that accept Medicaid in our community.	5.0%	20.0%	32.5%	40.0%	2.5%	3.15
Residents in our community have available transportation for medical appointments and other services.	7.5%	30.0%	22.5%	37.5%	2.5%	2.98
Residents in our community have a regular primary care provider/doctor/practitioner that they usually go to for health care.	5.0%	37.5%	25.0%	27.5%	5.0%	2.90
Residents have health insurance.	5.0%	35.0%	35.0%	22.5%	2.5%	2.83
I would describe our community as healthy.	12.5%	40.0%	27.5%	20.0%	0.0%	2.55
Residents receive recommended preventive screenings and checkups.	0.0%	67.5%	17.5%	12.5%	2.5%	2.50
There are a sufficient number of mental health providers in our community.	35.0%	27.5%	22.5%	15.0%	0.0%	2.18
There are a sufficient number of providers treating substance use disorders in our community.	40.0%	30.0%	20.0%	10.0%	0.0%	2.00

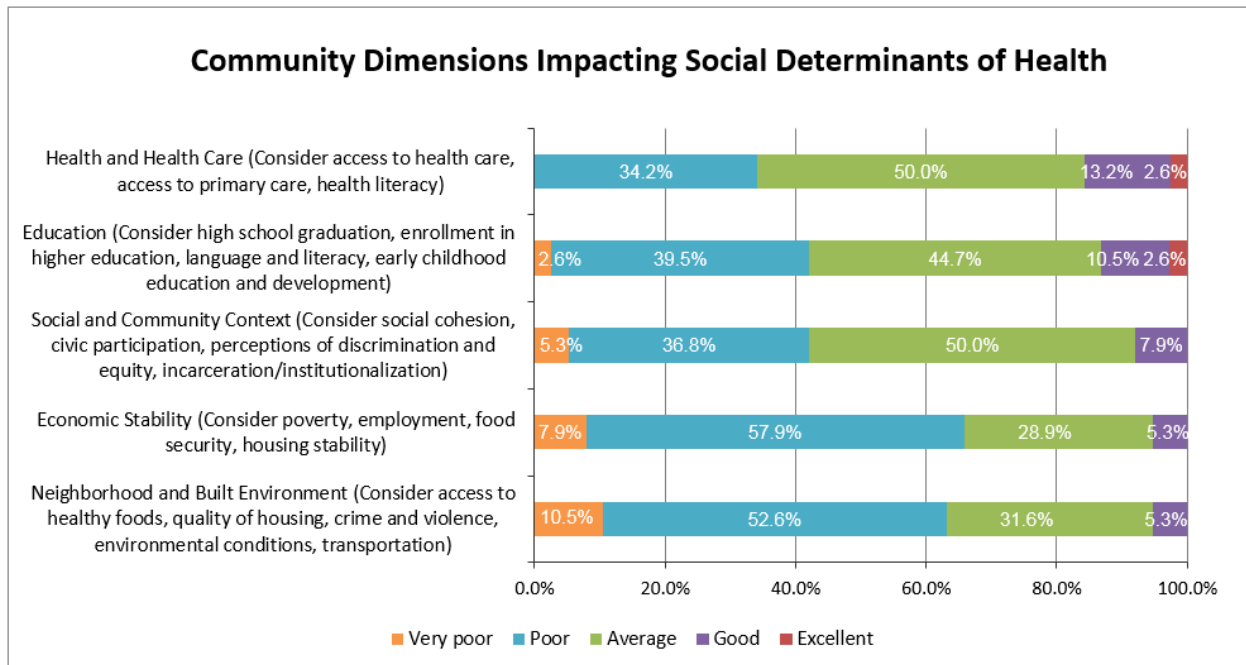
Social Determinants of Health

Healthy People 2020 defines social determinants of health as conditions in the environment in which people are born, live, learn, work, play, worship and age that affect a wide range of health, function and quality of life outcomes and risks. Informants were asked to rate five community dimensions that most highly affect social determinants of health — economic stability; education; health and health care; neighborhood and built environment; and social and community context using a scale of (1) “very poor” to (5) “excellent.”

The mean score for each dimension is listed in the table below in rank order, followed by a graph showing the scoring frequency. Mean scores were between 2.32 and 2.84 out of 5, with most respondents rating the listed dimensions as “poor” or “average.” Health and health care were seen as the strongest community dimension. One informant commented, “Health care has greatly improved as there are more clinics open with longer hours and more days available. These clinics also will try and work out payment options for patients who need resources.”

Ranking of Community Dimensions Affecting Social Determinants of Health in Descending Order by Mean Score

Ranking	Community Dimension	Mean Score	Corresponding Qualifier
1	Health and Health Care	2.84	Poor to Average
2	Education	2.71	Poor to Average
3	Social and Community Context	2.61	Poor to average
4	Economic Stability	2.32	Poor
5	Neighborhood and Built Environment	2.32	Poor

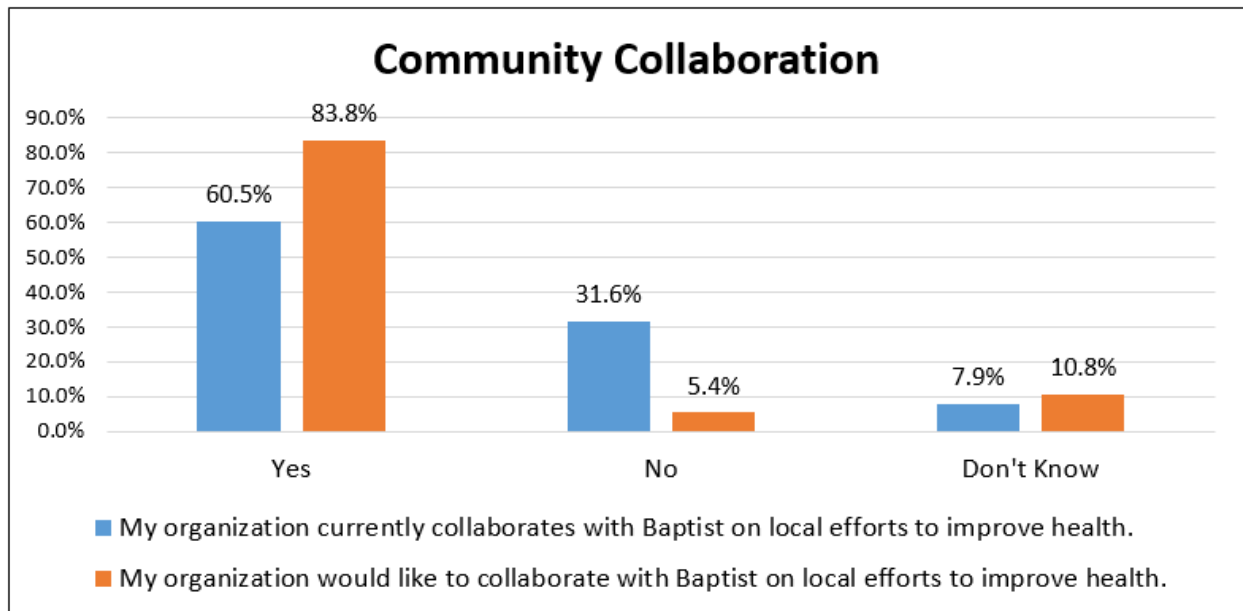


Key informants acknowledged the effect of social determinants as key underlying factors of health issues within the community. Informants identified the need to empower individuals and families through education and meaningful employment. Specific comments by informants are included below.

- > *“Health care providers and health care information access is very inaccessible for most of rural Mississippi.”*
- > *“It seems as if our community suffers greatly from the generational problem of living and expecting to continue on welfare. There is no encouragement from inside the family to further education, and sometimes parents do not seem to care or ignore the social needs of the children.”*
- > *“We have very strong, resilient communities in Mississippi...our strong communities are so strong in part because of all the discrimination and harm done unto them.”*
- > *“We have a number of residents living far below the poverty level. There are too many unemployed and single-parent households without jobs and with reliance on ‘the system.’”*

Leveraging Community Resources to Impact Health

Approximately 61% of key informants indicated that their organization currently collaborates with Baptist to improve the health of the local community. More than 80% of informants expressed interest in future collaboration with Baptist.



Key informants were asked what resources are missing in the community that would help residents optimize their health. Respondents could choose as many options as they saw needed. More than two-thirds of informants selected “substance abuse services” as a missing resource within the community. This response is consistent with the informants’ selection of “drug and alcohol abuse” among the top five health concerns for residents, and the perceived shortage of health providers in the area that specialize in substance use disorders.

Approximately 60% of informants selected “health and wellness education and programs” followed by 57% agreeing on “healthy food options” as missing resources. About half of respondents saw “community health screenings” and “mental health services” as top needs to round out the top five missing resources, followed closely by transportation needs at 48.6%.

Among the lower ranked missing resources, “adult education” and “community support groups” were closely aligned with about 40% of respondents selecting these as needed. One-third of respondents indicated “corporate wellness,” “early childhood education,” “outlets for physical activity” and “social services assistance” as missing resources within the community.

Top Missing Resources Within the Community to Optimize Health

Ranking	Resource	Percent of Informants	Number of Informants
1	Substance abuse services	67.6%	25
2	Health and wellness education and programs	59.5%	22
3	Healthy food options	56.8%	21
4	Community health screenings (blood pressure, cancer risk, stroke, etc.)	51.4%	19
4	Mental health services	51.4%	19
5	Transportation options	48.6%	18
6	Adult education (GED, training, workforce development)	43.2%	16
7	Community support groups	40.5%	15
8	Corporate wellness	32.4%	12
8	Early childhood education	32.4%	12
8	Outlets for physical activity (parks, recreation centers, gyms, walking trails, etc.)	32.4%	12
8	Social services assistance (housing, electric, food, clothing)	32.4%	12

Specific comments related to missing resources in the community are included below.

- > *“Mt. Helm has partnered with the chaplains at Baptist to assist us in grief counseling and end-of-life care concerns. We would like to strengthen this successful relationship and expand it to include other opportunities for partnership.”*
- > *“Education for affordable insurance options [is needed].”*
- > *“In my work, I am mostly focused on eating healthy and exercising...there are no healthy food options available to eat out.”*

- > *“Our parks and recreation facilities are not adequately used. More programs are needed for our senior adults and the mentally challenged. Some community health care services are provided, but attendance is usually sporadic. This may be due to lack of transportation or the fact that the information does not get to the masses.”*
- > *“There is a need in the community for elderly who do not drive, but do not have Medicaid for transportation services and have no local family to help with transportation for doctor visits, shopping trips and such. Many times they are forced to pay a great deal of money to people just for short trips, which is a financial burden to them.”*
- > *“The churches have come together to work as a unified group to encourage each other and help with children to prevent drug addiction and alcohol use. The Boys and Girls Club here in Yazoo County is well managed and has a good team working toward this, but could use more funding and a better building to encourage more children present. They also need more involvement from people willing to help with this organization, such as grandparent volunteer groups, etc. New leadership in public schools is working toward bringing the grade of the schools from failing to a more acceptable passing rate to promote a better education for our students in our community. A local community college has opened a satellite center to offer evening and technical courses to promote adult college classes.”*

Key Informant Survey findings were considered in conjunction with statistical secondary data to determine health priorities. Key Informant Survey data is valuable in informing community strengths and gaps in services, as well as wider community context for secondary data findings.

Summary of Focus Groups

Background

As part of the 2019 CHNA, focus groups were conducted in communities across the Baptist Mid-South service area with residents who have had experiences with cancer. The objectives of the focus groups were to collect perspectives on provider awareness of local and regional cancer services; collect patient experiences related to care delivery; understand consumers' views on preventive screenings; define barriers to accessing cancer services; and collect socioeconomic insights and barriers to care management. In total, 98 people participated in the discussion groups as listed below by locations and participants per region.

Memphis Metro Service Area

Germantown: 15 attendees

Southaven: 12 attendees

Northeast Arkansas Service Area

Jonesboro: 12 attendees

North Mississippi Service Area

Batesville: 9 attendees

Columbus: 14 attendees

Central Mississippi Service Area

Canton: 17 attendees

Carthage: 7 attendees

Jackson: 12 attendees

Recruitment efforts did not produce enough participants to hold focus groups in the West Tennessee Service Area.

Social Determinants of Health Survey

Focus Group participants were asked to complete an anonymous social determinants of health survey at the onset of each focus group. The survey assessed participants' access to health care, food security, housing status, safety perceptions and transportation availability. Survey questions and responses are shown below. Responses are compared across regions.

Note: The Northeast Arkansas focus group was conducted with key hospital partners and donors; the survey was not administered to this focus group to avoid skewing overall results.

Has there been a time in the past six months when you could not afford your health care, including medicine, doctor visits, procedures or other health costs?

	Often	Sometimes	Seldom	Never
Memphis Metro	7.4%	44.4%	14.8%	33.3%
Central Mississippi	16.7%	41.7%	8.3%	33.3%
North Mississippi	17.4%	39.1%	13.0%	30.4%

Has there been a time in the past six months that you worried you would not be able to afford food?

	Often	Sometimes	Seldom	Never
Memphis Metro	3.7%	11.1%	22.2%	63.0%
Central Mississippi	2.8%	27.8%	13.9%	55.6%
North Mississippi	8.7%	13.0%	17.4%	60.9%

Has there been a time in the past six months that you worried you would not have a place to live?

	Often	Sometimes	Seldom	Never
Memphis Metro	0.0%	11.1%	11.1%	77.8%
Central Mississippi	0.0%	11.1%	8.3%	80.6%
North Mississippi	17.4%	4.3%	8.7%	69.6%

Has there been a time in the past six months that you have not felt safe in your home?

	Often	Sometimes	Seldom	Never
Memphis Metro	0.0%	11.1%	22.2%	66.7%
Central Mississippi	2.8%	13.9%	13.9%	69.4%
North Mississippi	8.7%	8.7%	13.0%	69.6%

Do you have transportation available to you when you need it?

	Often	Sometimes	Seldom	Never
Memphis Metro	88.9%	3.7%	3.7%	3.7%
Central Mississippi	75.0%	19.4%	0.0%	5.6%
North Mississippi	73.9%	8.7%	13.0%	4.3%

Key Discussion Takeaways

Health Care Provider Preferences

Patients who received care at Baptist and their caregivers had positive experiences.

About half of all focus group participants had received cancer services from Baptist or cared for someone who did. The wide majority of these individuals had positive feedback about Baptist's cancer services. Positive experiences of their care included expertise of the providers; compassion of staff; ease of access via MyChart for physician communication and test results; and Baptist's reputation for quality care. Specific participant comments included:

- *"I was treated like a person at Baptist."*
- *"I like that they have a panel of doctors that meets weekly to discuss tough cases."*
- *"I feel at ease because of their reputation."*
- *"I would try [Baptist Memorial Hospital-Crittenden] if I was diagnosed with cancer in the future because it is in the Baptist system, and it has a good reputation."*

Participants perceived little differentiation in quality of cancer care between systems or networks. While individual system and provider preferences exist, provider and network options for cancer care and treatment were generally regarded as high quality across the region. Preferences and perceptions noted among regional competitors are included below.

- West Cancer Center in Southaven: Patients did not have a good first impression. The waiting room was "congested" and "filled with people who just didn't look healthy." Patients often "felt like cattle."
- NEA and St. Bernards are regarded equally for screening and diagnostic care, but patients perceived more advanced care was available at centers outside of the local community, including in Memphis, Little Rock and beyond the region.
- University of Mississippi Medical Center (UMMC): Patients liked UMMC for its research reputation. It was recognized as providing the newest procedures and treatments. MRI lung scans were specifically noted.
- St. Dominic Memorial Hospital: Patients perceived St. Dominic as providing spiritually-based, compassionate care with generous financial assistance to patients.

Insurance coverage is the key driver in decision-making for cancer care, usually in conjunction with primary care provider referrals. Patients are most influenced by their health insurance plan coverage. Provider referrals within network are usually followed. Recommendations from family and friends are also highly considered.

Trust in providers, shared faith, bedside manners rank highly after expertise. Patients value expertise and honesty with diagnosis, prognosis, preparation for path ahead and regular check-ins via phone. Good listening skills and a personal relationship with patients (knows patient info, shows interest in personal life, warm communication) are important. Nearly all participants relied on spiritual or religious beliefs and practices to help them cope with their condition and appreciated when their providers prayed with them.

Patients value nurse navigators to help with care and cost navigation, and recommended better communication of the role of nurse navigator within the patient care plan.

Patients who used nurse navigators were initially confused as to the staff's role in relation to their care. When patients understood their role in the care plan, nurse navigators were seen as vital in helping patients and families navigate their first experience with a serious medical condition. Participants recommended that all patients be connected with a nurse navigator at the onset of treatment to help navigate care and identify social needs (food, transportation, etc.).

- *“We haven’t been here before. We need someone to walk us through it.”*
- *“We’re asked if we have questions, but we don’t even know what questions to ask.”*

Perceptions Related to Preventive Screenings

Most focus group participants discovered cancer diagnosis through routine screening.

The biggest motivator for screening is knowing someone with cancer. Families and friends were more likely to get screened if they knew someone personally who was diagnosed with cancer. Cancer survivors are influential advocates for preventive screenings and early treatment. Opportunity exists to encourage patients to share stories with their communities, such as faith congregations, employer groups, civic and social clubs, etc., to educate community members on the benefits of early diagnosis, improved outcomes for cancer care and advances in treatment and screening techniques.

Fear and discomfort are most common reasons for intentionally delayed screenings.

Patients are reluctant to be proactive in assessing cancer risk for fear of positive results and discomfort of procedures. Perceptions are changing as advances in cancer treatment improve outcomes and quality of life for survivors. More advocacy is needed to educate people about the benefits of early detection and new methods for screening. Policies and funding to help uninsured and underinsured residents receive equitable care are needed to reduce disparities among African American and low-income populations.

- *“People need to know that cancer doesn’t mean death anymore.”*
- *“They think if they don’t know; it won’t happen to them.”*
- *“If you lose your breast, you won’t be a woman. They aren’t aware of options for plastic surgery and reconstruction.”*
- *“In this day and age, there has to be a better way to screen my breast than flattening it between two bars.”*

Limited insurance, transportation and after-hours care are barriers to screenings. The more rural the community, the more challenges exist to accessing screenings. Residents in the Central Mississippi Service Area may travel 1–2 hours to Jackson for screenings. Participants suggested that health care providers offer free or low-cost screenings at hair and nail salons, churches and area businesses. Mobile screenings in rural and isolated communities were recommended to bring services to residents, as was providing a “one-stop shop” to conduct multiple cancer screenings at one time. Focus group participants in rural areas were less able to recall health fairs and free community screenings than more populous areas. Germantown residents were most familiar with available community screenings.

Use tactics similar to mammography awareness to increase screenings for lung cancer.

Mammography screenings are among the most regularly recommended and received cancer screenings, regardless of risk factors. Community perception holds that lung cancer predominantly affects past or current smokers. Within the region, environmental factors are a significant risk factor for lung cancer, although this is largely unknown within the population. Participants recommended increased awareness and advocacy campaigns to encourage screening and awareness of lung cancer prevalence.

- *“Lung cancer is one of the most common and deadly cancers, but people only get screened if they’re a smoker.”*

Screenings are sometimes seen as “money makers” for hospitals. Participants believe hospitals will “always find something” or a reason for follow-up appointments.

Patients often misunderstand costs and coverage for wellness screenings vs. diagnostic testing. Education about potential for follow-up diagnostic tests and the benefits of further analysis, including better outcomes, may mitigate concerns.

Focus group participants were more likely to receive cancer screenings prior and after cancer diagnosis, but few had received screenings at free community events.

Focus group participants were generally reminded by their primary care providers to receive recommended screenings and did so within an outpatient setting. Symptoms and other concerns prompted screenings outside of age-related recommendations. Generally, residents in more rural locations were not aware of any free or community screenings held within their neighborhoods. Germantown, Tennessee, residents were most aware of availability of free screenings, but no focus groups participants had taken advantage of the screenings. Participants did not eschew the free screenings; rather they were aware of recommended screenings and could obtain screenings within a health care setting.

Financial Concerns

Participants did not forgo treatment because of cost. Deductibles, coinsurance are concerns, but participants “find a way” to afford care. Patients often rely on family, churches, support from local foundations, hospital payment plans or charity care to finance cancer treatment. A few participants were forced to declare bankruptcy due to their treatment costs. Others anticipated making monthly payments *“for the rest of my life.”*

Patients want a better estimate of expected costs and knowledge of financial assistance policies ahead of treatment.

Participants received unexpected bills for their care. Recommendations were to provide information during initial appointments about assistance at Baptist and within the community. Written materials are most useful so patients can refer to the information later. Ease of application and assistance with completing forms is necessary to ensure all patients can access programs. Streamline paper application across all programs with a single application.

- *“I made my payment to Baptist and thought I was fine, but then I got a bill from radiology that I didn’t expect. Why?”*
- *“I couldn’t afford my bill, so I set up a monthly payment. I was still sent to collections.”*

The financial expense of cancer care has a lasting impact on patients. Some participants are able to work throughout their treatment; others rely on short-term disability insurance or need to quit their jobs. Savings, retirement, loans and other finances are used to pay for care and have a long-term effect on the whole family.

- *“It changes your entire future. My husband and I had plans for retirement. We don’t anymore.”*
- *“The gas costs to get back and forth to Jackson for treatment really added up.”*

Support for Patients and Caregivers

Cancer brings loss of control in life and changes in family structure that affect mental well-being. Cancer treatment is emotionally draining for patients and caregivers. Women are especially affected. Health care providers, staff, advocates and others should help patients to prepare for what’s to come and provide support throughout treatment.

- *“You can lose your dignity pretty quickly.”*
- *“No one tells you how you’re going to feel or react when you lose your hair. I wouldn’t let my husband see my head for a week.”*
- *“I had to help my mom and take care of her house, but I still had my own family and I was still working.”*

Support groups for survivors and caregivers are valuable, but few are available in rural areas. Participants prefer support groups that are specific to their diagnosis, but appreciate general support groups for exchanging information and resources. Cancer care providers can ensure rural support networks by working with local partners to coordinate support groups, education sessions and other opportunities for networking and social support.

Patients and caregivers seek in-home services for personal care, home maintenance and meal delivery. They recommend providing a list of community resources in MyChart and other hospital communications. Meal delivery and prep services were seen as the most needed services, and critical to recovery.

- *“I couldn’t even make it to the kitchen when I was in treatment.”*
- *“We don’t have an appetite. We need meals that are pre-made and nourishing and that are delivered to the house.”*

Faith communities are a primary support system for cancer patients and their families. Volunteers provide transportation, meals, financial support and other services. Churches also serve as prevention partners through medical ministries, cancer screening events and trusted connections to the community. Participants recommended that health and human service providers offer a resource guide on where to find additional services.

Patients need transportation, escorts to frequent appointments; rural patients are most affected. Treatment and physician visits can be frequent and present transportation challenges for patients. Participants recommended satellite clinics in rural communities, bundled treatments and wider services provided through home care. Patients rely on family and friends to transport

them to chemotherapy, radiation and other appointments. Rural community members drive one to two hours to Memphis or Jackson for care, sometimes daily. A few participants lied to a provider about having a driver and drove themselves to and from treatment appointments.

- “It’s hard to get a commitment from people every day.”
- “I feel like a burden.”
- “Medicaid van requires advanced scheduling and has wait times of several hours. When you’re done with chemo, you just want to go home. You don’t want to wait for hours in a waiting room.”

Focus group findings were reviewed with Baptist’s CHNA committee and correlated with statistical secondary data and Key Informant Survey findings to inform priority health needs and community health improvement strategies.

Evaluation of Impact From 2016–2019 CHNA Implementation Plan

In September 2016, Baptist Memorial Health Care and Mississippi Baptist Health Systems (MBHS), including its four hospitals located in and around the Jackson, Mississippi, metro area signed a shared mission agreement. The 2016 CHNA and subsequent Implementation Plans were developed prior to this agreement, although Baptist Memorial Health Care has supported and carried through initiatives as outlined in MBHS' 2016–2019 Implementation Plan. An overview of the activities conducted and the resulting impact on residents' health follows.

MBHS developed a joint Implementation Plan for both Mississippi Baptist Medical Center and the Mississippi Hospital for Restorative Care to address the identified health priorities of chronic disease and related conditions, access to care and health risk behaviors.

Separate Implementation Plans were developed for Baptist Medical Centers in Attala, Leake and Yazoo counties. Health priorities for these hospital service areas were defined as at-risk populations, disease-specific needs and areas of social concern. Strategies to address priorities across the system service area were grouped into the following four types of interventions:

1. Education — Those activities and resources that MBHS can provide, both internally and externally, to assist individuals and/or partner organizations in addressing health-related issues.
2. Advocacy — Opportunities to engage with officials (both elected and appointed) who make or administer policies that directly or indirectly affect the health of the community.
3. Partnerships — Collaboration with individuals, stakeholders and community organizations toward the overall goal of improving community health.
4. Provision of Services — Those services that MBHS plans to provide directly and independently to patients.

Strategies used to address these health priorities are outlined below. Following the agreement with Baptist Memorial Health Care, these strategies continued to be supported by the new administration. This work demonstrates the health system's commitment to the people it serves and the communities they live in.

Completed Strategies

- > Offered smoking cessation seminars that were designed to increase lung cancer awareness and help individuals quit smoking
- > Hosted several cancer health education events, including the Raytheon Aerospace lung cancer and colorectal cancer seminars, Power of Pink breakfast and Pink Ribbon Day and Breast Cancer Seminar
- > Participated in various community health fairs and events to provide free or low-cost screenings, including heart, lung and mammogram

- > Provided training and education for interns, residents and fellows, as well as continuing education opportunities for staff
- > Provided financial contributions to community organizations that provide free and low-cost medical services, such as Mission First in Jackson and The Shepherd's Touch in Attala; these contributions supported health practitioner salaries and the purchase of medical supplies and equipment
- > Sponsored student interns to attend the city of Jackson's Apple Summer Workers Internship
- > Sponsored community agencies and events, including the Copiah Endowment Corporation, Diabetes Foundation of Mississippi, Komen Metro Jackson Race for the Cure, Make-A-Wish Foundation, Greater Belhaven Neighborhood Foundation and National Council on Alcoholism and Drug Dependence

By providing health education and opportunities for residents to participate in programs to improve their health, Baptist Memorial Health Care helped thousands of our community members lead healthier lives. We believe strongly in corporate citizenship and recognize the importance of collaboration with local organizations to build stronger and healthier communities. We remain committed to supporting community health improvement in line with our mission and vision.

Priorities for 2019–2022 CHNA Implementation Plan

Prioritization of Health Needs

To achieve community health improvement, it is imperative to prioritize resources and activities toward the most pressing and wide-ranging health needs within the community. The Baptist CHNA Steering Committee reviewed findings from the CHNA research, comparing statistical data from public health and socioeconomic measures with input received from key informants and focus group participants. The committee sought to determine unique and common health needs and disparities for each hospital service area, service regions and the Mid-South service area to effectively leverage resources across the system to address community health needs.

The rationale and criteria used to select health priorities included:

- > Prevalence of disease and number of community members impacted
- > Rate of disease in comparison to state and national benchmarks
- > Health disparities among racial and ethnic minorities
- > Existing programs, resources and expertise to address the issue
- > Input from representatives of underserved populations
- > Alignment with concurrent public health and social service organization initiatives

The 2019 CHNA research findings indicated that priority areas identified in the 2016 CHNA were still relevant and among the highest health needs across the region. Building upon its work over the past two CHNAs, while recognizing emerging health needs and a changing health care delivery environment, Baptist adopted the following systemwide priority health needs. The priorities are supported by systemwide goals for community health improvement and local hospital service area strategies.

Systemwide Community Health Priorities and Goals

Baptist determined the following health concerns were priorities on which to focus during the 2019–2022 reporting cycle.

Behavioral Health: Increase behavioral health screenings to initiate early treatment and improved outcomes for residents at all stages of life.

Cancer: Provide early detection and treatment to reduce death from breast, colorectal and lung cancers, and improve quality of life for patients.

Chronic Disease: Promote health as a community priority, and increase healthy lifestyle choices.

Maternal and Child Health: Improve birth outcomes for women and infants.

Hospital Implementation Plans

Supported by systemwide goals for community health improvement, individual hospitals developed specific strategies that reflect local needs, unique challenges, community assets and health disparities within the hospitals' service areas. Individual plans are available upon request and can be found on Baptist Memorial Health Care's website at <https://www.baptistonline.org/about/chna> along with the 2019 CHNA reports.

Board Approval

On Tuesday, Sept. 24, 2019, the Baptist Memorial Health Care corporate board reviewed and adopted this report (2019 CHNA) along with plans to create Implementation Plans for each hospital in Baptist's Central Mississippi Service Area.

Appendix A: Public Health Secondary Data References

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Appendix B: Key Informant Survey Participants

Key Informant Organization	Key Informant Title/Role	City/State
Arkansas State University	Associate Professor	Jonesboro, AR
BancorpSouth	AVP, CRA Specialist	Jonesboro, AR
Baptist Memorial Hospital–Attala	ER Medical Director	Kosciusko, MS
Baptist Memorial Hospital–Yazoo	Case Manager/Swing–Bed Coordinator	Yazoo City, MS
Black Jack Baptist Church	Pastor	Vaughan, MS
Baptist Memorial Health Care Corporation-Internal Audit	Director of Operations and Revenue Audits	Memphis, TN
Christian Liberty M. B. Church	Pastor/Teacher	Kosciusko, MS
City of Jackson	Executive Assistant to the CAO	Jackson, MS
City of Kosciusko	Mayor	Kosciusko, MS
Cowboy Maloney's	Director of Stores	Within the state of MS
First Baptist Church	Senior Pastor	Yazoo City, MS
First Presbyterian Church	Youth Minister	Kosciusko, MS
First Presbyterian Church	Senior Minister	Kosciusko, MS
GSC Management LLC/Leigh Mall	Owner/Mall Manager	Columbus, MS
Home Health	LPN, Patient Care Coordinator	Yazoo City, MS
Hospital Auxiliaries and Volunteer Services	Volunteer	Yazoo City, MS
Kindred Home Health	RN, Patient Care Coordinator	New Albany, MS
Kindred Home Health	RN, Patient Care Coordinator	New Albany, MS
Leake Baptist Association	Associational Missions Director	Carthage, MS
Leake County Career & Technical Center	Health Sciences Teacher	Carthage, MS
Leake County School District	Career Technical Education Counselor	Carthage, MS
Love Your Health LLC	Owner	Yazoo City, MS
Martha Coker Home	Executive Director	Yazoo City, MS
Mississippi Baptist Medical Center	Community Relations	Jackson, MS
Mississippi Coalition Against Domestic Violence	Training and Technical Assistance Coordinator	Flowood, MS
Mississippi Farm to School Network	Co-Director	Oxford, MS
Mississippi Hospital Association	Director, Center for Rural Health	Madison, MS
Mississippi Resident	Taxpayer	Jackson, MS
Mt. Helm Baptist Church	Pastor	Jackson, MS
Optus Inc.	Vice President, HR	Jonesboro, AR
Parkview Church of God	Church Secretary/Ministry Assistant	Yazoo City, MS
Paroled2Pride	Executive Director	Columbus, MS
ProMatura	President	Oxford, MS
Shiloh Baptist Church	Pastor	Kosciusko, MS
Susan G. Komen Memphis-MidSouth Mississippi	CEO	Memphis, TN
The Citizens Bank	Branch Manager Vice President	Kosciusko, MS
The Yazoo Herald	Publisher	Yazoo City, MS
Tyson Foods	Nurse Manager	Carthage, MS
Yazoo County Emergency Management	Director	Yazoo County, MS
Yazoo County Health Network	Member	Yazoo City, MS

Appendix C: Federally Qualified Health Center Locations

Hinds County

Location	Address
Bolton – Edwards Elementary/Middle SBC	9700 W. Highway 20, Bolton, MS 39041
Byram Middle School-Based Clinic	2009 Byram Bulldog Blvd., Terry, MS 39170
Central Mississippi Health Services	5429 Robinson Road Ext., Jackson, MS 39204
Central Mississippi Health Services Inc.	1134 Winter St, Jackson, MS 39204
Commonwealth Apartment Complex	3930 Skyview Dr., Jackson, MS 39213
Gary Road Elementary School	7241 Gary Road, Byram, MS 39272
Gary Road Intermediate School	7255 Gary Road, Byram, MS 39272
Jackson Hinds Central Mississippi Medical Center Site	1860 Chadwick Dr., Jackson, MS 39204
Jackson Hinds Comp Health Center– Administration/Billing	866 Medical Plaza, Jackson, MS 39204
Jackson-Hinds Comprehensive Health Center Edwards Site	100 Magnolia St., Edwards, MS 39066
Jackson-Hinds Ethel James Ivory Homeless Clinic	427 J R Lynch St., Jackson, MS 39203
Jackson-Hinds Comprehensive Health Center at the Jackson Medical Mall	350 W Woodrow Wilson Ave., Jackson, MS 39213
Jackson-Hinds Comprehensive Health Center Main Site	3502 W Northside Dr., Jackson, MS 39213
Jackson-Hinds Comprehensive Health Center South Clinic	145 Raymond Road, Jackson, MS 39204
Jackson-Hinds Isable Elementary School School-Based Health Clinic	1716 Isable St., Jackson, MS 39204
Jackson-Hinds Jim Hill High School SBHC	2185 Fortune St., Jackson, MS 39204
Jackson-Hinds Medical/Dental Mobile Unit 2	3502 W. Northside Dr., Jackson, MS 39213
Jackson-Hinds Tougaloo Clinic	500 W. County Line Road, Tougaloo, MS 39174
Jackson-Hinds Comprehensive Health Center Utica Clinic	129 White Oak St., Utica, MS 39175
Jackson-Hinds Comprehensive Health Center Utica–WIC Warehouse	6608 Highway 27, Utica, MS 39175
Jackson-Hinds Van Winkle Elementary School-Based Health Clinic	1655 Whiting Road, Jackson, MS 39209
Jackson-Hinds Comprehensive Health Center Woodrow Wilson Clinic	514 E. Woodrow Wilson Ave., Jackson, MS 39216
Pecan Park Elementary School-Based Health Clinic	415 Claiborne Ave., Jackson, MS 39209
Terry High School-Based Clinic	235 W. Beasley St., Terry, MS 39170
Utica Elementary School	260 Highway 18, Utica, MS 39175
The Village Apartment Complex	386 Raymond Road, Jackson, MS 39204

Leake County

Location	Address
Sebastopol Clinic	MS-487, Walnut Grove, MS 39189
Walnut Grove Medical Clinic	199 Rimmer St., Walnut Grove, MS 39189

Madison County

Location	Address
Canton Elementary School Clinic	740 E. Academy St., Canton, MS 39046
Canton High School Health Center	634 Finney Road, Canton, MS 39046
G. A. Carmichael Family Health Center	1668 W Peace St., Canton, MS 39046
Mallory CHC–Women’s Health Center	276 Nissan Pkwy, Canton, MS 39046
McNeal Elementary School Clinic	364 Martin Luther King Dr., Canton, MS 39046
Nichols School Health Center	529 Mace St., Canton, MS 39046

Rankin County

Location	Address
Family Health Care Clinic, Inc.–Brandon	1551 W. Government St., Brandon, MS 39042
Family Health Care Clinic, Inc.–Flowood	1307 Airport Road N., Flowood, MS 39232
Family Health Care Clinic, Inc.–Pearl	4635 Highway 80 E., Pearl, MS 39208
Family Health Care Clinic, Inc.–Pelahatchie	100 N Brooks St., Pelahatchie, MS 39145
Family Health Care Clinic Inc.–Pelahatchie	1205 Second St, Pelahatchie, MS 39145
Family Health Care Clinic Inc.– Piney Woods School	5096 Highway 49 S., Braxton, MS 39044

Yazoo County

Location	Address
Bentonia Gibbs Elementary Schools	10340 MS-433 W, Bentonia, MS 39040
G. A. Carmichael Family Health Center	1547 Jerry Clower Blvd., Yazoo City, MS 39194
G. A. Carmichael Family Health Center– Yazoo City	110 N. Jerry Clower Blvd., Yazoo City, MS 39194
Linwood Elementary School	3439 Vaughan Road, Vaughan, MS 39179
McCoy Elementary School	1835 School Dr., Yazoo City, MS 39194
Webster Elementary School	622 E Fourth St., Yazoo City, MS 39194
Woolfolk Elementary School Clinic	215 E Fifth St., Yazoo City, MS 39194
Yazoo City High School	1825 Dr Martin Luther King Jr. Dr., Yazoo City, MS 39194
Yazoo County High School	6789 Highway 49 E., Yazoo City, MS 39194

*Note: There are no Federally Qualified Health Center locations in Attala County.