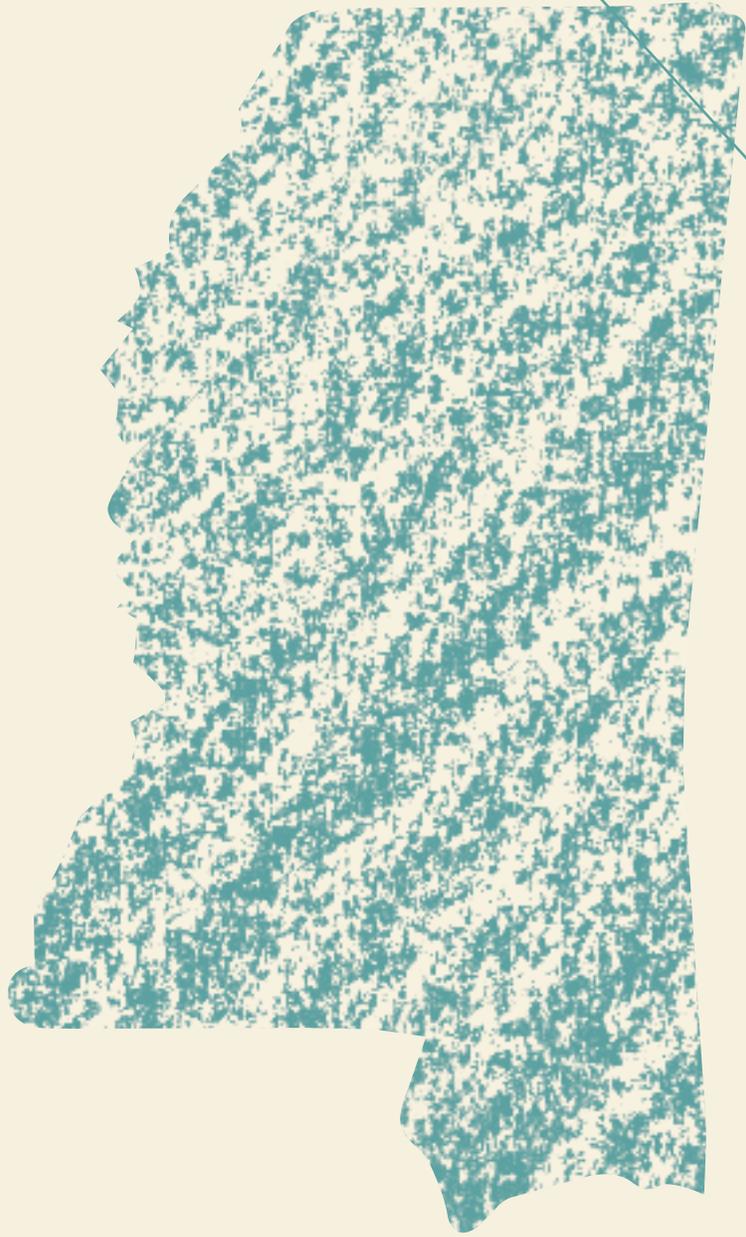


MISSISSIPPI DATA PROJECT

Report
October 2017

Child Health



INTRODUCTION

There are approximately 205,605 children between the ages of 0-9 in Mississippi, or about 6.9% of the population according to the latest census (MS KIDS Count; U.S. Census Bureau, 2011-2015 American Community Survey). Research shows time and again that the first years in a child's life establish the foundation of what their future experiences will likely be (American Academy of Pediatrics [AAP], 2016; National Center on Early Childhood Health and Wellness [NCECHW], 2017; Early Childhood Learning & Knowledge Center [ECLKC], 2017). All children deserve to have their basic health needs met. Basic needs include access to high-quality, affordable healthcare, including pediatric dentists and mental health providers, nutritious food, quality childcare, and immunizations. Long-term effects from the lack of access to these basic needs are seen all across the country, mainly in impoverished, minority communities.

Overall, 31% of children in Mississippi are growing up in poverty - one of the greatest threats to child development (KIDS COUNT [a], 2015). In states like Mississippi, which are rural and have pockets of extremely high poverty (17%), children are especially vulnerable (KIDS COUNT [b], 2015). "Poverty is an important social determinant of health and contributes to child health disparities" (AAP, 2016). Poverty and poor health, especially in children, are highly correlated as numerous studies have demonstrated (Wood, 2003).

"Poverty is an important social determinant of health and contributes to child health disparities"

-American Academy of Pediatrics, 2016



31

percent of children in Mississippi live in poverty.

This purpose of this brief is to provide an overview of several major health topics for Mississippi's children, including pediatric oral and mental health, child mortality and the status of pediatricians in the state. The brief will also give the latest Mississippi Child Health Rankings along with an explanation of how these are determined.

COUNTY HEALTH RANKINGS

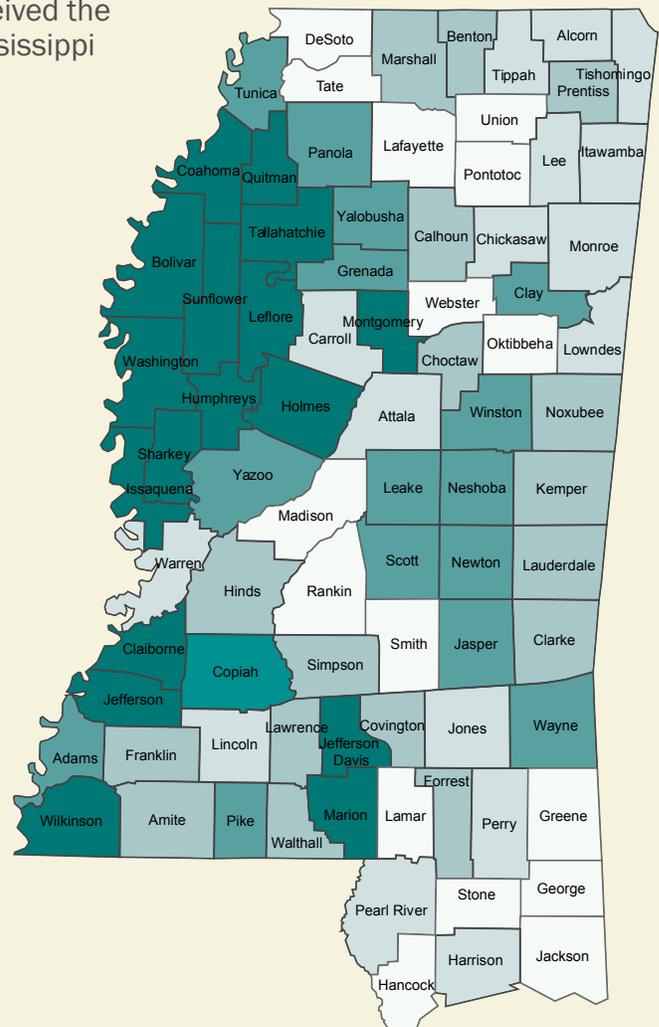
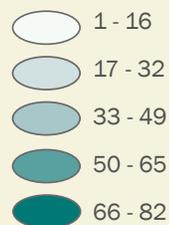
In Mississippi

This map shows the Health Ranking Outcomes of each of Mississippi's 82 counties. Using county-level data from national and state data sources, the counties are ranked based on summaries of a variety of health care outcome measures (refer to Appendix A).

As can be seen, clusters of counties that received the lowest health rankings are located in the Mississippi Delta and the southwestern part of the state.

County Health Outcomes Rankings 2017

Counties Ranked by Best to Worst Health Outcomes



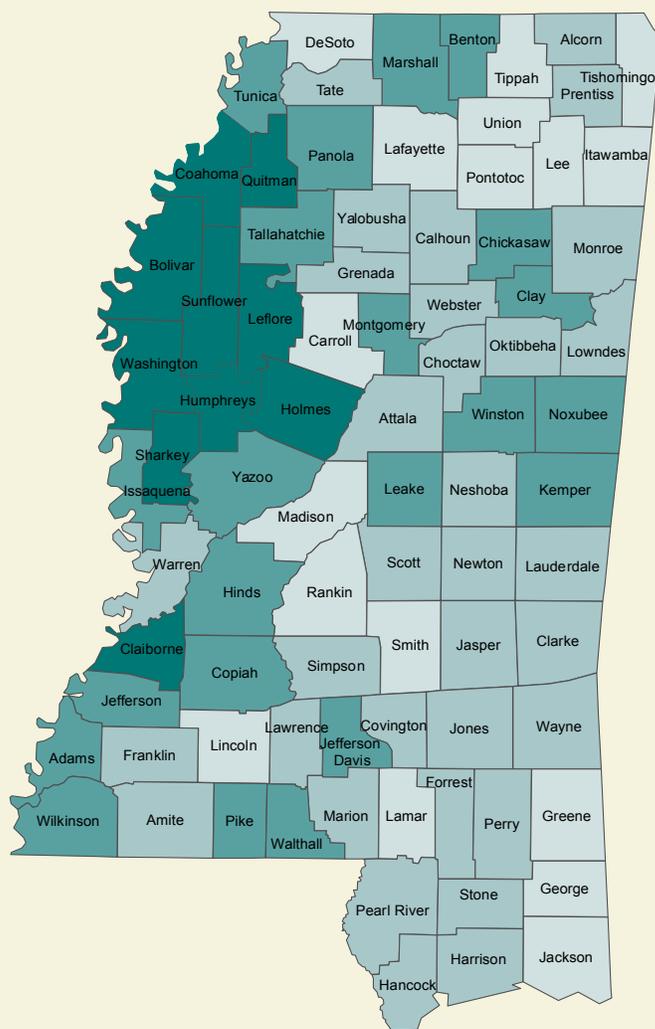
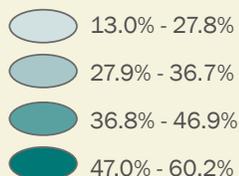
BEST AND WORST OUTCOME RANKINGS

Best	Worst
Desoto	Coahoma
Rankin	Holmes
Lamar	Jefferson
Lafayette	Humphreys
Madison	Jefferson Davis

When comparing rates of child poverty with rates of poor health outcomes, it is evident from the maps that the Mississippi counties with the worst health outcome rankings are also those with the highest rates of child poverty. This clearly highlights the intersection of child poverty and health outcomes.

Children in Poverty

Counties Ranked Lowest to Highest Child Poverty



HIGHEST AND LOWEST CHILD POVERTY

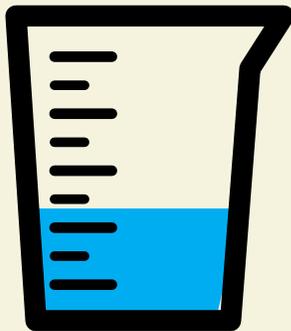
Lowest	Highest
Desoto	Humphreys
Rankin	Quitman
Madison	Leflore
Lafayette	Claiborne
Lamar	Sharkey

PEDIATRIC ORAL HEALTH

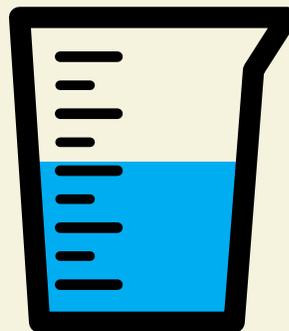
In Mississippi

The Centers for Disease Control and Prevention (CDC) lists tooth decay as the most common chronic childhood disease in children. In fact, in the adolescent age bracket, dental decay is four times more prevalent than asthma (CDC, n.d.; Dye et al., 2007). According to the CDC, one of the ten great public health achievements of the 20th century is water fluoridation. It can reduce the amount of tooth decay in children by 18-20% (CDC; HHS 2000). Mississippi KIDS COUNT Data reveals that 53% of Mississippi children lack access to fluoridated water (2012). Fluoride Varnish is another tool that has shown amazing results. It can decrease the rate of dental problems in children by 33% in primary teeth and 46% in permanent teeth. The American Academy of Pediatrics (AAP) and the United States Preventative Services Taskforce recommend that children, six months to age five, have a fluoride varnish applied every six months (Bruggeman, 2017). Pediatric dental care and prevention are important because oral health is directly connected to future health problems like diabetes, heart disease and strokes (ADHA, 2016).

Children Under 18 Lacking Access to Fluoridated Water



UNITED STATES
36%



MISSISSIPPI
53%

Fluoride Varnish can decrease the rate of dental problems in children by

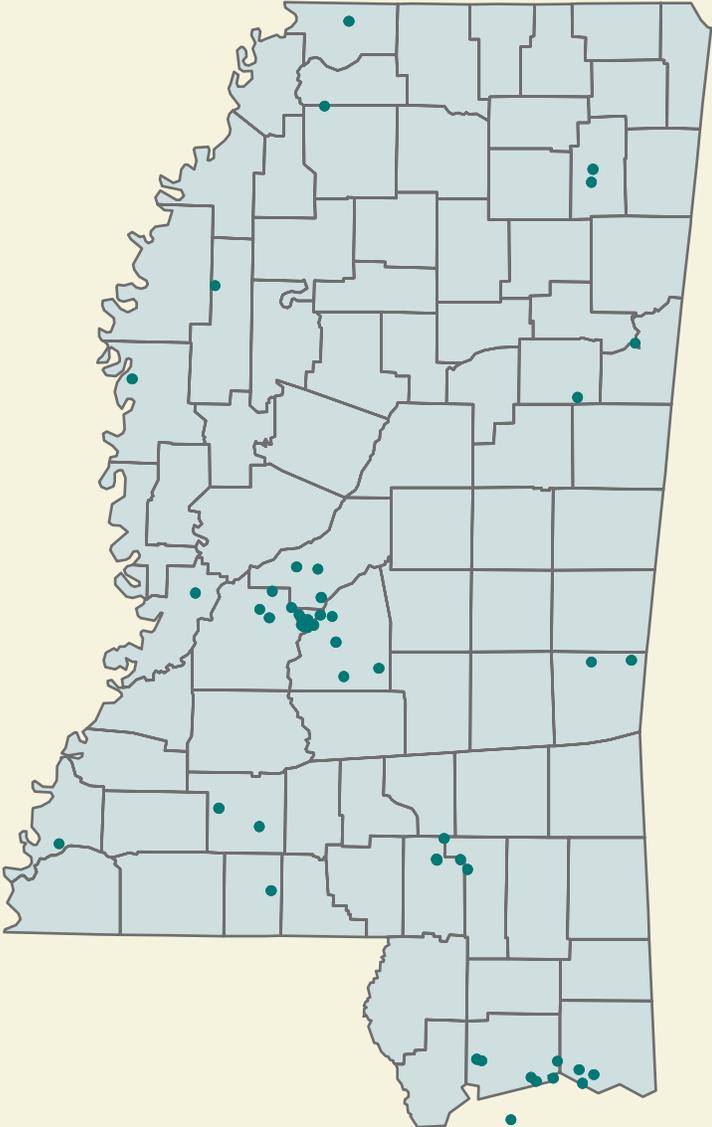
46% in permanent teeth



There are 52 pediatric dentists in the state of Mississippi, according to the American Academy of Pediatric Dentistry website. As the map shows, the pediatric dentists are often clustered in areas of higher population with the majority being in the Metropolitan Jackson and Gulf Coast areas. Out of the 82 counties in the state, 61 counties do not have any pediatric dentists at all.

● 1 Dot = 1 Pediatric Dentist
Dentists randomly placed within zipcode

Pediatric Dentists Total = 52



Even in the area of general dentistry (not specialized pediatric dentistry) Mississippi has a shortage. The federal government recommends that the population to dentist ratio should be at least 5,000 to 1 or 4,000 to 1 if there are exceptionally high needs in the community. Anything less than this is designated a Health Professional Shortage Area (HPSAs) by the Health Resources and Services Administration (HRSA) (“Designation of Health,” 2015). There are 110 oral health HPSAs designated in Mississippi (Health Resources, 2017). Despite a nationally projected increase of 6% in the number of dentists in the workforce for the year 2025, the estimated demand for dentists will increase by 10%. The dentist shortage will also continue in Mississippi, creating greater problems for underserved populations who do not have easy access or affordability to dentists (HHS, 2015).

PEDIATRICIANS

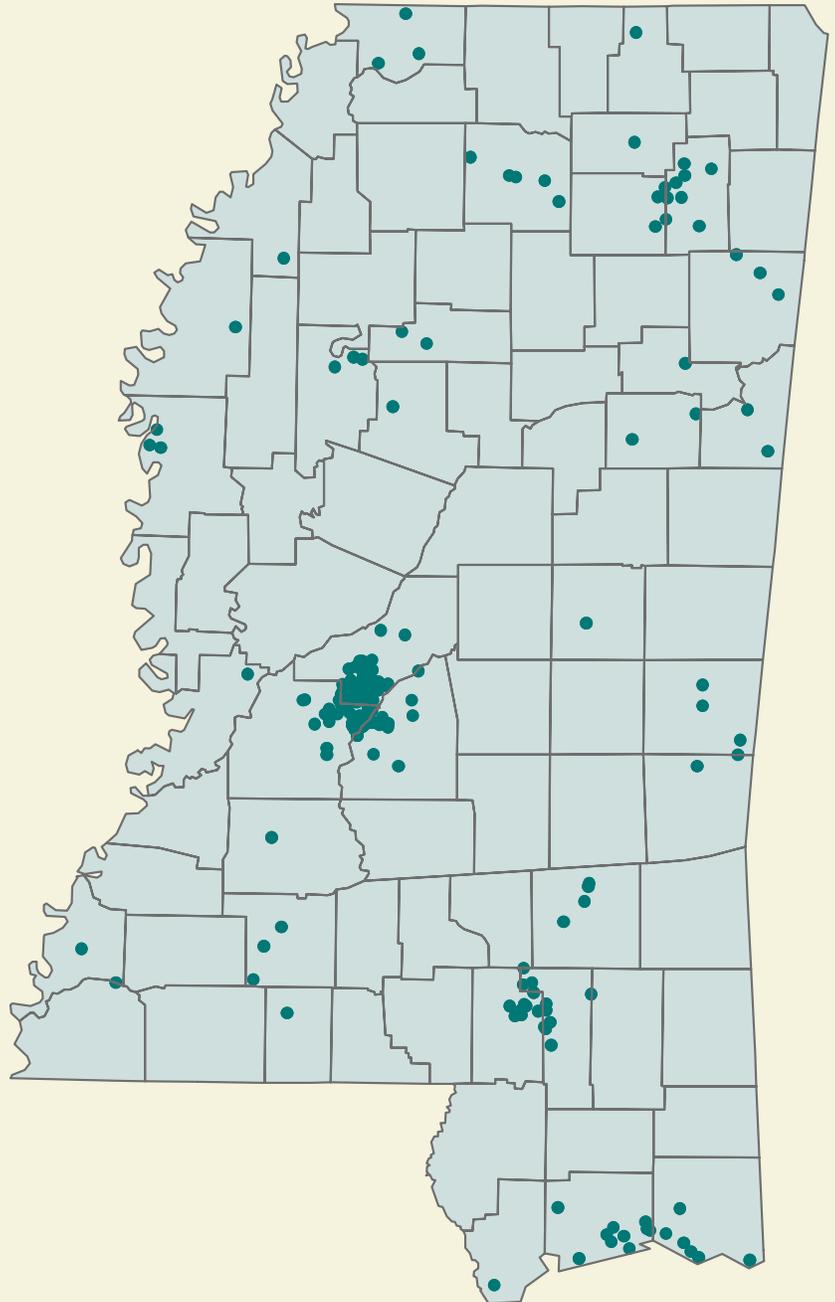
In Mississippi

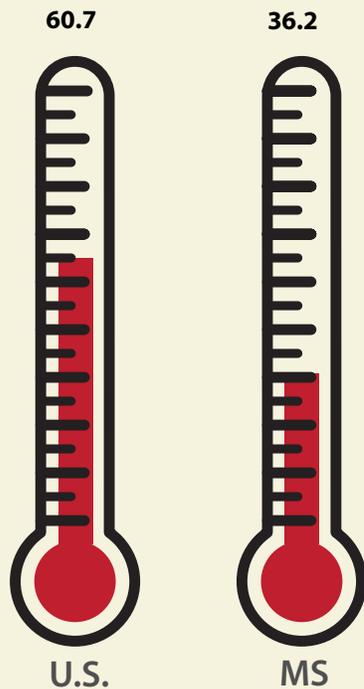
According to the executive director for the Mississippi Chapter of American Academy of Pediatrics, Gretchen Mann, there are 213 practicing pediatricians in the state of Mississippi (personal communication, August 25, 2017). As the map shows, the majority of the pediatricians in the state are located in the Metropolitan Jackson area.

● 1 Dot = 1 Pediatrician

Pediatricians randomly placed within zipcode

Pediatrician
S Total = 213





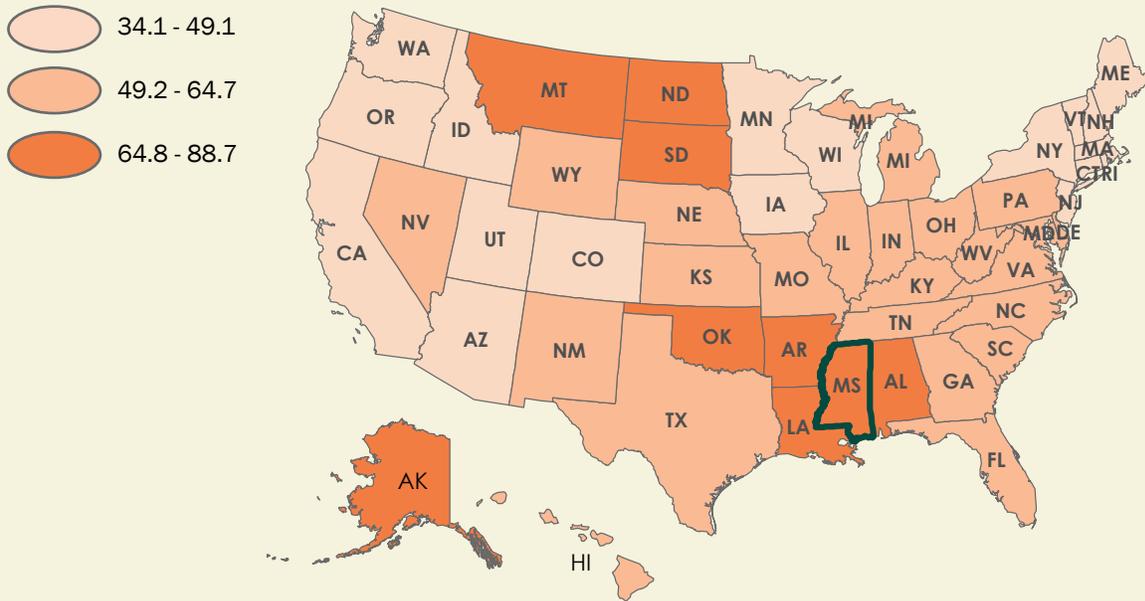
**OF THE 82
MISSISSIPPI
COUNTIES,
ALMOST HALF
(40) DO NOT
HAVE ANY
PEDIATRICIANS
AT ALL.**

According to the Health Resources and Services Administration, there are only 36.2 pediatricians per 100,000 Mississippi residents, compared to 60.7 nationally (HRSA, Health Workforce, 2015). Of the 82 Mississippi counties, almost half (40) do not have any pediatricians at all. There is an overall shortage of pediatricians in the United States, but adding to that problem is the geographical dispersion of these physicians (AAP, n.d.). A study on pediatric healthcare in the Mississippi Delta found that rural residents had significant difficulties accessing healthcare for their children due to the distances required to travel to see pediatricians and the inconvenient hours of operation (Grant, Ramgoolam, Betz, Ruttner, & Green, 2010).

CHILD MORTALITY

In Mississippi

National Child Mortality Rate (per 100,000)
ages 0-19, 2015 (due to external causes)



▶ Mississippi is the only state in the nation with a child mortality rate of 80. That exceeds the national average by 30.

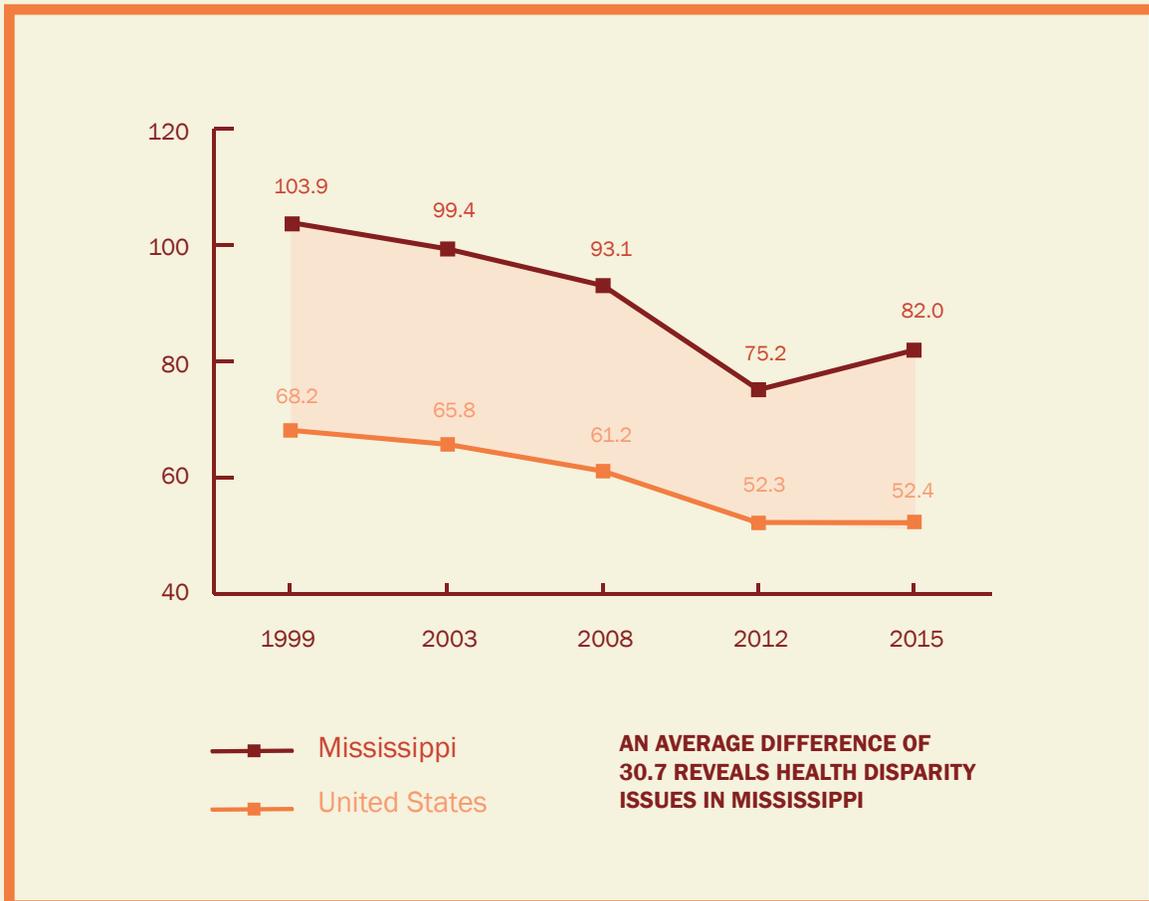
MS  82.0

U.S.  52.4

This map displays child mortality rates for for 2015. The state of Mississippi had the highest child mortality rate of any state at 82, while the national average was 52.4 per 100,000. The states with the lowest rates (per 100,000) are New Hampshire (34.1), followed by Vermont (34.8) and Massachusetts (35.8). For the same time period, the District of Columbia had a rate of 88.7 (CDC, 2015).

Child mortality due to all causes (age 0-19) is devastating and often preventable. In 2015, the national average was 52.4 child deaths (per 100,000) in the United States. Nationally, child mortality has steadily decreased since 1999 (68.2), 2003 (65.8), 2008 (61.2), 2012 (52.3). While child mortality has also decreased in Mississippi, it is still highly alarming. Between 1999 and 2012, Mississippi child mortality rates have steadily declined from 103.9 to 75.2, with a dramatic increase between 2012 and 2015 (CDC). The difference between the national and Mississippi state child mortality rates (represented in the area shaded orange) reveals the many health disparity issues in Mississippi, including access to healthcare, pediatric physician shortages and the highest child poverty rate in the country.

Child Mortality Rate



CHILD MENTAL HEALTH

In Mississippi



5 out of 25 children in the United States have a diagnosable mental health disorder.



However, only about 1 in 5 (21%) of those children receive treatment due mostly to shortages of pediatric mental health providers (AAP, n.d.).

The National Institute of Mental Health reports that half of mental illness cases begin by the time a child is 14 (National Institute of Mental Health, 2009). The earlier mental disorders can be diagnosed and treated, the better the long-term health outcomes will be for the child (AAP, n.d.). The most recent Child Trends analysis of data shows that 20% of Mississippi children (2-17 years old) had one or more emotional, behavioral, or developmental conditions during the 2011-2012 school year, compared to 17% nationally (Child Trends, 2013).

**THE EARLIER WE
ACT, THE BETTER.**

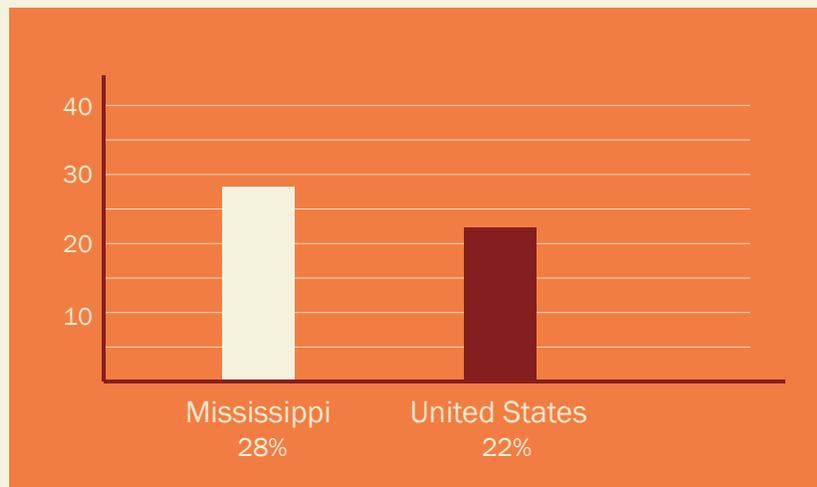
**THERE IS A SHORTAGE
OF MENTAL HEALTHCARE
PROVIDERS.**

Poor doctor to patient ratios result in patients being less likely to obtain needed psychiatric care due to longer wait times and longer distances to travel to see mental healthcare providers. Currently, the Health Resources and Services Administration (HRSA) reports that Mississippi has 47 areas designated as mental Health Professional Shortage Areas (HRSA, 2017).

The 2001/12 National Survey of Children's Health (NSCH) found that 28% of Mississippi children under the age of 18, had experienced two or more adverse experiences in their life time compared to 22% nationally (Child Trends, 2013). Adverse experiences include: frequent socioeconomic hardship, parental divorce or separation, parental death, parental incarceration, family violence, neighborhood violence, living with someone who was mentally ill or suicidal, living with someone who had a substance abuse problem or racial bias.

MISSISSIPPI CHILDREN EXPERIENCE MORE ADVERSE EXPERIENCES.

CHILDREN EXPERIENCING TWO OR MORE ADVERSE EXPERIENCES.



Nationally, many children who need mental health services receive them while in a school setting (Baffour, 2016). While 22% of schools in the United States have a full-time psychologist on staff, a school counselor is often the person helping a child with mental health needs (Baffour, 2016). However, there are shortages in the area of school counselors as well. The American Counseling Association recommends a student to counselor ratio of 250:1. In Mississippi, the 2013 ratio was 444:1 (American Counseling

THERE'S A SHORTAGE OF SCHOOL COUNSELORS IN MISSISSIPPI.

SCHOOL NURSES

In Mississippi

The nurse to student ratio in Mississippi is 1:1114, according to 2015 data from the Mississippi Department of Education (Mississippi Department of Education, 2015). The National Association of School Nurses (National Association of School Nurses, nd) recommends there be a nurse to student ratio of 1:750 for National Standard schools, and smaller ratios for Vulnerable and Extreme student populations requiring more involved nursing services or interventions. The nurse to student ratio is important in that it affects the level of health services that a school nurse is able to offer the students. This is evident in the results of a research study examining data from 21 counties in North Carolina. The study found a significant correlation in the level of care provided to children with asthma and diabetes and the nurse to student ratio (Guttu, Engelke, & Swanson, 2004). It also revealed that in schools where the ratio was lower, nurses were able to provide more counseling services and follow-up care.

THE MISSISSIPPI NURSE TO STUDENT RATIO IS **1 : 1114**





IN 2015, **13** MISSISSIPPI SCHOOL DISTRICTS HAD **NO SCHOOL NURSE**

A 2015 MDE survey of Mississippi school nurses found that only 25% of those nurses responding to the survey reported working within ideal situations. This included having the recommended nurse to student ratio and only working on one campus. However, 48% of MS school nurses responding to the survey reported working with a larger than recommended nurse to student ratio and having to cover more than one school campus, resulting in an extreme workload. MDE reported that in 2015 there were 13 school districts with no school nurses as all (Mississippi Department of Education, 2015).

APPENDIX A MEASURES USED TO DETERMINE COUNTY HEALTH RANKINGS

Premature death
Poor or fair health
Poor physical health days
Poor mental health days
Low birthweight
Adult smoking
Adult obesity
Food environment index
Physical activity
Access to exercise opportunities
Excessive drinking
Alcohol-impaired driving deaths
Sexually transmitted infections

Teen births
Uninsured
Primary care physicians
Dentists
Mental health providers
Preventable hospital stays
Diabetic monitoring
Mammography screening
High school graduation
Some college
Unemployment
Children in poverty
Income inequality
Children in single-parent homes

Social associations
Violent crime
Injury deaths
Air pollution-particulate matter
Drinking water violations
Severe housing problems
Driving alone to work
Long commute-driving alone

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Research made possible
through funding from the
W. K. Kellogg Foundation.



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