Building a Healthier Mississippi from the Ground UP

State Health Assessment and Improvement Plan

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State Health Assessment and Improvement Plan 2016

Mississippi State Department of Health
570 E. Woodrow Wilson Avenue
Jackson, Mississippi 39216

This report is accessible online at www.uprootms.org.

A collaborative effort led by the

MISSISSIPPI STATE DEPARTMENT OF HEALTH

Mary Currier, MD, MPH
State Health Officer

Angie Gainey, MBA
Accreditation Coordinator

ACKNOWLEDGEMENTS

Letter from the State Health Officer

Dear Colleagues,

It is with great pleasure that I present Mississippi's first-ever State Health Assessment and Improvement Plan. Over the past year, Mississippi State Department of Health staff and the Mississippi State Health Assessment and Improvement Committee (SHAIC), in collaboration with partners across the state public health system, have worked hard to develop this comprehensive assessment.

The findings from the Building a Healthier Mississippi State Health Assessment provide insight on the health and quality of life of Mississippians across the state, and inform the development of the Mississippi State Health Improvement Plan, which lays out a comprehensive roadmap for improving the health of Mississippi residents over the next five years.

The findings of the State Health Assessment highlight significant challenges for our state. However, they also reveal many assets and resources present in our communities and across the public health system that we can leverage to improve health outcomes and to strengthen public health for Mississippians. Improving the health and quality of life of Mississippians will require an alignment of efforts throughout the state, and the inclusion of health as a consideration in everything we do. We must change our culture to be one of health, using the data gathered in this assessment to start that process and measure our success.

As we move forward, I want to sincerely thank all of the partners and residents across the state who contributed to this assessment process, and ask for your continued engagement in the future as we develop and implement our State Health Improvement Plan.

Sincerely,

Mary Currier, MD, MPH

Mary Currier, MD, MPH

Mississippi State Health Officer

Contents

Executive Summary

In 2014 through 2016, the Mississippi State Department of Health began its first-ever State Health Assessment and State Health Improvement Plan to determine the state's greatest health needs. This process was a collaborative effort that engaged more than 19,000 residents, public health professionals, and community partners across the state.

The **Building a Healthier Mississippi** State Health Assessment provides an overview of the health and social wellbeing of Mississippians and the issues affecting our state's public health system. Understanding our state's current health and quality of life, as well as the many factors that influence health, provided an important foundation of knowledge to inform the development of **Building a Healthier Mississippi** State Health Improvement Plan to improve our state's health.

The findings from the State Health Assessment informed the selection of nine priority issues across three categories. The development of the **Building a Healthier Mississippi** State Health Improvement Plan narrowed the nine priorities to four which are highlighted in yellow below:

Address Social Determinants of Health

• Reduce Poverty

• Increase Educational Attainment

Strengthen Public Health Infrastructure

• Create a Culture of Health

• Improve Access to Care

• Shared Public Health Agenda

Improve Health Status and Reduce Health Disparities

• Improve Mental Health

• Reduce Rates of Chronic Disease

• Improve Sexual Health

• Improve Infant Health

The process of developing the 2016 **Building a Healthier Mississippi** State Health Improvement Plan (SHIP) has served as a catalyst for moving diverse groups and sectors of the state toward a common health agenda over the next five years.

In this Plan, there are specific goals with each of the identified community health priorities. While this Plan does not address every strength and weakness identified in the State Health Assessment, it does provide a clear course of direction for this Plan cycle. The Plan identifies high-impact strategic issues and desired health and public health system outcomes to be achieved by the coordinated activities of the many partners who provided input.

Part I – State Health Assessment

Mobilizing for Action through Planning and Partnerships (MAPP) Framework

The Mississippi State Department of Health and the Mississippi State Health Assessment and Improvement Committee (SHAIC) used the MAPP framework to guide the assessment process. MAPP is a community-driven[1] strategic planning framework that assists communities in developing and implementing efforts around the prioritization of public health issues and the identification of resources to address them. The MAPP process was developed by the National Association for County and City Health Officials (NACCHO) and the Centers for Disease Control and Prevention (CDC), and is considered the gold standard for health assessment and improvement planning.

The MAPP framework promotes a system focus, emphasizing the importance of partners across the public health system and the dynamic interplay of factors and forces within the public health system. The focus on an inclusive, community-driven process assures that the diverse perspectives of public health system stakeholders and community residents are sought to inform a shared understanding of health and quality of life, as well as a shared vision for a healthy future. Partnerships and collaboration are emphasized in the MAPP model to underscore the critical importance of shared resources and responsibility to make the vision for a healthy future a reality[2].

The key phases of the MAPP process include:

- Organizing for Success and Developing Partnerships

- Visioning

- Conducting the Four MAPP Assessments

- Identifying Strategic Issues

- Formulating Goals and Strategies

- Taking Action (Planning, Implementing, and Evaluating)

The four MAPP assessments include:

- State Health Status Assessment

- State/Community Themes and Strengths Assessment

- Forces of Change Assessment

- State Public Health System Assessment

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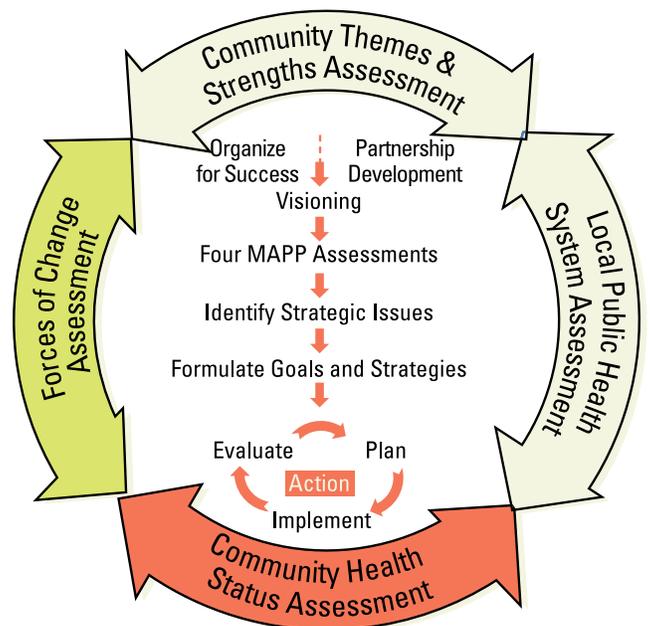
1 For the purposes of the MAPP process, the Mississippi State Department of Health defines community broadly as the residents of the state of Mississippi and the state's partners through the state's public health system, including state and local government agencies, businesses, non-profits, academia, and other entities that influence the health and well-being of Mississippians.

2 National Association for County and City Health Officials, 2015.

Collaborative Approach

The State Health Assessment was a collaborative effort that engaged a diverse range of public health partners, stakeholders, and Mississippi residents to inform a shared understanding of health and quality of life, create a common vision for a healthy future, and build collective investment in implementing strategies to address priority issues.

MAPP's emphasis on a system-focused approach rather than an agency-focused approach underscores the critical role of partnerships and collaboration in the State Health Assessment process. The SHAIC, an advisory council comprised of experts, stakeholders, and representatives from across the state public health system, played a central role in the assessment process and will continue this central role in the planning and implementation process. This collaborative approach assures shared ownership and responsibility for the State Health Assessment and State Health Improvement Plan.

Vision and Values

The SHAIC developed the following vision and values to guide the State Health Assessment process:

Vision:

All Mississippians living healthier, longer lives due to a thriving public health effort that is supported by active and committed citizens and organizations.

Values:

- **Integrity:** Strive to do the right thing to achieve the best public health outcomes through honesty, trustworthiness, and transparency in all we do;

- **Collaboration:** Value the diversity and unique contributions of partners, develop positive relationships, foster innovative solutions, and strengthen capacity to accomplish our mission;

- **Service:** Demonstrate a commitment to public health through compassionate actions and stewardship of time, resources, and talents;

- **Quality:** Exhibit superior performance and continuous improvement in knowledge and expertise;

- **Equity:** Promote equity through fairness and social justice within the context of health in diverse communities;

- **Effectiveness:** Utilize evidence, science, best practices, resources, and time to achieve optimal results; and

- **Accountability:** Maintain the highest standards of responsibility, transparency, and accountability to the citizens of Mississippi.

Process Flowchart for the State Health Assessment and Improvement Plan

The state health assessment and improvement plan was conducted following the process outlined below:

Leadership

MSDH Senior Advisory Committe	State Health Assessment and Improvement Committee	MSDH Staff Leadership Team	Community Engagement and Input

Vision and Values
All Mississippians living healthier, longer lives due to a thriving public health effort that is supported by active and committed citizens and organizations.

Integrity	Collaboration	Service	Quality	Equity	Effectiveness	Accountability

Health Assessments

State Health Assessment	State/Community Themes and Strengths Assessment	Forces of Change Assessment	State Public Health System Assessment
Epidemiological Analysis of Health and Social Determinants	Statewide Survey	Focus Group and Community Conversations	SHAIC Meeting	Stakeholder Meeting

Analysis of Cross Cutting Themes and Priority Issues

Key Findings Meeting with SHAIC	4 Community Input Webinars	Public Comment Period

Development of State Health Improvement Plan

Formulate Goals and Strategies	Develop Action Plan	Implement Action Plan	Evaluate Action Plan

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Leadership

The State Health Assessment process began by convening the leadership structure. Senior staff of the Mississippi State Department of Health formed an advisory committee that met monthly over the course of a year to provide guidance on partnership development, assessment planning, and report development. As the MAPP model emphasizes a collaborative, stakeholder-engaged process, a State Health Assessment and Improvement Committee (SHAIC), comprised of a diverse range of organizations and stakeholders throughout the state public health system, was convened to serve as the primary advisory body for the process. This group met at least once each quarter to conduct MAPP assessments and review assessment findings.

A core team of MSDH staff led the coordination and implementation of the MAPP process, and engaged the MSDH district staff and public health partner organizations in assessment and community input activities.

The State Health Assessment engaged Mississippi residents and stakeholders to seek input at multiple stages of the process. Community input was sought through a statewide survey and a series of focus groups and community conversations that took place across Mississippi's nine public health districts. Key findings of the four MAPP assessments were shared broadly with the public through the MSDH website and Facebook page, and stakeholders and residents were invited to vet the priority areas selected by the SHAIC through a series of community input webinars and through a public comment period on the MSDH website. Public health districts and partner organizations participated in disseminating information on these input opportunities to ensure that they were shared widely among the public.

Vision and Values

During its preliminary meeting, the SHAIC composed vision and values statements to guide the State Health Assessment and Improvement Planning process, as well as a mission statement to summarize the purpose of the State Health Assessment and State Health Improvement Plan. This mission of the State Health Assessment, "Working together to establish public health priorities, goals, objectives, and strategies to develop a culture of healthy people in healthy communities," described how the state would achieve its vision of "All Mississippians living healthier, longer lives due to a thriving public health effort that is supported by active and committed citizens and organizations." The SHAIC's selection of values was referred to throughout the MAPP process to ensure that all State Health Assessment and Improvement Plan activities were in line with these guiding principles.

Health Assessments

The **State Health Status Assessment** was conducted through an epidemiological analysis of demographic, social, and health indicators from a variety of state and national surveillance data sources. MSDH epidemiologists gathered and analyzed these data, which were then compiled into a report. This assessment constitutes a snapshot of the health status and social wellbeing of Mississippians, highlighting disparities in health and social outcomes that must be addressed to improve population health and quality of life.

The **State/Community Themes and Strengths Assessment** sought community input from Mississippians through a statewide survey and a series of community conversations and focus groups throughout each of the state's nine public health districts.

Mississippi conducted a statewide survey of 18,946 Mississippians throughout the state. While not a representative sample, survey respondents generally reflected the demographic composition of the state. The survey explored Mississippians' perceptions on health status, health care, social services, quality of life, social support, and economic opportunity in their communities.

A total of 48 focus groups and community conversations were also held in communities throughout the state to explore local perspectives regarding community assets and challenges, and barriers to health and quality of life Mississippians experience in their communities. These focus groups and community conversations were also used to secure input from state residents on how we can improve health and wellbeing in communities across the state.

Results from the survey and focus group were analyzed and compiled into a report. This assessment represents Mississippians' perspectives and lived experience of important health and quality of life issues in their communities, highlighting the community voice on local health priorities.

The **Forces of Change Assessment** was conducted through a convening of the SHAIC to discuss trends, factors, and events present or on the horizon in the near future that affect the health of the state or the Mississippi public health system, and to explore threats and opportunities generated by these occurrences.

Dialogue from this assessment was captured and summarized in a report, highlighting important issues affecting public health in Mississippi and opportunities to address challenges and leverage resources to strengthen public health in the state. This assessment represents the preeminent challenges and opportunities the state must be prepared to address in the near future to protect and improve the health of Mississippians.

The **State Public Health System Assessment** was conducted through a day-long retreat of over 100 partners and stakeholders from sectors across the public health system, including government, community based organizations, businesses, academic institutions, health care providers, and non-profit and advocacy organizations. Participants assessed the public health system's collective performance in delivering essential public health services to Mississippians.

Dialogue from this assessment was captured and summarized in a report, highlighting strengths, weaknesses, and opportunities to collectively improve the state public health system. This assessment is an illustration of the performance of Mississippi's public health system and serves as a roadmap for partners and stakeholders across the state to collectively strengthen public health services.

Analysis of Cross Cutting Themes and Identification of Priority Issues

Upon completion of the four MAPP assessments and reports, the SHAIC convened to review key findings from the assessments and to discuss cross-cutting themes across the four assessments. Following analysis of cross-cutting themes, the SHAIC applied the following prioritization criteria to identify a list of strategic issues:

• The issue helps to achieve our vision.

• The consequences of not addressing the issue are severe.

• There are health disparities related to this issue that must be addressed.

• The issue is a root or underlying cause for multiple health/system issues.

• There are strengths and assets to leverage.

This process resulted in a list of nine priority issues across three categories:

Address Social Determinants of Health

- Reduce Poverty

- Increase Educational Attainment

Strengthen Public Health Infrastructure

- Create a Culture of Health

- Improve Access to Care

- Shared Public Health Agenda

Improve Health Status and Reduce Health Disparities

- Improve Mental Health

- Reduce Rates of Chronic Disease

- Improve Sexual Health

- Improve Infant Health

The key findings and priorities were then shared through a series of community input webinars to solicit feedback from partner organizations and state residents on the findings from the assessment and to vet the proposed priorities with the public. A recording of the webinar and information on each of the proposed priority issues were posted on the MSDH website, and public comment on the priorities was solicited over the course of two months. Community feedback demonstrated strong support for the proposed priority issues.

State Health Assessment Key Findings

State Health Status Assessment

Background & Methods

The **State Health Status Assessment** answers the questions:

- **How healthy are our residents?**
- **What does the health status of our community look like?**

The **State Health Status Assessment** was conducted through epidemiological analysis of state and national surveillance data.

Key Findings

Demographics

- 60% of the state's population identified as Caucasian in the most recent Census, 37% identified as African American, and 3% of the population identified as another race (Native American, American Indian, Asian or other). Three percent of the population identified as Hispanic or Latino.

- About 96% of the population speaks English as a primary language. The next largest primary language is Spanish, with 2.4% of Mississippians speaking Spanish as their primary language.

- Mississippi's population is growing, but at a slower rate than the average growth nationwide. Most of the growth in Mississippi is occurring in metropolitan areas, while the majority of rural areas are losing population.

Educational Attainment

- Mississippi has a smaller proportion of population who has completed higher education compared to the U.S.

- Among Mississippi's population 25 and older, approximately 1 in 5 has not completed high school.

- **Disparities:** African Americans and individuals living in rural communities have lower high school completion rates than Caucasians and individuals living in metro areas.

Poverty

- In 2013, the median household income in Mississippi was $40,000 compared to $53,000 nationally.

- 22.5% of Mississippi's population lives under the poverty level.

- **Disparities:** Statewide, 36% of African Americans live in poverty, compared with 14% of Caucasians. The poverty rate in rural counties is substantially higher than metro counties.

Access to Care

- From 2011 to 2013, 17.3% of Mississippians lacked health insurance.

- **Disparities:** 20% of African American residents and 38% of Latino/Hispanic Mississippians lack health insurance, compared with 15% of Caucasian Mississippians.

Mortality

- In 2012, Mississippi's age-adjusted mortality rate was 28% higher than the national rate, and the highest of all 50 states.

- The 5 leading causes of death for 2012 included: heart disease, cancer, emphysema and other chronic lower respiratory diseases, accidents/unintentional injuries, and stroke.

- **Disparities:** The 2012 age-adjusted mortality rate was higher for African American Mississippians than for Caucasian Mississippians.

Sexual Health

- In 2012, Mississippi had the highest rates of chlamydia and gonorrhea in the country, the 10th highest rate of HIV infection, and the 11th highest rate of syphilis in the nation.

- **Disparities:** Youth and young adults age 15-24 and African Americans are disproportionately affected by STIs.

Birth Outcomes

- Compared to national rates, Mississippi has significantly higher rates of: infant mortality, premature birth, low birth weight, and teen births.

- **Disparities:** African American Mississippians are disproportionately affected by adverse birth outcomes.

Chronic Disease Risk Factors

- In a recent survey, Mississippians reported very low reports of fruit and vegetable consumption and low rates of physical activity. Mississippi has the 5th highest smoking rate in the country.

- In 2013, Mississippi had the highest obesity rate in the nation, tied with West Virginia, and 40% of Mississippi children were overweight or obese. Mississippi's diabetes rate is higher than the national rate.

- **Disparities:** Individuals with lower educational attainment and lower income are more likely to report smoking. African American Mississippians are disproportionately affected by diabetes.

State/Community Themes and Strengths Assessment

Background & Methods

The **State/Community Themes and Strengths Assessment** answers the questions:

- **What is important to our community?**
- **How is quality of life perceived in our community?**
- **What assets do we have that can be used to improve community health?**

To answer these questions, the Mississippi State Department of Health conducted a statewide survey and facilitated a series of focus groups and community conversations across the state.

Key Findings

Perception of Community Health

• Survey respondents most frequently described their communities as "somewhat healthy." Only 21% of survey respondents described their communities as healthy or very healthy.

• In rating personal health, 57% of survey respondents rated their personal health as healthy or very healthy and 8% rated their personal health as unhealthy or very unhealthy.

Most Important Factors for a Healthy Community

Survey respondents rated the following as the top 5 most important factors for a healthy community:

• Good place to raise children

• Good schools

• Low crime/safe neighborhoods

• Good jobs and healthy economy

• Access to health care

Satisfaction with Quality of Life

When survey respondents were asked about satisfaction with quality of life in their community:

• 58% of Caucasian respondents reported satisfaction or strong satisfaction, compared with 43% of African American respondents.

• African American respondents were almost twice as likely to report that they were unsatisfied or strongly unsatisfied with quality of life in their communities compared to Caucasian respondents.

Community Challenges

Focus group and community conversation participants frequently cited the following as challenges they face in their communities:

• Lack of access to affordable housing, healthy food, and healthcare

• Community divisiveness and tension

• Lack of access to quality employment

• Lack of community infrastructure (lack of public transportation, sidewalks absent or in disrepair, etc.)

• Lack of access to recreational opportunities, particularly for youth and seniors

• Lack of community safety

• Distrust of healthcare providers and facilities

Community Assets

Focus group and community conversation participants frequently cited the following as the best parts of life in their communities:

- Friendly people

- Small-town feel

- Natural beauty

- Community safety

A detailed list of assets and resources can be found in Appendix C.

Barriers to Health

Focus group and community conversation participants discussed a variety of barriers to health in their communities:

Environmental

- Lack of safe places to exercise and play

- Air and water pollution

Economic

- High cost of accessing basic resources

- Lack of access to good paying jobs

Cultural

- Unhealthy traditional cuisine

- Traditions centered around food consumption

Social

- Unequal access to opportunities to participate in the community

- Lack of community unity

- Lack of social and recreational outlets for community members

Behavioral

Lack of healthy habits such as vegetable consumption and physical activity

Political

Lack of political and public support for public health

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Forces of Change Assessment

Background & Methods

The Forces of Change Assessment answers the questions:

- **What is occurring or might occur that affects the health of our state or the Mississippi public health system?**
- **What specific threats or opportunities are generated by these occurrences?**

The Mississippi State Health Assessment and Improvement Committee convened to discuss important issues affecting Mississippi, and their potential implications on the health and quality of life of Mississippians and on the state's public health system.

Key Findings

Health Care System Infrastructure and Access to Care

- High rates of uninsured individuals, provider shortages
- Pressure on underfunded public health to fill gaps
- Payment model driven by treatment versus prevention
- **Opportunities:** Advocacy at local, state, and federal level, adoption of Medicaid expansion

Poverty

- High unemployment rate and limited access to jobs with living wages
- Low investment in education
- Inadequate investment in safety net services
- **Opportunities:** Invest in education, child development, vocational training, and workforce planning and development; improve access to healthcare and other basic services

Environmental, Structural, and Behavioral Barriers to Health

- Limited access to healthy foods
- Lack of access to recreation spaces
- Stress of living in unsafe neighborhoods
- **Opportunities:** Invest in walkable communities and parks; improve access to healthcare; create policies that improve living and working conditions; and educate the public on healthy behaviors

Health Literacy and Health Education

- Low levels of health literacy – affects ability to make appropriate health decisions
- Low educational attainment and literacy rates

- **Opportunities:** Create readily available, accessible, culturally appropriate health information; disseminate targeted health messages to different communities

Lack of Political and Financial Support of Public Health

- Severe underfunding of public health system, low tax revenue to support state governmental services

- Little public or political support to invest in infrastructure and services and create policy changes that remove barriers to good health

- **Opportunities:** Improve communication with policymakers and the public; articulate the critical role and importance of public health

Changing Demographics

- Growing demographic and cultural diversity

- Increasing population of incarcerated individuals and parolees

- Population loss and aging in rural communities

- **Opportunities:** Develop service delivery that reflects understanding of cultural differences; support re-entry efforts for formerly incarcerated individuals to prevent recidivism; create social supports for aging individuals to prevent isolation

Impact of Chronic Disease

- Obesity, diabetes, and heart disease are among Mississippi's most pressing health concerns

- Limits workforce productivity and increases state health care spending

- **Opportunities:** Ensure access to quality preventative care; increase access to healthy foods; support active living by building walkable communities; reduce tobacco use through statewide legislation and community-level smoking bans

Impact of Natural and Human-made Disasters

- Hurricane Katrina, BP Oil Spill, and other disasters have caused significant economic loss and severe environmental damage in Mississippi communities

- Families more vulnerable due to high poverty and unemployment

- **Opportunities:** Invest in emergency preparedness infrastructure; promote sustainable agricultural practices and environmental regulations

Urban/Rural Disparities

- Rural communities are at a disadvantage for receiving funding for critical infrastructure and are challenged by reduced access to health care

- **Opportunities:** Increase recruitment incentives to health care providers who practice in rural communities, such as scholarships and debt forgiveness

State Public Health System Assessment

Background & Methods

The **State Public Health System Assessment** answers the questions:

- **What are the activities and capacities of our public health system?**
- **How well are we providing the 10 Essential Public Health Services in Mississippi?**

Stakeholders from across the state public health system gathered to conduct this assessment, to discuss the collective performance of Mississippi's public health system, and to identify system strengths, weaknesses, and areas for improvement in addressing the 10 Essential Public Health Services:

1. Monitor health status to identify and solve community health problems.

2. Diagnose and investigate health problems and health hazards in the community.

3. Inform, educate, and empower people about health issues.

4. Mobilize community partnerships and action to identify and solve health problems.

5. Develop policies and plans that support individual and community health efforts.

6. Enforce laws and regulations that protect health and ensure safety.

7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.

8. Assure competent public and personal health care workforce.

9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.

10. Research for new insights and innovative solutions to health problems.

Key Findings

Mississippi Public Health System Strengths:

- Robust health hazard surveillance

- Nationally recognized excellence in emergency preparedness

- Robust communications in place to inform health providers and public about disease prevention and mitigation

- Strong relationships among public health system partners

- Success of tobacco prevention efforts serves as a best practice example

Mississippi Public Health System Weaknesses:

• Prevalence and severity of chronic disease and obesity

• System has low capacity and resources to address surveillance and response to long-term problems like chronic disease

• Siloing and underfunding of mental health

• Low levels of health literacy

• Low funding for public health

• Lack of public support for public health

• Workforce shortages limit capacity

Opportunities to Improve the Mississippi Public Health System:

• Strengthen funding and public support for public health

• Advance chronic disease prevention

• Foster a culture of health across state

• Address the social determinants of health

• Increase strategic alignment and coordination of public health efforts throughout the system

• Improve workforce development efforts to increase system capacity
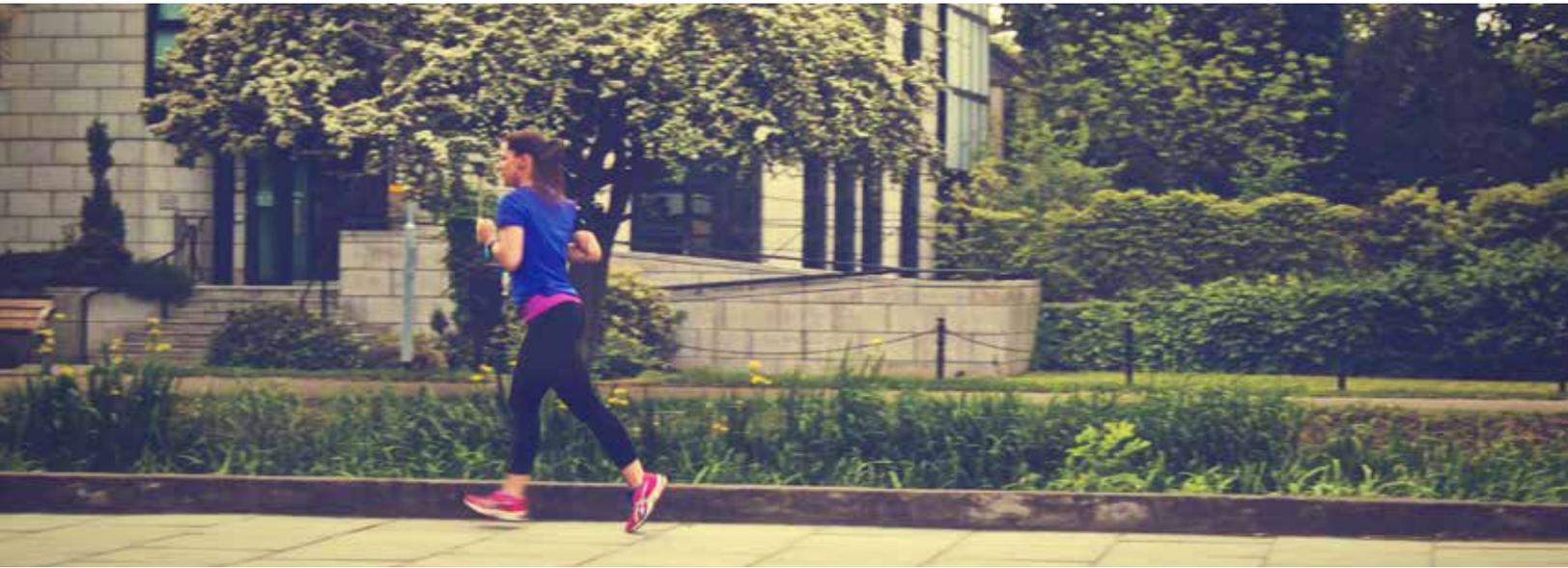
Priority Issues To Address In The Building A Healthier Mississippi State Health Improvement Plan

Priority Issues

Based on the key findings from the State Health Assessment process, the SHAIC selected nine priority issues to address in the State Health Improvement Plan, which fall under three categories:

Address Social Determinants of Health

• Reduce Poverty

• Increase Educational Attainment

Strengthen Public Health Infrastructure

• Create a Culture of Health

• Improve Access to Care

• Shared Public Health Agenda

Improve Health Status and Reduce Health Disparities

• Improve Mental Health

• Reduce Rates of Chronic Disease

• Improve Sexual Health

• Improve Infant Health

Address Social Determinants of Health

Strengthen Public Health Infrastructure

All Mississippians living healthier, longer lives due to a thriving public health effort that is supported by active and committed citizens and organizations.

Reduce Poverty · Shared Public Health Agenda · Improve Access to Care · Create a Culture of Health · Improve Infant Health · Improve Sexual Health · Reduce Rates of Chronic Disease · Improve Mental Health · Increase Educational Attainment

Improve Health Status and Reduce Health Disparities

During the assessment of the state's resources and capacity of the public health partners, the SHAIC further narrowed the nine priorities to four:

Address Social Determinants of Health

• Increase Educational Attainment

Strengthen Public Health Infrastructure

• Create a Culture of Health

Improve Health Status and Reduce Health Disparities

• Reduce Rates of Chronic Disease

• Improve Infant Health

Address Social Determinants of Health

Reduce Poverty

Rationale: Mississippi has the lowest average household income of all 50 states, and one of the highest levels of poverty. In households with a single female head, 42% were living below the poverty level in 2013.

Why it matters: People living in poverty cannot meet basic needs such as health care and nutritious food. High levels of poverty are also associated with high rates of chronic disease.

Increase Educational Attainment

Rationale: Among Mississippians 25 and older, approximately 1 in 5 has not completed high school. The situation is worse among African-Americans, where 1 in 4 on average have not completed high school.

Why it matters: People with higher levels of education are more likely to have healthy diets and to exercise regularly. They are also less likely to participate in behaviors like smoking which put their health at risk. Education also strongly determines an individual's future employment and income, both of which affect access to health insurance and health care.

Strengthen Public Health Infrastructure

Create a Culture of Health

Rationale: Healthy communities surround their residents with people and systems that promote wellness. In addition to health services for those who fall ill, wellness means easy access to healthy foods, public spaces that encourage exercise and safe outdoor activity in a smoke and drug free environment, and other factors that can help prevent illness. It also means a community of people who are knowledgeable about health, who care about the health of their whole community, and work to make the place they live a healthy one.

Why it matters: Creating a culture of health makes it easier to maintain good health as part of daily life – not just when a person is sick.

Improve Access to Care

Rationale: In 2013 survey, 1 in 5 respondents were unable to afford a doctor at some point in the past year. And about 1 in 6 Mississippians were without any kind of health insurance.

Why it matters: Lifelong health depends not only on affordable access to care for those who are sick, but preventive health care to avoid illness, and ongoing care to manage chronic diseases like diabetes.

Shared Public Health Agenda

Rationale: State health agencies and community health organizations do not currently have a common set of priorities that they follow. Instead, efforts and resources are working independently in many directions at once.

Why it matters: By combining the efforts of many organizations toward common goals, we could expect more success and better results in improving the state's health.

Improve Health Status and Reduce Health Disparities

Improve Mental Health

Rationale: Health for the whole person means a healthy body as well as a healthy mind. But mental illness is treated separately from physical health in Mississippi, and does not receive the same level of funding that physical health does.

Why it matters: Poor mental health often means that physical health suffers as well. The absence of good mental health care and services also reduces the potential contributions that individuals can make to their communities.

Reduce Rates of Chronic Disease

Rationale: Mississippi is far above the national average in its rate of diabetes, cancer, heart disease, and other diseases that shorten lifespan and reduce the quality of life. In 2013, Mississippi and West Virginia led the nation in obesity. Contributing to our high rates of chronic disease are very low levels of physical activity and inadequate vegetable and fruit consumption.

Why it matters: Chronic diseases are a personal burden financially and in years of life lost, and a burden to the community in lost productivity and higher expenses for medical care.

Improve Sexual Health

Rationale: In 2012, Mississippi had the highest rate of gonorrhea and chlamydia infections in the nation, and it ranked 10th in HIV infection. Younger Mississippians and African-Americans are disproportionately affected by sexually-transmitted diseases: 64% of all cases are among African-Americans.

Why it matters: These are highly contagious diseases whose control imposes a costly burden on the state. They also strike at one of the state's most valuable populations – its youth – and limit the potential these youth can fulfill.

Improve Infant Health

Rationale: Infants are the future of the state, but nationally Mississippi has significantly higher rates of premature birth, low birthweight babies, and infants who do not survive the first year of life.

Why it matters: Infants who are born healthy are more likely to grow into healthy adults with fewer health care needs and costs.

PART II: 2016 STATE HEALTH IMPROVEMENT PLAN

Approach to Identifying Strategic Issues

During MAPP Phase 4, Identification of Strategic Issues, the SHAIC utilized the Balance Scorecard concept for Mississippi which is based on the data yielded from the Four MAPP Assessments. This resulted in the development of a State Balanced Scorecard. For more information on the Balanced Scorecard Concept, please see the section entitled "Identifying Key Strategic Issues" located in Part I of this report.

After analysis and consideration of community feedback and statistical health data, the SHAIC developed a list of state health priorities that they could have the greatest impact on.

Questions asked during the selection process included:

- **Statistical Data: Is the data trending up or down? Is it significantly better or worse than the Peer State, or the National Average?**
- **Perceptual Data: What does the community believe our main health concerns are?**
- **Opportunities for Greatest Probable Impact: Where can the greatest impacts be made over the next 3 years when considering available resources, as well as, capacity within the Mississippi state public health system? What is the risk of not addressing an issue?**

The following criteria were also used to assist in the determination of the most important strategic objectives:

1. **Magnitude:** How many people are affected?

2. **Seriousness:** To what extent does this issue affect quality of life or economic burden?

3. **Concern:** What do the community and stakeholders think about this issue?

4. **Feasibility:** Can we do it?

5. **Strategies:** Is the problem responsive to interventions?

Priority	Magnitude *How many people are affected?*	Seriousness *To what extent does this issue affect quality of life or economic burden?*	Concern *What do the community and stakeholders think about this issue?*	Feasibility *Can we do it?*	Strategies *Is the problem responsive to interventions?*	Total
Increase Educational Attainment	5	5	5	3	3	4.2
Create a Culture of Health	5	5	4	4	5	4.6
Improve Infant Health	3.82	4.36	3.18	4.18	4.18	3.94

Priority	Magnitude *How many people are affected?*	Seriousness *To what extent does this issue affect quality of life or economic burden?*	Concern *What do the community and stakeholders think about this issue?*	Feasibility *Can we do it?*	Strategies *Is the problem responsive to interventions?*	Total
Reduce Rates of Chronic Disease	5	5	4.63	3.63	4.18	4.49

The SHAIC identified three cross-cutting themes for each of the four priority areas. They were health disparity, mental health and access to care.

Health Disparity

A health disparity is a difference in health status or in health services delivery that is associated with social, economic or environmental disadvantage. In other words, it is an indication that all Mississippians do not have the same chance for good health. The SHAIC ultimately decided to make health disparities a cross-cutting issue because this was a concern within so many of the priority areas. Most of the priority areas have disparity objectives which will be tracked according to race, gender, ethnicity and socioeconomic status when these data are available. A detailed list of Key Health Disparity Objectives can be found in Appendix D.

Mental Health

According to the World Health Organization, in developed countries such as the United States, mental illnesses account for more disability than any other group of illnesses, including cancer and heart disease. The Centers for Disease Control and Prevention estimate that one-fourth of adults in the United States currently have a mental illness and nearly one-half will develop at least one mental illness during their lifetime. The effects of mental illness range from minor disruptions in daily functioning to personal, social, and occupational impairments that can be incapacitating and even lead to premature death. Mental illness is also associated with increased morbidity from a number of chronic diseases, including cardiovascular disease, diabetes, cancer, asthma and obesity. Injury rates are two to six times higher for persons with a mental illness than they are for the overall population. This includes both unintentional injuries and intentional injuries (such as homicides and suicides). Mental illness also is associated with use of tobacco products and alcohol abuse, which are harmful to a person's health.

Access to Care

Access to health care is important for improving quality of life and eliminating disparities in health. When people are able to get preventive care or treatment for their health conditions, they have better health outcomes, improved perceptions of their health, and increased productivity.

Formulating Goals & Strategies

Targets and measures outlined in this Plan are aligned with the national Healthy People 2020 goals and objectives, wherever applicable. A detailed list of alignment with national priorities can be found in Appendix E. The science-based measurable objectives and goals identified in Healthy People 2020 are applicable at the

national, State, and local levels. These objectives and goals allow communities to engage multiple sectors, to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge.

As with Healthy People 2020, the overarching goal of utilizing evidence-based goals and strategies is to ensure that Mississippi sustains its journey to:

• Promote quality of life, healthy development, and healthy behaviors across all life stages.

• Achieve health equity, eliminate disparities, and improve the health of all groups.

• Create social and physical environments that promote good health for all.

• Support programs or policies recommended in the national health plans.

Take Action! - Tracking & Evaluating Results

This implementation phase of the MAPP process is a two-year cycle, which begins January 2016 and will end with the completion of the budget cycle in 2018. During this phase, the efforts of the previous phases begin to produce results, as the Mississippi State public health system develops and implements action plans. Because MSDH bears statutory responsibility for protecting the public's health, its staff initiated the SHIP and convened partners to develop it. However, MSDH is only one part of the public health system. Other agencies, non-governmental organizations, institutions and informal associations play critical roles in creating conditions in which people can be healthy. MSDH leadership realized that government alone cannot match the collective strength of individuals, communities and various social institutions working together to improve health, so they created a collaborative state health improvement process, culminating in the SHIP. The ongoing SHIP process and the plan itself both reflect efforts of many of the key players in the public health system to promote collaboration, coordination and efficiency. The ongoing process of implementing the SHIP will bring together these system partners on a periodic, regular basis to coordinate to meet SHIP goals. As such, this plan is meant to be a living document rather than an end point. It reflects a commitment of partners and stakeholders to coordinate to address shared issues in a systematic and accountable way.

LOOKING AHEAD

The success of each goal is based on outcome measurements that track progress and project impact. Each priority area has an assigned co-chair, one from the Mississippi State Health Department and one from our Partners and, work groups who are working together to develop coordinated Action and Evaluation plans. Progress will be monitored by each co-chair as well as the SHAIC.

Evaluation will remain important throughout the remainder of the two-year cycle so that progress toward Plan goals is both meaningful and measurable. Continual plan updates will regularly occur and will be based on feedback members of the SHAIC provide. Lessons learned from what actions taken will help guide future actions (i.e. what worked well? what didn't work well?). Evaluation will also help to inform key decision makers to decide if the right strategies were implemented, as well as, if the desired outcomes were achieved.

The detailed priority work plans using the Balanced Scorecard approach can be found in Appendices L through O and presents a comprehensive view of the State Health priorities, strategic objectives, measures, targets, and specific actions.

The State Health Improvement Plan priorities works in concert to improve health and wellbeing for Mississippians. By addressing the social determinants of health and strengthening the state's public health infrastructure, Mississippi can improve health status and reduce health disparities for its residents, achieving the State Health Improvement Plan vision of All Mississippians living healthier, longer lives due to a thriving public health effort that is supported by active and committed citizens and organizations.

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Appendix A - Participating Partners and Organizations

American Cancer Society

American College of Cardiologists

American Heart Association

American Lung Association

Appalachian Regional Commission

Arts Klassical, Inc.

Blue Cross Blue Shield of Mississippi

Bower Foundation

Catholic Charities Jackson

Center for Mississippi Health Policy

Central Mississippi Area Health Education Center

City of Jackson

CommonHealth ACTION

Dependable Source Corporation

Diabetes Foundation of Mississippi

Eliza Pillars Registered Nurses of Mississippi

Families as Allies

Foundation for the Mid-South

Head Start

Health Resources in Action

Health Ways

I-HELP Inc.

Information & Quality Healthcare

Innovative Behavioral Services, Inc.

Jackson Roadmap to Health Equity Project

Jackson State University

Jackson-Hinds Comprehensive Health Center

Madison County Citizens Services Agency

March of Dimes

Mississippi Academy of Family Physicians

Mississippi Action Coalition on the Future of Nursing

Mississippi Association of Supervisors

Mississippi Band of Choctaw Indians

Mississippi Board of Nursing

Mississippi Business Group on Health

Mississippi Center for Justice

Mississippi Coalition for Vietnamese-American Fisher Folks and Families

Mississippi Community College Board

Mississippi Department of Agriculture and Commerce

Mississippi Department of Education

Mississippi Department of Environmental Quality

Mississippi Department of Human Services

Mississippi Department of Mental Health

Mississippi Department of Rehabilitation Services

Mississippi Department of Wildlife, Fisheries, and Parks

Mississippi Division of Medicaid

Mississippi Economic Council

Mississippi Economic Policy Center

Mississippi Emergency Management Agency

Mississippi Farm Bureau Federation

Mississippi First

Mississippi Health Care Association

Mississippi Health Information Network

Mississippi Healthcare Alliance

Mississippi Hospital Association

Mississippi Institutions of Higher Learning

Mississippi Joint Legislative Committee on Performance Evaluation and Expenditure Review

Mississippi Legislative Budget Office

Mississippi Medical and Surgical Association

Mississippi Migrant Education Service Center

Mississippi Municipal League

Mississippi Nurses Association

Mississippi Office of Nursing Workforce

Mississippi Primary Healthcare Association

Mississippi Public Health Association

Mississippi Public Health Institute

Mississippi Restaurant Association

Mississippi Rural Health Association

Mississippi Rural Water Association

Mississippi Society for Disabilities

Mississippi State Board of Health

Mississippi State Board of Nursing

Mississippi State Department of Health

Mississippi State Extension Service

Mississippi State University Social Science Research Center

My Brother's Keeper

National Coalition of 100 Black Women-Central Mississippi Chapter

National Diabetes and Obesity Research Center, at Tradition

NMHS Unlimited/The Good Life

The Office of the Governor of Mississippi

The Office of the Lieutenant Governor of Mississippi

Office of Mississippi Physician Workforce

The Partnership for a Healthy Mississippi

Robert Wood Johnson Foundation

Rural Health Association

Rush Health Systems

Small Business Administration

United States Department of Housing and Urban Development

United Way of the Capital Area

University of Alabama at Birmingham School of Public Health

University of Mississippi Medical Center

University of Southern Mississippi

W.K. Kellogg Foundation

William Carey University College of Osteopathic Medicine

Wray Enterprises, Inc.

Appendix B - MSDH Contributors

Mitchell Adcock	Elvie Guthrie-Lewis	Crystal Price
Jana Bailey	Kelly Hamilton	Alfio Rausa
Gwen Black	Breanne Hancock	Dionne Richardson
Melanie Bowman	Diane Hargrove	Katherine Richardson
Bruce Brackin	Dematt Harkins	Roger Riley
Chad Bridges	Matthew Harrell	Sandra Scott
Lakesha Brooks	Rozelia Harris	Jessica Sheets
Nathaniel Brown	Roy Hart	Joy Sennett
Stephanie Brown	Stephanie Hedgepeth	Liz Sharlot
Kathy Burk	Kay Henry	Larry Smith
Paul Byers	Rebecca James	Bonnie Sprayberry
David Caulfield	Marilyn Johnson	Victor Sutton
Jim Craig	Margaret Jones	Chrystal Tate
Mary Currier	Jill Knight	Christy Thornton
Robert Curry	Deborah Lake	Bea Tolsdorf
Tim Darnell	Ashley Lawson	Laura Tucker
Monique Drake	Comma McDuffey	Sharon Vance
Thomas Dobbs	Ashley McKay	Evelyn Walker
Malcolm Dodd	Charles Minninger	Tameka Walls
Cassandra Dove	Kathy Moon	Paige Ward
Don Eicher	Judy Moulder	Daphne Ware
Leslie England	Caroline Newkirk	Brad Williams
D'Ette Lorio	Christy Nutt	Jennifer Windham
Tanya Funchess	Ellen O'Neal	Alex Woods
Angie Gainey	Melissa Parker	Karen Zittleman
Veronica Gates	Kevin Pearson	
Jacquilyn German	Nancy Pitts	
Jenny Griffin	Kathy Posey	

Appendix C - Mississippi State Asset and Resource Inventory

This state asset inventory was compiled throughout the state health assessment and improvement process. This inventory will be used to explore the breadth and depth of state assets and resources that may be mobilized to address community health needs. This is a living document, with additional community assets and resources being continually added.

What is an asset? – An asset is anything that improves the quality of community life. It may be a person, group of people, place or institution.

Health Care System Assets

- Alternative Medicine Providers
- University/College Student Health Centers
- Community Health Centers
- Dentists and Dental Clinics
- Disease-based Support Groups
- Emergency Medical Services
- Eye & Ear Care Providers
- Free Clinics
- Health Insurance Plans
- Health Professions Schools/Programs
- Hospitals
- Mental Health Providers
- Nursing Homes
- Pharmacies
- Physical and Occupational Therapists
- Private Physicians
- Public Health Department
- Registered Dietitions
- Rehabilitation, Home Health & Hospice Providers
- School Nurses, Counselors, Psychologists
- Substance Abuse Treatment and Recovery
- Urgent Care Centers

Recreational Assets

- 4H and County Fairs
- Bicycle Courses (BMX)
- Bicycling Clubs
- Community Centers
- Community Dances
- Community Education Programs
- Conservation Activities/Programs
- Golf Courses
- Horseback Riding/Stables
- Parks and Recreation Districts
- Private Membership Fitness Clubs
- Riverboat
- School Based Athletics
- Swimming Locations
- Walking/biking Trails & Sidewalks
- Recreation and Fitness Organizations

UProot

Building a healthier Mississippi from the ground UP.

uprootms.org

Food System Assets

- Agriculture
- Community Gardens
- Farmers Markets
- Food Pantry/Bank/Commodities
- Food Policy and System Groups
- Food Purchasing Programs
- Full Service Grocery Stores
- Garden Supply Centers
- Home Delivered Meal Services
- Nutrition Education Programs/Services
- School Lunch Programs

Cultural Assets

- Agencies That Provide Cultural Support, Education and Advocacy
- Community Events and Festivals
- Crafts and Enrichments Classes/Resources
- Family and Cultural Centers
- Historical Organizations
- Media Organizations
- Museums
- Nature Centers
- Performing Arts Organizations
- Public Spaces

Education Assets

- Charter and Private Schools
- Childcare and Preschool Providers (0-5)
- Community Centers
- Community Colleges and Universities
- Homeschool Organizations
- K-12 School Districts
- Nature Centers
- Public Libraries
- Senior Centers
- Tutoring/Mentoring Organizations
- Virtual & Online Learning
- Vocational/Trade Schools

Organizational Assets

- 12-Step Organizations
- Crisis Intervention
- Chambers of Commerce
- Economic Development Organizations
- Faith-Based Organizations
- Human Service Organizations
- Informal Groups and Meetings
- Local Charities, Grant-Makers, & Foundations
- Multi-Sector Coalitions
- Service Organizations

Public Safety Assets

- Alternative Custody Programs
- Anti Bullying Programs
- Domestic Violence & Crisis Response Organizations
- Emergency Operations Centers
- Emergency Preparedness Coalitions
- Environmental Protection Organizations
- Jails
- Law Enforcement Training Centers
- National Guard
- Neighborhood Watch Programs
- Police and Fire Departments
- Probation and Fire Departments

Housing Assets

- Affordable Housing Programs
- Aging in Place Efforts
- Assisted Living Facilities
- Foster Care Homes (Adult/Child)
- Home Building Charities
- Homeless Coalitions
- Homeless Shelters
- Rehab Programs
- Subsidized Housing Developments
- Rental Housing Landlords and
- Developments
- Weatherization, Home Improvement, and Home Safety Programs

Transportation Assets

- Airports
- Ambulances
- Bicycle Infrastructure
- Long Distance Bus Services
- Mobility Managers
- Public Transportation Providers
- Safe Streets Initiatives/Polices
- Taxis
- Train Service

Employment Assets

- Business Associations
- Development and Social Service
- Department
- Economic Development Organizations
- Farmers and Rural Employers
- Labor Organizations
- Major Employers
- Public Employers
- Self-Employed and Startups
- Unemployment and Job-Placement Services
- Volunteer Organizations

Appendix D – Key Health Disparity Objectives

The objectives in the table below were selected for inclusion in the SHIP because there are clear disparities between people who belong to different racial groups, geographic regions, or other groupings. The disparity measures below will help us evaluate if we are making progress in addressing the objectives in disparately affected groups.

SHIP Objective	Disparately Affected Group	Disparity Measure	Baseline	Target
1.0 Decrease teen pregnancy rate of 15-19 year old women	Black/African-American	Rate of teen pregnancy among young black women ages 15-19 years *Source: MSDH Office of Public Health Statistics*	2013: 62.2/1000	December 31, 2020: 56.0/1000
2.0 Increase the number of mothers who are breastfeeding	Non-Hispanic Black	Percentage of non-Hispanic black infants who were ever breastfed Source: CDC National Immunization Survey	2009-2011 births: 39.5%	2018-2020 births: 43.5%
3.1 Increase the percentage of youth ages 17 and under who engage in 60 minutes of daily physical activity	Non-Hispanic Black	Percentage of non-Hispanic black students in grades 9-12 who achieve 1 hour or more of moderate-and/or vigorous-intensity physical activity daily *Source: YRBS*	2013: 22.0%	2019: 24.2%
3.1.2 Increase the percentage of adults who engage in at least 150 minutes of weekly moderate-intensity aerobic physical activity	Non-Hispanic Black	Percentage of non-Hispanic black adults who achieve at least 150 minutes a week of moderate-intensity aerobic physical activity or 75 minutes a week of vigorous-intensity aerobic activity (or an equivalent combination) *Source: BRFSS*	2013: 34.1%	2019: 37.5%
3.1.3 Decrease the percentage of students in grades 9-12 who consume fruits and vegetables less than 1 time daily	Non-Hispanic White	Percentage of non-Hispanic white students in grades 9-12 who consume fruit less than 1 time daily *Source: YRBS*	2013: 56.7%	2019: 51.0%
3.1.4 Decrease the percentage of adults ages 18 and older who report consuming fruits and vegetables less than one time daily.	Non-Hispanic Black	Percentage of non-Hispanic black adults who report consuming vegetables less than 1 time daily *Source: BRFSS*	2013: 43.2%	2019: 38.9%

Appendix E – Alignment of SHIP Goals and Objectives with National Priorities

SHIP Goals	National Priorities
1.0 Increase high school graduation rates	AH-5.1 Increase the proportion of students who graduate with a regular diploma 4 years after starting 9th grade (HP 2020).
2.0 Improve the care of infants in Mississippi	MICH-1 Reduce the rate of fetal and infant deaths (HP 2020).
3.1 Decrease obesity through the promotion of healthy lifestyles	NWS-9 Reduce the proportion of adults who are obese (HP 2020). NWS-10 Reduce the proportion of children and adolescents who are considered obese (HP 2020).
4.1 Improve the culture of health in Mississippi workplaces	No direct national alignment.
4.2 Improve the culture of health in Mississippi academic settings	No direct national alignment.

SHIP Objectives	National Priorities
1.0 Decrease teen pregnancy rate of 15-19 year old women	FP-8 Reduce pregnancies among adolescent females (HP 2020).
2.0 Increase the number of mothers who are breastfeeding	MICH-21 Increase the proportion of infants who are breastfed (HP 2020).
3.1 Increase the percentage of youth ages 17 and under who engage in 60 minutes of daily physical activity	PA-3.1 Increase the proportion of adolescents who meet current Federal physical activity guidelines for aerobic physical activity (HP 2020).
3.2 Increase the percentage of youth ages 17 and under who consume the daily recommended servings of fruits and vegetables	NWS-14 Increase the contribution of fruits to the diets of the population aged 2 years and older (HP 2020). NWS-15 Increase the contribution of vegetables to the diets of the population aged 2 years and older (HP 2020).
3.3 Increase the percentage of adults who engage in at least 150 minutes of weekly moderate intensity physical activity	PA-2.1 Increase the proportion of adults who engage in aerobic physical activity of at least moderate intensity for at least 150 minutes/week, or 75 minutes/week of vigorous intensity, or an equivalent combination (HP 2020).
3.4 Increase the percentage of adults who consume the recommended servings of fruits and vegetables.	NWS-14 Increase the contribution of fruits to the diets of the population aged 2 years and older (HP 2020). NWS-15 Increase the contribution of vegetables to the diets of the population aged 2 years and older (HP 2020).
4.1 Increase the number of Mississippi worksites that offer employee wellness programs	PA-12 (Developmental) Increase the proportion of employed adults who have access to and participate in employer-based exercise facilities and exercise programs (HP 2020).
4.2 Increase the percentage of school health councils in full compliance with composition requirements	No direct national alignment.

Appendix F – How to Use This State Health Improvement Plan

Each of us can play an important role in community health improvement here in Mississippi, whether in our homes, schools, workplaces, or churches. Encouraging and supporting healthy behaviors from the start is so much easier than altering unhealthy habits. Below are some simple, ways to use this Plan, to improve the health of your community:

Employers

• Understand priority health issues within the community and use this Plan and recommended resources to help make your business a healthy place to work!

• Educate your team about the link between employee health and productivity.

Community Residents

• Understand priority health issues within the community and use this Plan to improve the health of your community.

• Use information from this Plan to start a conversation with   community leaders about health issues important to you.

• Get involved! Volunteer your time or expertise for an event or activity, or financially help support initiatives related to health topics discussed in this Plan.

Health Care Professionals

• Understand priority health issues within the community and use this Plan to remove barriers and create solutions for identified health priorities.

• Share information from this Plan with your colleagues, staff, and patients.

• Offer your time and expertise to local improvement efforts (committee member, content resource, etc.)

• Offer your patients relevant, counseling, education, and other preventive services in alignment with identified health needs of the State of Mississippi.

Educators

• Understand priority health issues within the community and use this Plan and recommended resources to integrate topics of health and health factors (i.e. access to health food, physical activity, risk-behaviors, use of the health care system, etc.) into lesson plans across all subject areas such as math, science, social studies, and history.

• Create a healthier school environment by aligning this Plan with school wellness plans/policies. Engage the support of leadership, teachers, parents and students.

Government Officials

• Understand priority health issues within the community.

• Identify the barriers to good health in   your communities, and mobilize community leaders to take action by investing in programs and policy changes that help members of our community lead healthier lives.

State and Local Public Health Professionals

• Understand priority health issues within the community and use this Plan to improve the health of this community.

• Understand how the State of Mississippi compares with Peer States, Regional Peers, and the U.S. population, as a whole.

Faith-based Organizations

• Understand priority health issues within   the community and talk with members about the importance of overall wellness (mind, body and spirit) and local community health improvement initiatives that support wellness.

• Identify opportunities that your organization or individual members may be able to support and encourage participation (i.e. food pantry initiatives, community gardens, youth groups gear around health priorities, etc.).

TAKE ACTION
Work Together

Evaluate Efforts

Assess Needs & Resources

Implement Strategies

Pick Priorities

Find Programs & Policies That Work

Grantmakers

Business

Public Health

Community

Healthcare

Government

Education
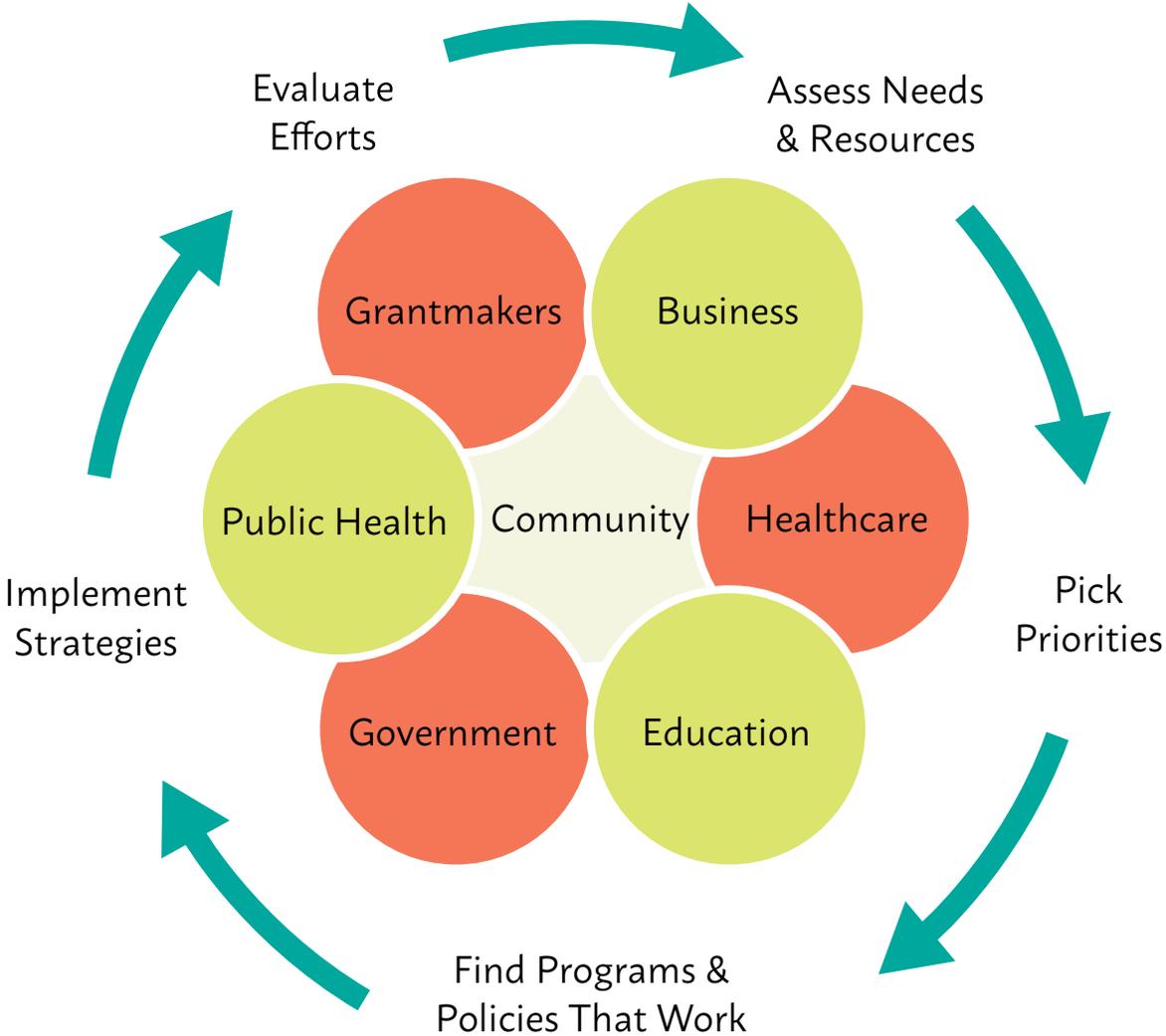
Source: Take Action www.countyhealthrankings.org

Appendix G – Glossary of Key Terms

Community

Community is a group of people who have common characteristics; communities can be defined by location, race, ethnicity, age, occupation, interest in particular problems or outcomes, or other similar common bonds. Ideally, there would be available assets and resources, as well as collective discussion, decision-making and action. (Turnock, BJ. *Public Health: What It Is and How It Works.* Jones and Bartlett, 2009)

Community Assets

Community assets are contributions made by individuals, citizen associations, and local institutions that individually and/or collectively build the community's capacity to assure the health, well-being, and quality of life for the community and all of its members. (*National Association of County and City Health Officials (US). Mobilizing for Action through Planning and Partnerships (MAPP): Achieving Healthier Communities through MAPP, A User's Handbook. 2001 [cited 2012 Nov 7].* http://www.naccho.org/topics/infrastructure/mapp/upload/MAPP_Handbook_fnl.pdf)

Community Health

Community health is a field within public health concerned with the study and improvement of the health of biological communities. Community health tends to focus on geographic areas rather than people with shared characteristics. (http://dictionary.reference.com/browse/community+health) The term "community health" refers to the health status of a defined group of people, or community, and the actions and conditions that protect and improve the health of the community. Those individuals who make up a community live in a somewhat localized area under the same general regulations, norms, values, and organizations. For example, the health status of the people living in a particular town, and the actions taken to protect and improve the health of these residents would constitute community health. (http://www.encyclopedia.com/topic/Community_Health.aspx)

Community's Health

The community's health is the perspective on public health that regards "community" as an essential determinate of health and an indispensable ingredient for effective public health practice. It takes into account the tangible and intangible characteristics of the community, its formal and informal networks.

Community Health Assessment

Community health assessment is a systematic examination of the health status indicators for a given population that is used to identify key problems and assets in a community. The ultimate goal of a community health assessment is to develop strategies to address the community's health needs and identified issues. A variety of tools and processes may be used to conduct a community health assessment; the essential ingredients are community engagement and collaborative participation. (Turnock, B. Public Health: What It Is and How It Works. Jones and Bartlett, 2009).

Community Health Improvement Plan

A community health improvement plan is a long-term, systematic effort to address public health problems on the basis of the results of community health assessment activities and the community health improvement process. A plan is typically updated every three to five years. (http://www.cdc.gov/stltpublichealth/cha/plan.html)

This plan is used by health and other governmental education and human service agencies, in collaboration with community partners, to set priorities and coordinate and target resources. A community health improvement plan is critical for developing policies and defining actions to target efforts that promote health. It should define the vision for the health of the community through a collaborative process and should address the gamut of strengths, weaknesses, challenges, and opportunities that exist in the community to improve the health status of that community (Adapted from: United States Department of Health and Human Services, *Healthy People 2010*. Washington, DC)

This definition of community health improvement plan also refers to a Tribal, state or territorial community health improvement plan.

Community Health Improvement Process

Community health improvement is not limited to issues clarified within traditional public health or health services categories, but may include environmental, business, economic, housing, land use, and other community issues indirectly affecting the public's health. A community health improvement process involves an ongoing collaborative, community-wide effort to identify, analyze, and address health problems; assess applicable data; develop measurable health objectives and indicators; inventory community assets and resources; identify community perceptions; develop and implement coordinated strategies; identify accountable entities; and cultivate community ownership of the process. (National Public Health Performance Standards Program, *Acronyms, Glossary, and Reference Terms*, CDC, 2007. www.cdc.gov/nphpsp/PDF/Glossary.pdf)

Culture of Health

A culture of health is achieved when the collective set of individual and institutional priorities promotes comprehensive health, generates a perception of the need for well-being, and empowers all to lead healthier lives now and in generations to come. We believe this is best accomplished by weaving health into all policies, decisions and activities.

Demographics

Demographics are characteristic related data, such as size, growth, density, distribution, and vital statistics, which are used to study human populations. (Turnock, BJ. *Public Health: What It Is and How It Works*. Jones and Bartlett. 2009)

Determinants of Health

Determinants of health are factors that influence the health status of an individual and/or a population are called determinants of health. They may be categorized in several groups such as the genetic or biological causes and predisposition of disease, mortality, or disability; the behavioral aspects of disease and illness (choices, lifestyle, etc.); the cultural, political, economic, and social aspects of disease and illness; the environmental aspects of disease and illness; the policy aspects of disease and illness; and the individual and response to all of the above. (Institute of Medicine. *The Future of the Public's Health in the 21st Century.* National Academies Press. Washington, DC. 2003).

Evidence-based Practice

Evidenced-based practice involves making decisions on the basis of the best available scientific evidence, using data and information systems systematically, applying program-planning frameworks, engaging the community

in decision making, conducting sound evaluation, and disseminating what is learned. (Brownson, Fielding and Maylahn. *Evidence-based Public Health: A Fundamental Concept for Public Health Practice.* Annual Review of Public Health).

Goals

Goals are general statements expressing a program's aspirations or intended effect on one or more health problems, often stated without time limits. (*Turnock, B.J. Public Health: What It Is and How It Works. 4th ed. Sudbury, MA: Jones and Bartlett; 2009.*)

Health Disparities

Health disparities are differences in population health status (incidence, prevalence, mortality, and burden of adverse health conditions) that can result from environmental, social and/or economic conditions, as well as public policy. These differences exist among specific population groups in the United States and are often preventable. *(*Adapted from: National Association of County and City Health Officials (US). *Operational Definition of a Functional Local Health Department [online].* 2005 [cited 2012 Nov 8]. Available from URL http://www.naccho. org/topics/infrastructure/accreditation/OpDef.cfm. National Cancer Institute (US). Health Disparities *Defined [online]. 2010 [cited 2012 Nov 8]* http://crchd.cancer.gov/disparities/defined.html)

Health in all Policies

Health in all policies is an approach that rests on the assumption that health is fundamental to every sector of the economy and that every policy—large and small—should take into consideration its effect on health. (Institute of Medicine (US). *For the Public's Health: Revitalizing Law and Policy to Meet New Challenges.* Washington, DC: National Academies Press; 2012.)

Health Inequity

Health inequity refers to differences in population health status and mortality rates that are systemic, patterned, unfair, unjust, and actionable, as opposed to random or caused by those who become ill. (Margaret M. Whitehead, "The Concepts and Principles of Equity and Health," 22(3) *International Journal of Health Services* (1992): 429-445.)

Healthy People 2020

Healthy People 2020 is a document that provides science-based, 10-year national objectives for improving the health of all Americans. For three decades, Healthy People has established benchmarks and monitored progress over time in order encourage collaborations across sectors; guide individuals toward making informed health decisions and measure the impact of prevention activities. (www.healthypeople.gov/2020)

Intervention

Intervention is a generic term used in public health to describe a program or policy designed to have an impact on a health problem. For example, a mandatory seat belt law is an intervention designed to reduce the incidence of automobile-related fatalities. Five categories of health interventions are: (1) health promotion, (2) specific protection, (3) early case finding and prompt treatment, (4) disability limitation, and (5) rehabilitation. (Turnock. *Public Health: What It Is and How It Works (4th Ed).* Jones and Bartlett. MA. 2009

Mission Statement

A mission statement is a written declaration of an organization's core purpose and focus that normally remains unchanged over time. Properly crafted mission statements (1) serve as filters to separate what is important from what is not, (2) clearly state which markets will be served and how, and (3) communicate a sense of intended direction to the entire organization. (BusinessDirectory.Com. *"Mission Statement" [online].* No date [cited 2012 Nov 8]. http://www.businessdictionary.com/definition/mission-statement.html)

Objectives

Objectives are targets for achievement through interventions. Objectives are time limited and measurable in all cases. Various levels of objectives for an intervention include outcome, impact, and process objectives. (*Turnock, B.J. Public Health: What It Is and How It Works. 4th ed. Sudbury, MA: Jones and Bartlett; 2009.*)

Partnership

A partnership is a relationship among individuals and groups that is characterized by mutual cooperation and responsibilities. (Scutchfield, FD, and CW Keck. *Principles of Public Health Practice.* Delmare CENGAGE Learning. 2009)

Population Health

Population health is a cohesive, integrated and comprehensive approach to health considering the distribution of health outcomes within a population, the health determinants that influence the distribution of care, and the policies and interventions that impact and are impacted by the determinants. (Nash, Reifsnyder, Fabius, and Pracilio. *Population Health: Creating a Culture of Wellness.* Jones and Bartlett. MA, 2011)

Practice-based Evidence

For Tribal health departments, for the purposes of PHAB accreditation, practice-based evidence is the incorporation of evidence grounded in cultural values, beliefs, and traditional practices. (Public Health Accreditation Board. *Standards and Measures Version 1.5.* Alexandria, VA, May 2011)

Promising Practice

Promising practice is defined as a practice with at least preliminary evidence of effectiveness in small-scale interventions or for which there is potential for generating data that will be useful for making decisions about taking the intervention to scale and generalizing the results to diverse populations and settings. (U.S. Department of Health and Human Services, Administration for Children and Families Program Announcement. *Federal Register,* Vol. 68, No. 131, July 2003.)

Public Health System

Public health systems are commonly defined as "all public, private, and voluntary entities that contribute to the delivery of essential public health services within a jurisdiction." This concept ensures that all entities' contributions to the health and well-being of the community or state are recognized in assessing the provision of public health services.

The public health system includes:

• Public health agencies at state and local levels

• Healthcare providers

• Public safety agencies

• Human service and charity organizations

• Education and youth development organizations

• Recreation and arts-related organizations

• Economic and philanthropic organizations

• Environmental agencies and organizations

State Health Department

For the purposes of PHAB accreditation, a state health department is defined as the governing entity with primary statutory authority to promote and protect the public's health and prevent disease in humans. This authority is defined by state constitution, statutes or regulations, or established by Executive Order. State health departments may be part of an umbrella organization, super public health agency, or super agency that oversees public health functions as well as other government functions. (Public Health Accreditation Board. *Guide to National Public Health Department Accreditation Version 1.0.* Alexandria, VA, May 2011).

Values

Values describe how work is done and what beliefs are held in common as a basis for that work. They are fundamental principles that organizations stand for. (Swayne, Duncan, and Ginter. *Strategic Management of Health Care Organizations.* Jossey Bass. New Jersey. 2008)

Vision

Vision is a compelling and inspiring image of a desired and possible future that a community seeks to achieve. A vision statement expresses goals that are worth striving for and appeals to ideals and values that are shared among stakeholders (Bezold, C. *On Futures Thinking for Health and Health Care: Trends, Scenarios, Visions, and Strategies.* Institute for Alternative Futures and the National Civic League. Alexandria, VA. 1995)

Well-Being

Well-being is the state of being comfortable, healthy, and happy.

Wellness

Wellness is the quality or state of being in good health especially as an actively sought goal. (www.merriam-webster.com/dictionary/wellness)

MAPP ASSESSMENTS

Appendix H – State Health Status Assessment

Mississippi State Health Assessment Health Status Report

January 2015

Table of Contents

Introduction

In 2014, the Mississippi State Department of Health embarked on a journey to develop a State Health Assessment (SHA) by adapting the Mobilizing for Action through Planning and Partnerships (MAPP) process. MAPP is a community-driven[3] strategic planning framework that assists communities in developing and implementing efforts around the prioritization of public health issues and the identification of resources to address them as defined by the 10 Essential Public Health Services. The MAPP process includes four assessment tools, as shown in the graphic below.

Figure 1. MAPP Model
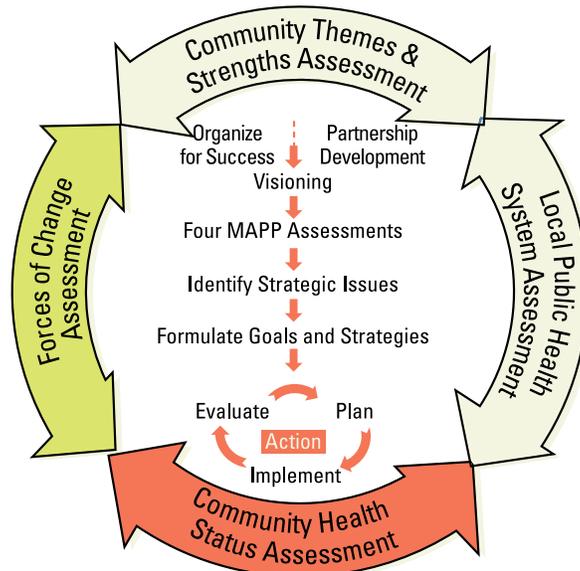
Source: MAPP Model, Achieving Healthier Communities MAPP User's Handbook

Within the MAPP process, there are four assessment tools. One of these assessment tools is the Health Status Assessment (HSA). The HSA is designed to assess the health of individuals in the state as well as factors that can impact the health of communities. This is done by compiling data around a few specific indicators of health. While many indicators are used in other states and communities, the state is free to select any indicators that reveal pertinent information about its residents' health. The results of the HSA will be viewed in the context of the other three assessments in the MAPP process, which include the Community Themes and Strengths Assessment (CTSA), the State Public Health System Assessment (SPHSA), and the Forces of Change Assessment (FOCA). Strategic analysis of these assessment results will inform the identification of prevailing issues, which will be prioritized. Goals and action plans will be developed for each of these priority issues. These action plans will be implemented and aligned to improve the state public health system and ultimately the health and well-being of Mississippi residents.

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3 For the purposes of the MAPP process, the Mississippi State Department of Health defines community broadly as the residents of the state of Mississippi and the state's partners through the state's public health system, including state and local government agencies, businesses, non-profits, academia, and other entities that influence the health and well-being of Mississippians.

Assessment Methodology

The Health Status Assessment uses existing data from a variety of sources to answer the questions, "How healthy are our residents?" and "What does the health status of our community look like?" This is done by taking a list of key health indicators, examining trendsb and making comparisons between population groups.

To decide which indicators best reflect the health of Mississippians, department heads at the Mississippi State Department of Health (MSDH) compiled a list of the measures that their programs use to evaluate health status. Additional indicators were added to this list after reviewing Health Status Assessments from other jurisdictions. MSDH staff then condensed the list of indicators by eliminating redundancies and examining the availability, reliability, and repeatability of data over time. The State Health Officer then approved the final list of indicators included in this report. The text and information included in this report represents the collaborative effort of program staff at MSDH as well as input from community partner organizations.

Data for this report was obtained from the MSDH Office of Vital Statistics, the Behavioral Risk Factor Surveillance System (BRFSS), the Youth Risk Behavior Surveillance System (YRBSS), the United States Census Bureau, the Centers for Disease Control and Prevention, and other sources. Where appropriate, information is included regarding disparities that exist on gender, racial, or geographic lines. Furthermore, comparisons are made between United States and Mississippi data to show how the health of Mississippians compares to the national average. In some cases, data regarding certain geographies or racial groups may be excluded due to the fact that a low number of individuals in a sample can lead to unreliable conclusions.

Mississippi's small population makes it difficult to examine trends in data within a very limited geographic region or a racial group that is not very prevalent in the state. For this reason, when racial groups are discussed, data on the white and black populations is always reported, but data on other racial groups is combined into an "other" racial category or may be absent altogether.

One other consideration to note is the use of self-reported data. Some of the data sources referenced throughout this document are the result of surveys that are administered to a random sample of Mississippians each year. These include BRFSS and the YRBSS. Self-reported data, while useful, may not always be an accurate indicator of the presence of diseases. For example, self-reported data about the prevalence of diabetes underestimates the actual prevalence of the disease because many diabetes cases are undiagnosed. Keep this in mind when reviewing sections of this report that reference self-reported data.

Executive Summary

Geographic, Demographic, and Socioeconomic Profile

Mississippi is located in the Southeastern United States. It is bordered by Alabama to the east, Tennessee to the north, Louisiana and the Gulf of Mexico to the south, and by Arkansas and Louisiana across the Mississippi River to the west. These boundaries outline an area approximately 48,000 square miles with a north-south length of 350 miles and an east-west width of 180 miles. Mississippi is the 32nd largest state in the United States. Appendix 1 includes a map of Mississippi's counties grouped by public health district. These districts are referenced throughout the text of this document.

The residents of Mississippi account for just less than 1% of the United States population. As of 2013, Mississippi has an estimated population of 2,991,207. Mississippi's population is growing slowly compared to the rate of growth in the United States overall. More than half (43) of Mississippi's 82 counties lost population between 2000 and 2010, and the trend continues based on 2013 population estimates. Nearly 14% of the residents are age 62 or older. Approximately 25% of the residents are under 18 years old. "White, non-Hispanic" is the predominant racial/ethnic group comprising approximately 60% of the population, with "Black/African American, non-Hispanic" as the second largest group accounting for over 37% of the population. Mississippi has the highest percentage of residents identifying as "Black/African American" in any U.S. state. Nearly 3% of the population identifies as Hispanic or Latino.

In August 2014, Mississippi had an unemployment rate of 7.4% compared to the national rate of 6.3%. Nearly 22.7% of the population in the state is at or below the poverty level, compared to United States' 15.4%. The state's per capita income was $20,618. The median household income for the state was $39,031. The percentage of residents aged 25 and older who had obtained a high school diploma or GED was approximately 82%. The socioeconomic disadvantages facing many Mississippi residents are consistently linked to poor health outcomes in communities.

Access to Health Care

- The percentage of residents lacking health insurance is 17.5% for Mississippi.

- 27.7% of adult black residents reported that they were unable to see a doctor in past 12 months because of cost compared to 18.1% of adult white residents.

Mortality and Leading Causes of Death

- In terms of population health, the top ten causes of death were cardiovascular (heart) disease, cancer, chronic obstructive pulmonary disease (COPD), accidents, cerebrovascular disease (stroke), diabetes, Alzheimer's disease, nephritis (kidney disease), septicemia, and pneumonia/influenza.

- In 2012 heart disease was the leading cause of death in Mississippi, accounting for 24.6% of all deaths, followed by cancer with 21.9%. These two causes account for nearly 47% of all deaths during 2012.

- Lung cancer caused slightly over 29% of deaths related to cancer during 2012.

- In 2012 there were 1,596 deaths due to unintentional injuries, a rate of 62.5 per 100,000 for white residents compared to 40.0 per 100,000 for black/other residents. The overall rate for unintentional injuries was 53.5 per 100,000.

Infectious Diseases

- Black residents comprise only 38% of the state's total population, but account for more than 75% of all new HIV cases and had an incidence rate in 2012 nearly seven times that of white residents.

- Adolescents and young adults aged 15-24 years make up only 15% of Mississippi's population, yet represented 76% of all cases of chlamydia reported in 2012.

- In 2012, Mississippi ranked worst among the 50 states in gonorrheal infections (230.8 per 100,000 persons.

Chronic Disease Risk Factors

- In 2012, Mississippi's obesity rate (body mass index of 30 or higher) was 34.6%.

- In 2013, the percentage of the population who are current smokers (aged 18 and older) was 24.0%. Mississippi had the 5th highest smoking prevalence for adults among the 50 states and Washington, D.C. The national average for 2013 was 19%. Most smokers in Mississippi have annual household incomes less than $24,999 and have not completed high school.

- Obesity and smoking are associated with lung cancer, cardiovascular diseases, respiratory diseases, and diabetes. The disease burden from these deadly conditions in Mississippi could be reduced or alleviated by behavioral changes.

- Mississippians with less education and in lower income levels reported the highest percentage of physical inactivity. In 2013, 38.1% indicated no physical activity during the past 30 days.

Maternal & Child Health Indicators

- In 2012, approximately 85% of Mississippi births were to mothers who had prenatal care beginning in the 1st trimester.

- The 2012 crude birth rate was 12.9 per 1,000 population for Mississippi.

- In 2012, 11.6% of births in Mississippi were of low birth weight.

- The teenage birth rate was 46 per 1,000 females (15-19 year olds) for Mississippi in 2012.

- In 2012, the infant mortality rate was lower in white individuals (5.4 per 1,000 live births) than in black/other individuals (13.1 per 1,000 live births) for Mississippi. The overall rate for the state was 8.8 infant deaths per 1,000 live births. This is significantly higher than the U.S rate of 5.98 deaths per 1,000 live births in the same year.

Demographic and Socioeconomic Factors

While genetics and personal lifestyle are major influencers of health, many differences in health status occur along demographic and social lines, indicating that social determinants play a large role in a person or population's health. The social determinants of health are the conditions in which people are born, grow, live, work, and age. These circumstances are shaped by the distribution of money, power, and resources at global, national, and local levels.[4] Social determinants of health contribute to health inequities, explaining why people living in poverty tend to die at younger ages and get sick more often than those living in more privileged conditions.

The World Health Organization (WHO) Commission on Social Determinants of Health concluded in 2008 that the social conditions in which people are born, live, and work are the most important determinant of one's health status. The neighborhoods in which people live may be more important to their health than their genetics. Low-income neighborhoods may offer inadequate healthcare services, fewer employment opportunities, lower quality education, and higher crime rates when compared to more mixed-income or high-income communities, all factors which may contribute to continued poverty and the development of poor health outcomes.

Because of the importance of demographic and socioeconomic factors in shaping health outcomes, a summary of these factors for the Mississippi population is included. Additionally, where relevant, information is provided throughout this document regarding the differences that occur between population groups with regard to health outcomes.

Race and Ethnicity

Mississippi's racial distribution is indicated by Figure 2 below. The population of the state is largely made up of people identifying as white or black. Though white residents are a majority statewide, in many counties, black residents are the majority racial group. The black population is growing at a faster rate than the white population, meaning that the percentage of the total population consisting of black residents is increasing while the percentage of the population consisting of white residents is decreasing.

Figure 2. Mississippi Racial Distribution
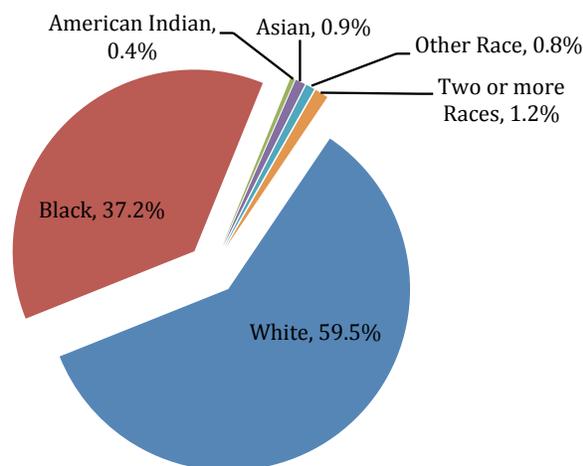
Source: American Community Survey 5-year Estimates, 2009-2013

4 http://www.who.int/social_determinants/sdh_definition/en/

UProot   Building a healthier Mississippi from the ground UP.   uprootms.org

Mississippi's Hispanic population is growing as indicated by Table 1 below. In 2013, an estimated 2.69% of the population identified as Hispanic or Latino. It is important to note that ethnicity and race are not exclusive of one another. People who identify as Hispanic or Latino can be of any race.

Table 1. Mississippi Hispanic/Latino Distribution

Hispanic Or Latino And Race	1990		2000		2010		2013	
	#	%	#	%	#	%	#	%
Total population	2,573,216	100.0	2,844,658	100.0	2,967,297	100.0	2,991,207	100.0
Hispanic or Latino (of any race)	15,931	0.62	39,569	1.39	81,481	2.75	80,455	2.69
Not Hispanic or Latino	2,557,285	99.4	2,805,089	98.61	2,885,816	97.25	2,910,752	97.31

Source: U.S. Census FactFinder

As this group grows, cultural and linguistic factors must be accounted for in the provision of health services. Table 2 shows the linguistic distribution of Mississippi's population. The second most commonly spoken language in the state is Spanish.

Table 2. Language Most Commonly Spoken at Home - Mississippi

Subject	Estimate*	Speak English "very well"	Speak English less than "very well"
Population 5 years and over	2,771,287	98.4%	1.6%
Speak only English	96.1%	(X)	(X)
Speak a language other than English	3.9%	59.9%	40.1%
Spanish or Spanish Creole	2.4%	55.6%	44.4%
Other Indo-European languages	0.6%	76.7%	23.3%
Asian and Pacific Island languages	0.6%	54.1%	45.9%
Other languages	0.3%	71.9%	28.1%

Source: American Community Survey 5 Year Estimates, 2009-2013

Population Growth and Migration

As of 2013, Mississippi has an estimated population of 2,991,207. Mississippi's population is growing slowly compared to the rate of growth in the United States as a whole (Table 3).[5]

Table 3. Population of the United States and Mississippi and Percentage Change Over Time

	1970	1980	1990	2000	2010	2013 Est.
U.S. Population	203,211,925	226,548,632	248,709,873	281,421,906	308,745,538	316,128,839
Growth from Previous Census	13.3%	11.5%	9.8%	13.2%	9.7%	2.4%
Mississippi Population	2,226,138	2,524,011	2,577,256	2,844,658	2,967,297	2,991,207
Growth from Previous Census	2.2%	13.4%	2.1%	10.4%	4.3%	0.8%
% of U.S. population in Mississippi‡	1.10%	1.11%	1.04%	1.01%	0.96%	0.95%

‡ Significant Chi Square for linear trend (1970-2010). $X^2 = 34.04$, 4 df, $p \leq 0.001$

Sources: 1970 to 2010 from U.S. Census documents, 2013 from American Community Survey.

Based on gains between the 2000 and 2010 Census, DeSoto County alone accounted for 44% of the growth in the state population. Six counties (DeSoto, Harrison, Lafayette, Lamar, Madison, and Rankin) accounted for a gain of 33,852 residents between the 2010 U.S. Census and July 1, 2013, population estimates. With the exception of Lafayette County, these counties are all in metropolitan areas. Overall only 19 counties are estimated to have gained population and 61 lost between 2010 and 2013. While several counties have experienced significant population gains, many counties have static or declining populations. More than half (43) of Mississippi's 82 counties lost population between 2000 and 2010 and the trend continues based on 2013 population estimates (Figure 3 and Table 4).[6]

5 The rate of population growth over the past few decades is such the other states outpaced Mississippi resulting in the loss of a member of the U.S. House of Representatives in 2000.

6 Many of the current trends are the continuation of long term patterns beginning in the 1930's with the mechanization of agriculture and radical shifts in the need for labor.

Figure 3. Number of Counties That Gained or Lost Population Over Time
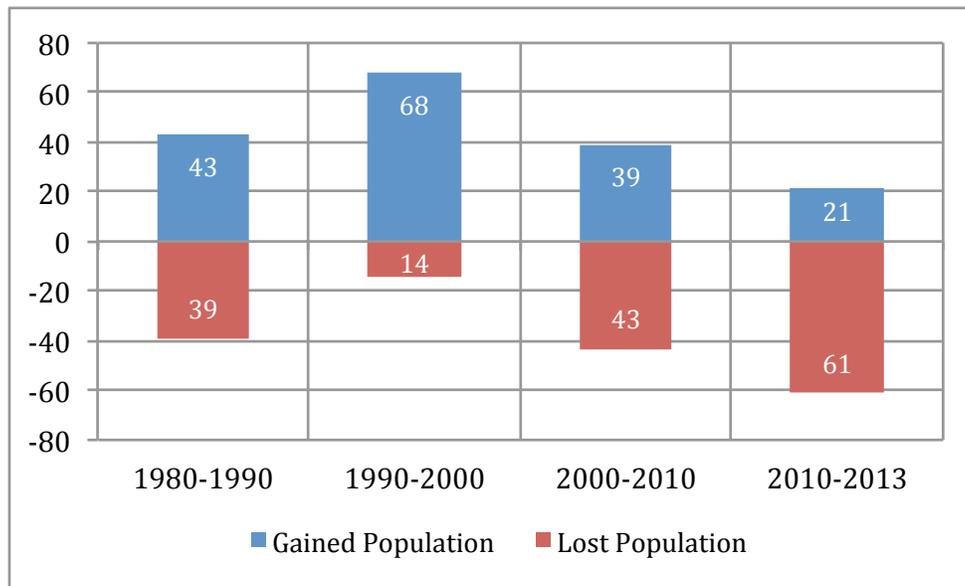
Sources: 1970 to 2010 from U.S. Census documents, 2013 from American Community Survey.

Table 4. Components of Change in the Mississippi Population Between 2000 and 2010

	Total	White	Black	Other
2000 Population	2,844,658	1,746,099	1,033,809	64,750
2010 Population	2,967,297	1,754,684	1,098,385	114,228
2000–2010 Difference	122,639	8,585	64,576	49,478
Natural Growth†	151,610	44,367	101,236	6,007
Net Migration	–28,971	–35,782	–36,660	43,471
Number of Counties with:				
Population Growth/Loss	39/43	32/50	43/39	73/9
Natural Growth/Loss†	80/2	47/35	81/1	78/4
Net Migration Growth/Loss	27/55	26/56	21/61	72/10

† Number of births minus the number of deaths during time period of interest.

Source: 2000 and 2010 U.S. Census and Components of Change

Demonstrating the rural to urban shift that has occurred over time, historical USDA Census of Agriculture data shows that in 1959 there were about 138,000 Mississippi farms, averaging 135 acres, while the most current 2012 agricultural census data shows 38,000 farms remaining that average 287 acres. The total number of farm acreage in Mississippi fell from approximately 19 million to 11 million acres from 1959 to 2012.[7]

There are numerous classifications in use by agencies regarding the urban or metropolitan and rural mix of areas. One of the more commonly used classifications was developed by the U.S. Office of Management and Budget (OMB) and is a simple two tier classification of metropolitan (metro) and nonmetropolitan (nonmetro). In 2010,

7 In addition to the trend of fewer farms with larger acreage, many acres have been lost to urban/suburban sprawl or allowed to remain idle or fallow and thus not considered farm under the Census of Agriculture definition.

17 of the 82 Mississippi counties were considered metro, and those 17 counties are grouped in four areas in the state. The four areas considered metro are made up of counties surrounding the Memphis area (Districts I and II), Jackson (District V), Hattiesburg (District VIII) and the Gulf Coast (District IX). Table 5 below lists Mississippi's 17 metro counties in 2010 by metro area.

Table 5. Mississippi Metropolitan Counties, 2010

Metropolitan Area	County	
Memphis	Benton	Tate
	DeSoto	Tunica
Jackson	Copiah	Rankin
	Hinds	Simpson
	Madison	Yazoo
Hattiesburg	Forrest	Perry
	Lamar	
Gulfport-Biloxi-Pascagoula	Hancock	Jackson
	Harrison	

As seen nationally, nonmetro areas are the ones typically experiencing population loss (Table 6).

Table 6. Metro and Nonmetro Components of Population Change

Area	2000 Population	2010 Population	Diff	% Diff	Births	Deaths	Natural Growth	Net Migration	% Diff
State	2,844,658	2,967,297	122,639	4.3%	435,534	283,924	151,610	-28,971	-1.0%
Metro (17 counties)	1,194,552	1,331,025	136,473	11.4%	190,151	108,760	81,391	55,082	4.6%
Nonmetro	1,650,106	1,636,272	-13,834	-0.8%	245,383	175,164	70,219	-84,053	-5.1%
% Metro	42.0%	44.9%			43.7%	38.3%	53.7%		
% Nonmetro	58.0%	55.1%			56.3%	61.7%	46.3%		

Source: 2000 and 2010 U.S. Census and Components of Change

Fourteen of the 17 metro counties experienced population growth between 2000 and 2010.[8] The nonmetro counties experienced loss overall with 40 of the 65 losing population.[9]

The continued population loss and low population density of many rural counties in Mississippi raises challenges for service provision in those counties.

8 Of the three metro counties that lost population, one of those was Harrison County that was heavily impacted by Hurricane Katrina in 2005. However the county has rebounded and is now estimated to have an average annual population increase of about 3,000 per year since 2010.

9 One other measure of mobility is given by the American Community Survey and measures the percentage of the population 1 year of age and above that lived in the same house the previous year. As of 2012, 85.8% of Mississippians reported living in the same place over the previous year. Of those that had moved (13.9%), over half reported a local move within the same county. These rates are very comparable to the overall U.S. population.

Gender

Mississippi's gender ratio is very similar to the U.S. Overall, 51.4% of Mississippi's population is female and 48.6% is male.[10]

Figure 4. Gender Ratio by Age, Mississippi 2010
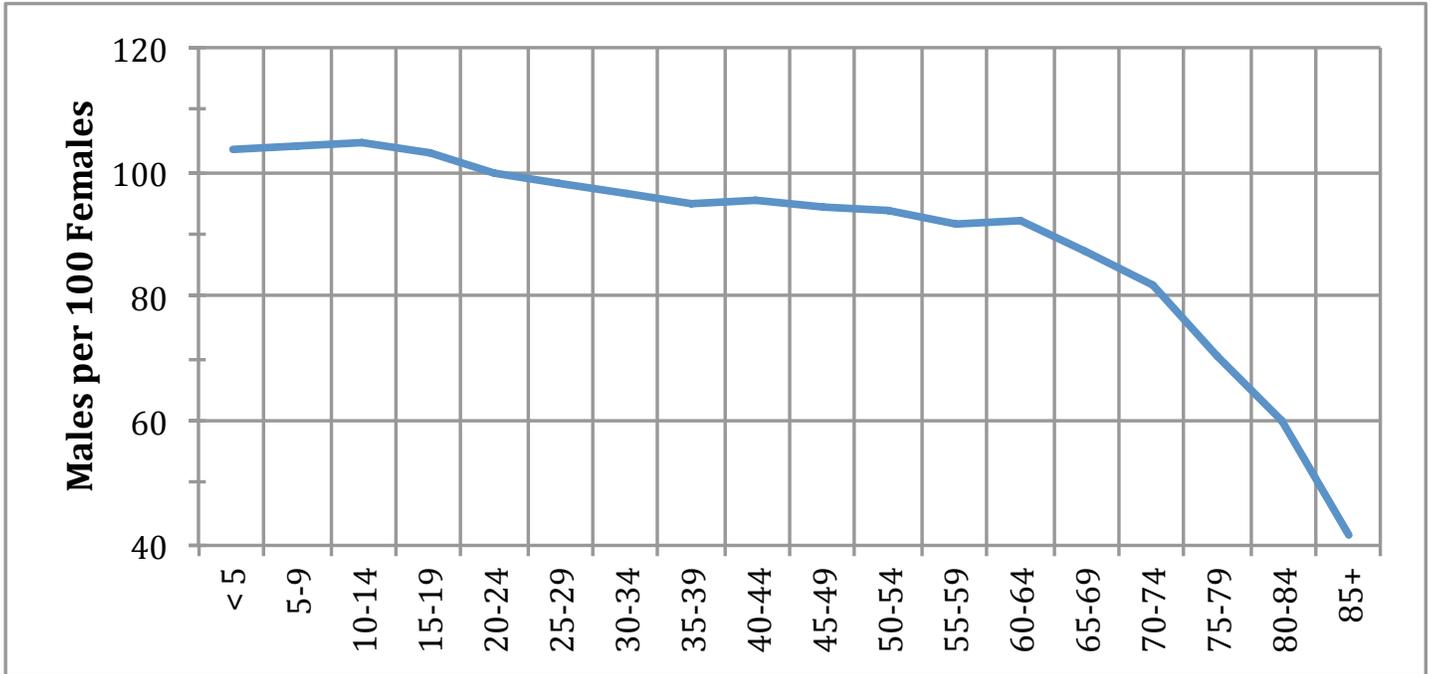
Source: 2010 U.S. Census

10 From birth through the early 20's, males outnumber females as indicated by the males to 100 females ratio being greater than 100 (Figure 4). The population makeup changes over the course of life, and females begin to outnumber males by age 25. Due to differential and higher mortality in males, the proportion of males falls steadily through the remaining age groups, particularly for those 65 years of age and older. While small differences occur, the same pattern is seen across race/ethnicity groups.

Age

Mississippi's population is aging, similar to the rest of country. The median age for the Mississippi population was 36.4 in 2010 compared to 33.8 in 2000, 31.1 in 1990, and 27.7 in 1980. While the median age is higher for white residents than black residents in Mississippi, both population groups experienced an increase of roughly ten years between 1980 and 2013. As seen nationally, rural Mississippi counties with little or no natural growth (births minus deaths) are aging at a faster rate. The lack of natural growth coupled with outmigration in many of these counties leads to accelerated population aging. In many of the smaller rural counties the difference in the median age between the white and black residents is at or nearing generational differences.

Figure 5. Changes in Median Age Over Time, Mississippi 1980-2013
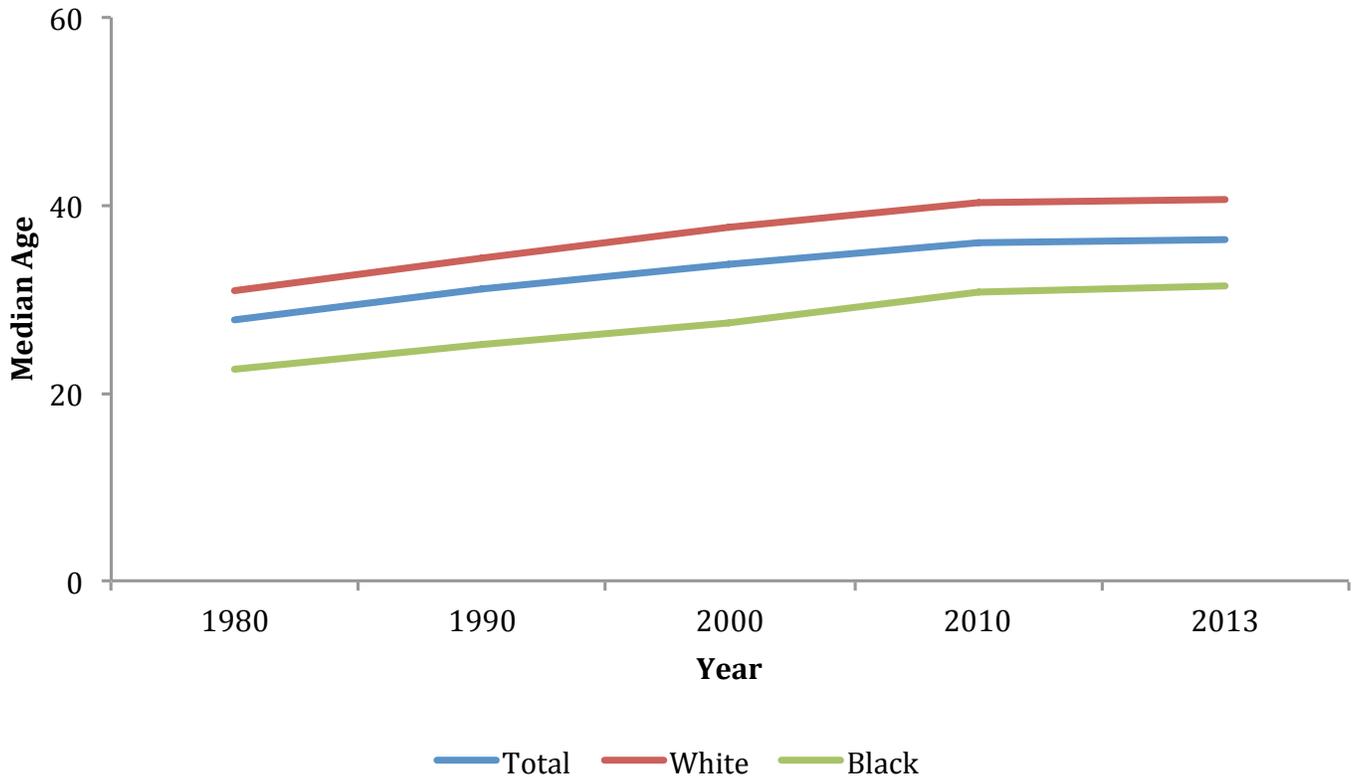
Sources: 1980-2010 U.S. Census and 2013 American Community Survey

There are also fairly unique population characteristics that can have an effect on the reality and perceptions of the health status of the overall population. Overall, minorities comprised 40.9% of the state population in 2010 with people identifying as black accounting for 37% of the population. Nationally the numbers are 26.3% for all minorities combined and 12.6% for people identifying as black. Twenty seven (27) of 82 counties have a minority population larger than the white population.

In terms of shifts in the age structure over time, several observations should be noted that can have an effect on potential services needed within the state. As seen nationally, the number and proportion of those aged 65 years or older have increased and are expected to continue increasing. There was a 2% jump in that age range in the state between 2000 and 2010 Census, rising from 12% to 14%, and resulting in about 37,000 additional older adults in the state. During the same time period there was a decline in the number and percentage for those less than 15 years of age. Those 15 and under comprised 28% of the total population in 2000 compared to 25% in 2010. Part of

the decline is due to lower birth rates coupled with a drop in the percentage of females who are of child-bearing age (15 to 44 years of age). While the number of females in the 15-44 age group increased approximately 55,000 between 2000 and 2010, the proportion of females in this age range as a percentage of all Mississippi females decreased from 43% to 39%.

The demographic makeup and distribution of Mississippi is unique in a number of ways. Factors such as race/ethnic diversity and high rates of people living in poverty, coupled with existing health disparities, present challenges for public health.

Educational Attainment

Just as the demographic distribution of a population can influence a number of health related concerns, factors of socioeconomic origin can have a significant effect at the population level as well. This section will present some of the more common factors known to potentially influence the health and health related issues groups. Just as in demographics, the social and economic factors refer to a population group or groups and not individuals.

The Economic Research Service of the USDA refers to educational attainment as an "indicator of the stock of human capital in a community or region."[11] Numerous other social and economic characteristics of an area will be interrelated and tied to the educational status of the area. Over a longer term, education can play a role in demographics, primarily through out migration of more educated young adults seeking opportunity. Mississippi lags the U.S. in several measures related to education. The state is comparable percentage wise for those with high school and some college or an associate's degree, but has a higher percentage that did not finish high school as well as a lower percentage with a bachelor's degree or higher (Figure 6).

Figure 6. Educational Attainment for Population Aged 25 Years and Older, 2008-2012
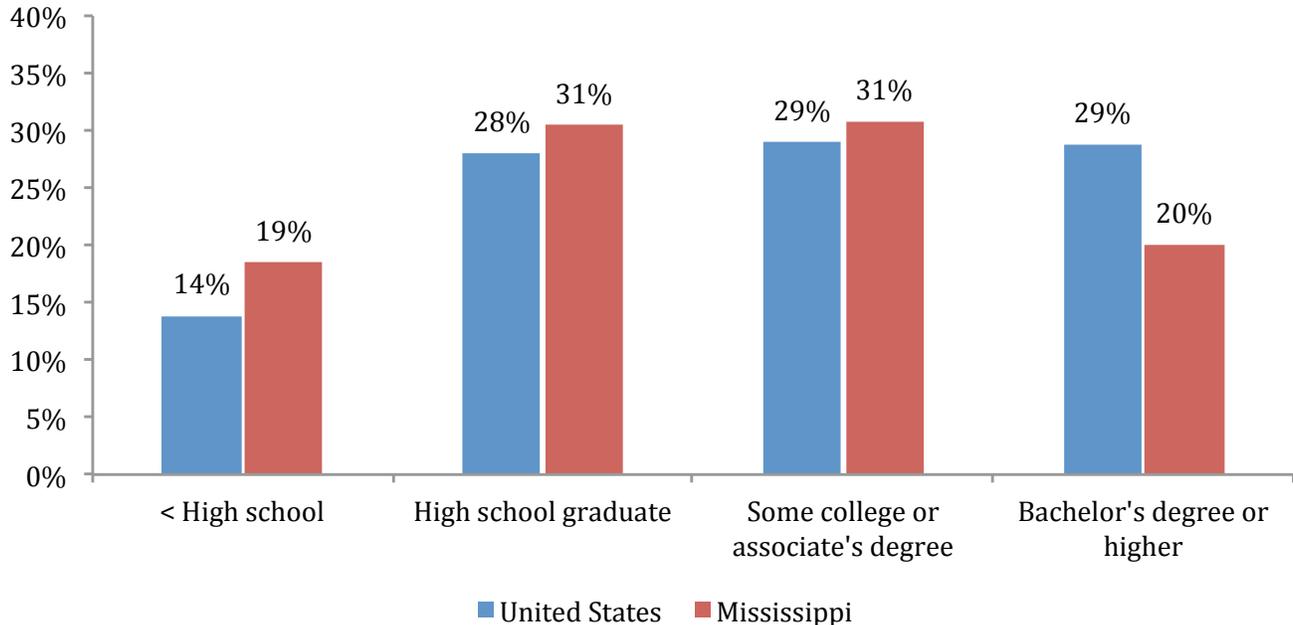
Source: 2008-2012 five-year American Community Survey

11 Marré, Alexander. "Rural Areas Lag Urban Areas in College Completion" Amber Waves, December 01, 2014, http://www.ers.usda.gov/amber-waves/2014-december/rural-areas-lag-urban-areas-in-college-completion.aspx

What is not well documented or measured is the "brain drain" effect seen for areas where mainly younger adults finishing their education migrate from their home county or state for better employment opportunities. Some areas of the state also have a high rate of high school dropouts. Figure 7 presents a comparison of those individuals who have less than a high school education between the United States, Mississippi, and the metro/nonmetro areas of the state. While the state's metro counties compare favorably overall and by race with the country, the more rural counties have a substantially higher number who failed to complete high school. The overall educational attainment of communities can have an impact on numerous other economic parameters, such as occupation and income, or influence the reverse as measured by unemployment and poverty. Economic development opportunities can be also be limited by the educational level of the potential work force.

Figure 7. Percentage of Population Aged 25 and Older That Did Not Complete High School, 2008-2012
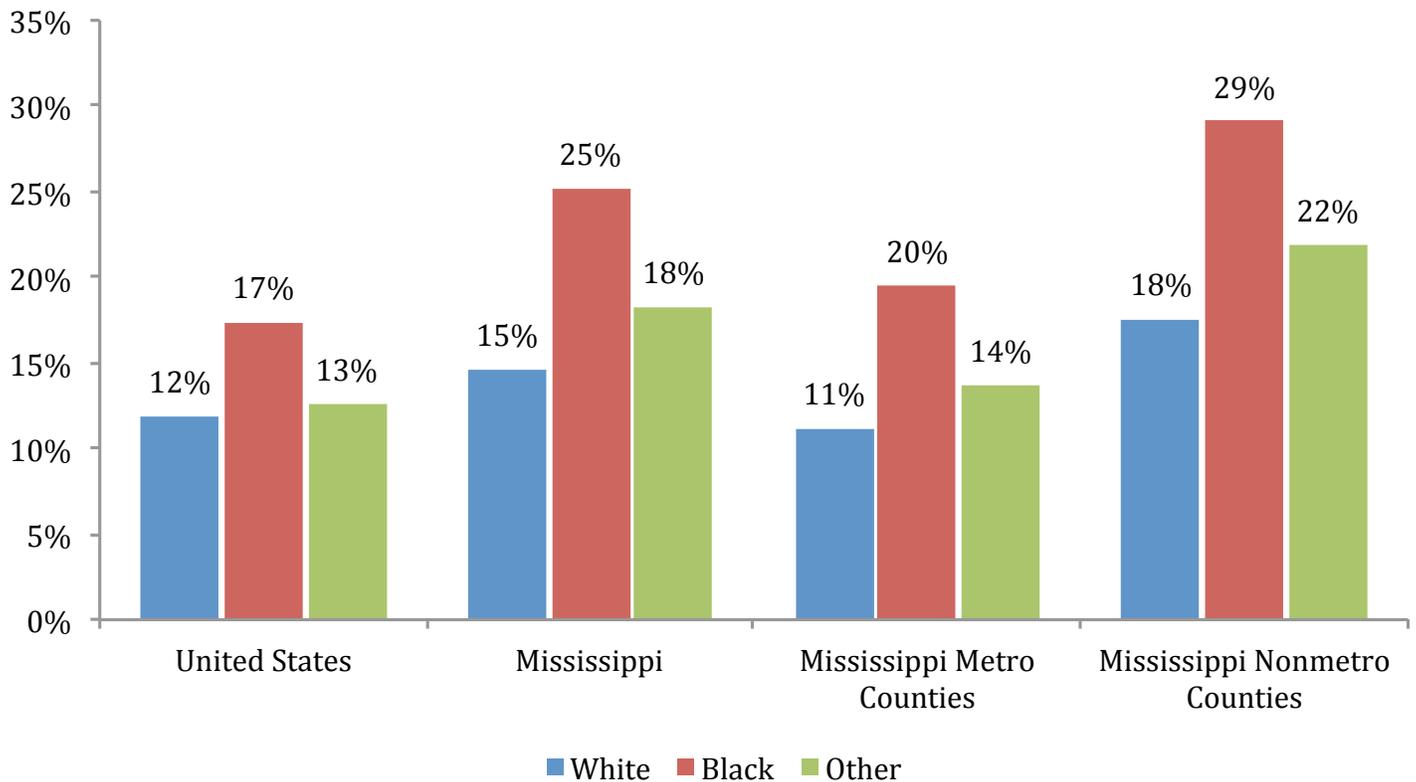
Source: 2008-2012 five-year American Community Survey

Income and Poverty

Based on 2013 inflation adjusted dollars from the American Community Survey, Mississippi households lag the national median income of $53,000 by approximately $13,000. A comparison of the distribution of household income presented in Figure 8.

Figure 8. Distribution of Household Income, 2008-2012

Source: 2008-2012 five-year American Community Survey

Substantial differences occur when income is examined by the type and educational level of households. There is only slight variation between the U.S. median income and state median income for those with less than a four year college degree as seen in Figure 9. Much larger discrepancies are seen between the state and national levels for those households with college and graduate degrees.

Figure 9. Median Earnings by Education
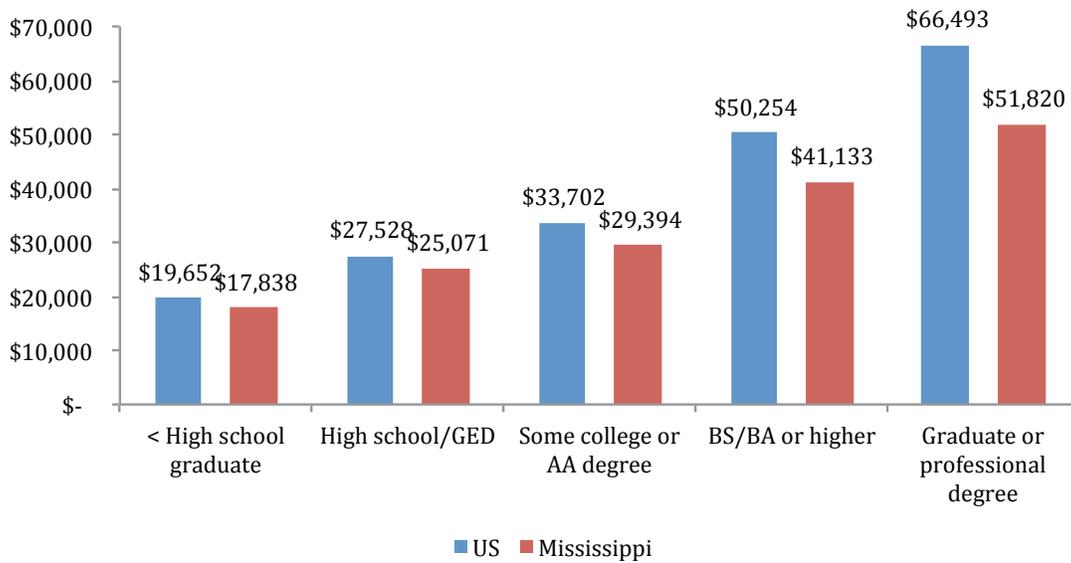
Source: 2008-2012 5-year American Community Survey

The type of household structure plays a large role in the resulting median income with married-couple families having a two- to three-fold higher income than nonfamily household both at the national and state level. (Figure 10). Nationally 73.5% of families are married couples compared to 66.5% for the state. Part of the differences in income is due to a large number of both spouses working in married-couple households.

Figure 10. Median Income by Type of Household
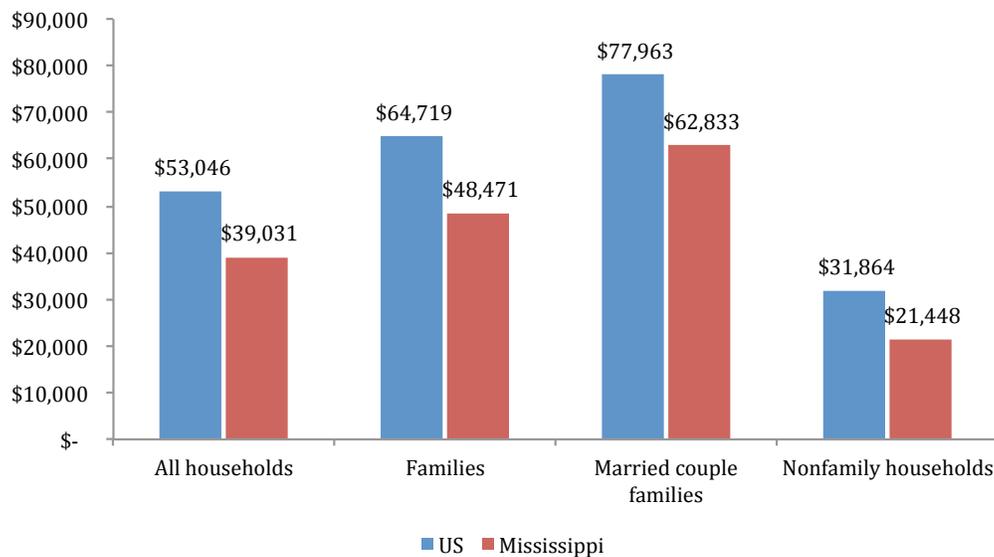
Source: 2008-2012 five-year American Community Survey

As noted, localities vary in their ability to support the financial well-being of the area for a number of reasons. One such delineation is along the metro vs. nonmetro (or rural) lines. For the 17 metro counties the 2013 median earnings for those age 25 and over and employed was 26,000 to 41,000 dollars compared to 19,000 to 33,000 dollars for the 65 rural or nonmetro counties in the state. Similar differences are seen for 2013 median household income with the metro counties ranging from 31,446 to 59,904 dollars and the nonmetro counties running 22,325 to 43,328.

As one might expect the rates for poverty behave in an opposite manner. Again from the 2013 American Community Survey data, the overall poverty rate for the U.S. in 2013 was reported as 14.2% compared to 21.3% for the state. The poverty level in the 48 contiguous states and the District of Columbia for 2013 for one person in a family/household was $11,490 and $4,020 for each additional person. For a family of four, the federal poverty level in 2013 was $23,550.[12]

The percentage of the households receiving Supplemental Nutritional Assistance Program (SNAP) benefits in 2013 was 12.4% for the U.S. and 21.3% for Mississippi. Rates for both poverty and SNAP participation were shown to vary inversely by the educational level in the household and in relation to the metro and nonmetro classifications with rates being highest among those that did not complete high school and/or living in the rural counties. Poverty rates are also influenced by household family structure. The poverty rate for married-couple families in 2013 was 5.6% and 7.3% in the U.S. and Mississippi respectively. The highest rates are reported are for single female head of household with 42% of those households living below the poverty line. If children are in the single female head of household, the rate jumps to over 50% in the state and 40% nationally. Poverty also varies by race as shown in Figure 11 with the impact more pronounced in the rural counties.

Figure 11. Poverty Level by Race
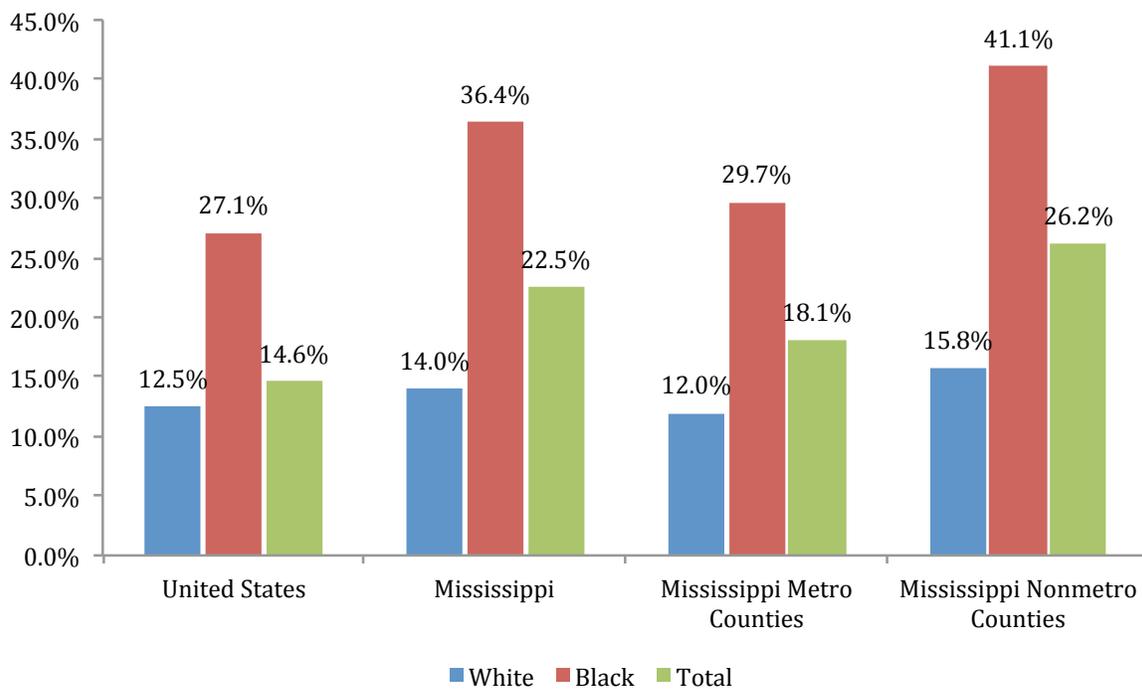
Source: 2008-2012 5-year American Community Survey

Housing

The built environment, particularly one's home, can also affect the well-being and health of its occupants. With the farm to town shift, most of the older substandard rural houses are gone. This can have an effect on the median age of structures as well as replacement due to storm damage. Most Mississippians live in single family dwellings (70%) or mobile homes (15%). Roughly 69% of the residences in the state are owner-occupied versus 65% in the U.S..

12 U.S. Federal Register Notice, January 24, 2013

About 48% of the homes in the state were built prior to 1980 compared to nearly 60% nationally. One of the factors associated with older homes and structures is lead contamination. Buildings constructed before 1980 are more likely to contain lead paint, and surveillance for elevated blood lead levels in children can be partially guided by the age of housing stock.

Over the years more communities have adopted more stringent building codes and enforcement. With new construction or remodeling, fewer substandard buildings remain. As seen nationally, less than 1% of the homes in the state lack complete plumbing or kitchen facilities. Due to programs developed around 911 systems, fewer than 3% of home lack some form of telephone service.

Access to Health Care

Access to comprehensive, quality health care services is important for the achievement of health equity and for increasing the quality of a healthy life for everyone. Obtaining access to health services requires using personal health services to achieve the best health outcomes and involves three distinct steps: 1) gaining entry into the health care system, 2) finding a health care provider where needed services are available, and 3) locating a health care provider with whom the patient can communicate and trust.

Health care access impacts overall physical, social, and mental health status; prevention of disease and disability; detection and treatment of health conditions; quality of life; preventable death; and life expectancy.

Disparities in access to health services affect individuals and society. Limited access to health care impacts people's ability to reach their full potential, negatively affecting their quality of life. Barriers to services include: lack of availability, high cost, and lack of insurance coverage

These barriers to accessing health services lead to unmet health needs, delays in receiving appropriate care, inability to get preventive services, and hospitalizations that could have been prevented.

In 2013, as part of the Behavioral Risk Factor Surveillance System (BRFSS), 21.8% of Mississippians surveyed said they were unable to see a doctor at some point in the prior twelve months because of cost. Black respondents (29.0%) were greater than one and one-half times more likely to have not seen a doctor due to cost than white respondents (16.8%). Also females of both races were much more likely to experience this phenomenon than males: 25.6% to 17.6%.

The survey revealed that one of the biggest barriers to access is income. Not surprisingly, those in the lower income ranges reported the greatest difficulty in gaining access to care. Those making less than $15,000 (41.2%) per year were more than eight times as likely to have not seen a doctor in the previous 12 months due to cost that those reporting and annual income of $75,000 per year (5.0%).

Health Insurance Coverage

Having health insurance improves an individual's access to care and reduces economic vulnerability when medical services are needed. People with private insurance are less likely to die in a defined time period than people without insurance, even when differences in age, gender, race, income, health status, and education are accounted for.[13] Over the period from 2011 to 2013, approximately 17.3% of the Mississippi population was

13 Wilper, A. P., Woolhandler, S., Lasser, K. E., McCormick, D., Bor, D. H., & Himmelstein, D. U. (2009). Health Insurance and Mortality in U.S. Adults. *American Journal of Public Health*, *99*(12), 2289–2295. doi:10.2105/AJPH.2008.157685

uninsured.[14] During the same time period about 14.8% of the total United States population was uninsured. When broken down by race or ethnic group, there are significant differences in the rate of uninsured individuals, as shown in Figure 12 below.

Figure 12. Percentage of Population Uninsured, by Race and Ethnic Group
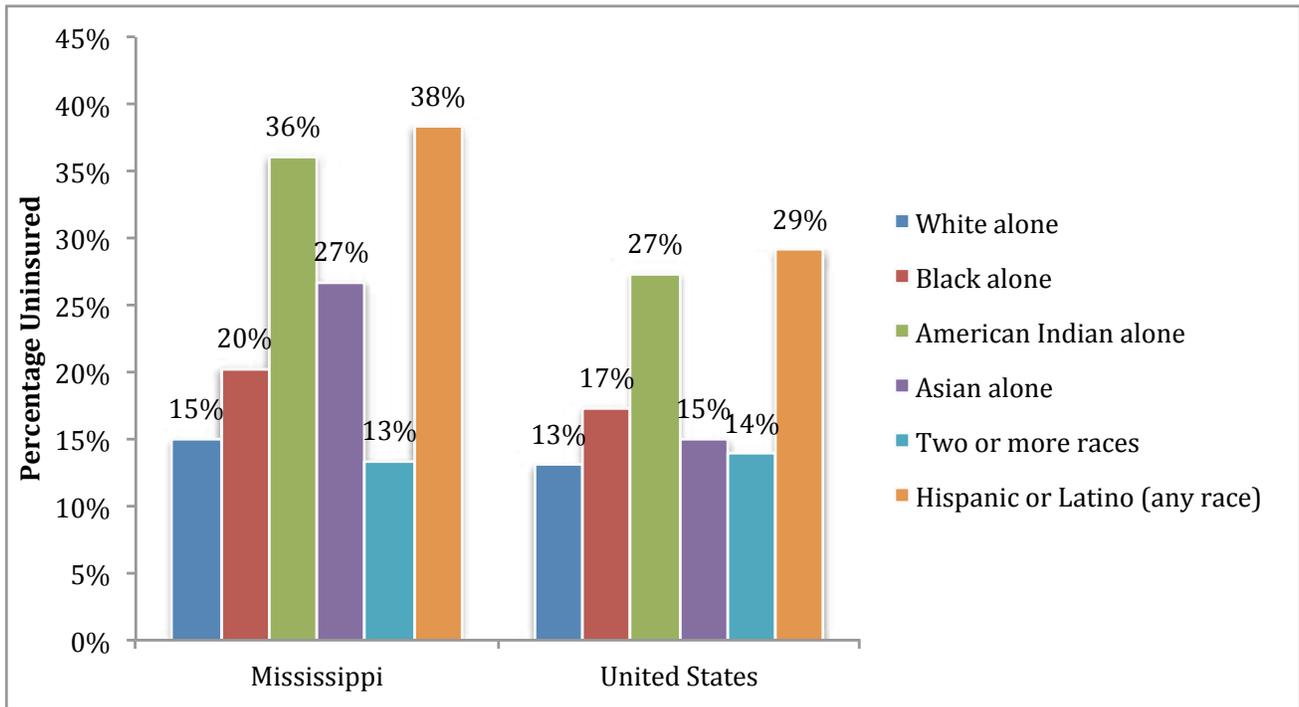
Source: U.S. Census: 2011-2013 3-Year American Community Survey

Additionally, there are significant differences between the rates of uninsured individuals based on age. 7.7% of the Mississippi population under the age of 18 was uninsured, while 25% of the population aged 18 to 64 was uninsured. Both rates are much higher than the 0.3% of the Mississippi population aged 65 years or older who are uninsured. This is because some publicly-funded insurance programs are targeted at the young [Children's Health Insurance Program (CHIP)] and the elderly (Medicare).

Adult Dental Visits

Regular dental visits are important in the prevention, early detection, and treatment of oral and craniofacial diseases. Research has shown that infrequent dental visits have been associated with poor oral health among adults. In 2012, an estimated 55.4% of Mississippi adults reported having a dental visit within the past year compared to a median prevalence of 67.2% in the U.S. Among all age groups, with exception of the 18-24 year old age group, the prevalence of having a dental visit within the past year was relatively consistent. Based on the BRFSS survey, non-Hispanic, white females (61.6%) were the group most likely to report having a dental visit within the past year, while non-Hispanic, black males (46.3%) were least likely to report having a dental visit. Generally, people identifying as white were more likely to report seeing a dentist in the past year than people identifying as black. Additionally, people with higher levels of educational attainment were more likely to report having a dental visit over the past year than people with lower levels of educational attainment.

14 U.S. Census Bureau. (2014). *2011-2013 3-Year American Community Survey*. Retrieved from http://www.census.gov/acs/www/

Mortality and Leading Causes of Death

Mortality (All Causes)

Mortality is a broad indicator of a population's health. While relatively easy to calculate given complete death reporting and population estimates, the overall mortality rate does not provide information about the underlying causes of death in the population. Mortality rates for leading causes of death are presented beginning on page 70.

Figure 13. All-Cause Mortality by Race
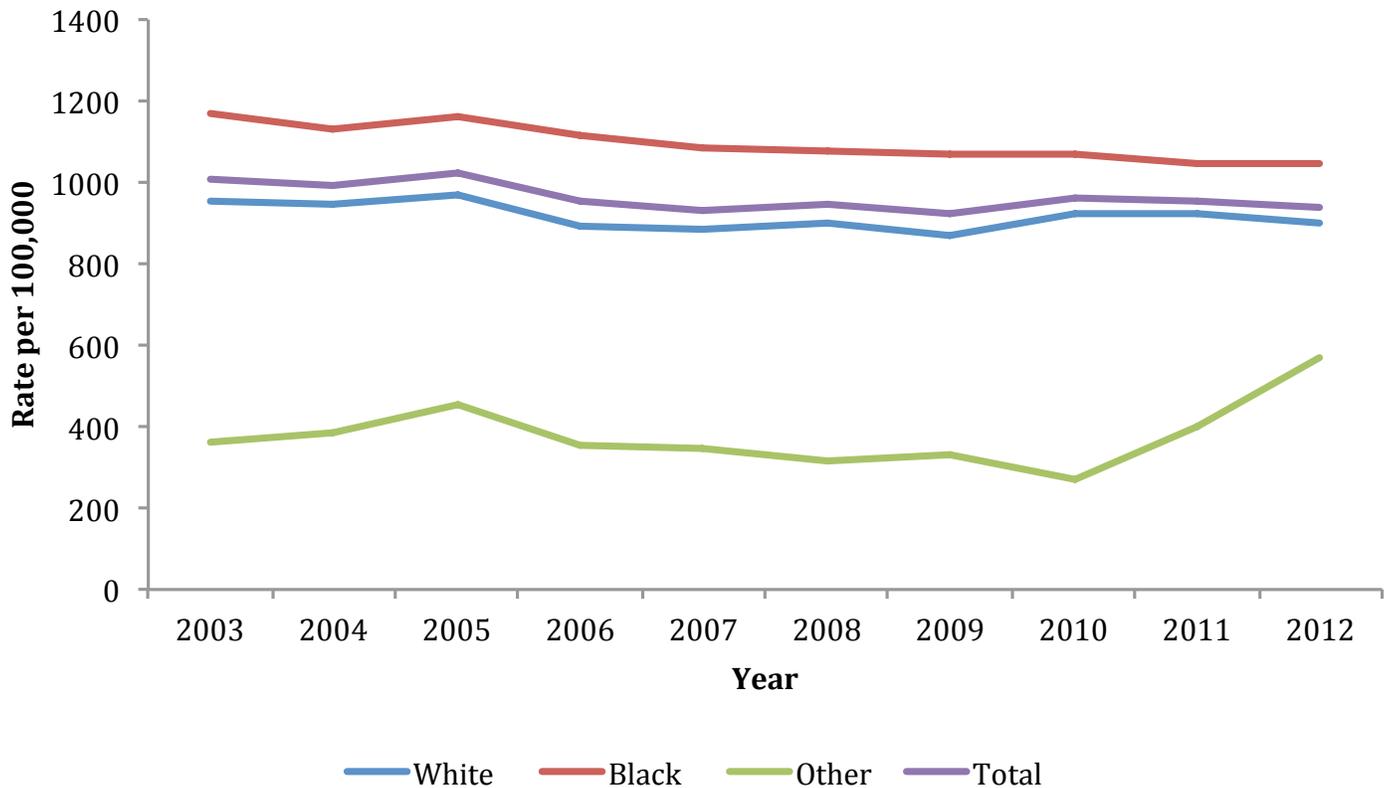
Source: Mississippi Statistically Automated Health Resource System (MSTAHRS) 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Figure 14. All-Cause Mortality by Gender
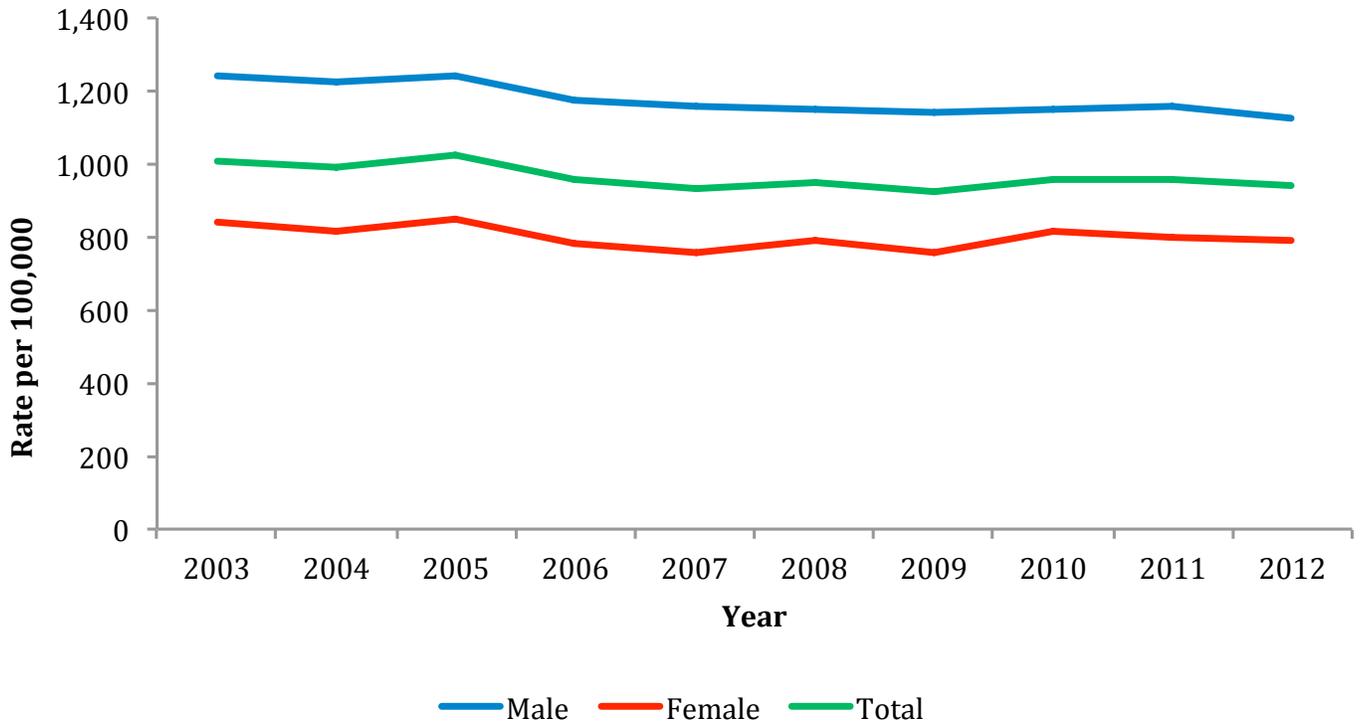
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

The age-adjusted, all-cause mortality rate among Mississippi's resident population dropped by 6.7% between 2003 and 2012 (from 1,008.7 to 940.7 deaths per 100,000). In 2012, the mortality rate among the black population was 17% higher than among the white population (1,048.6 vs. 897.5). This is slightly less than the national disparity of 18% between the white and black populations. In Mississippi, males are 42% more likely to die in a given year than females. This is reflected in the fact that males, on average, have shorter life expectancies than females.

Because of the disparity between the white and black populations, regional differences in mortality rates tend to be determined by population makeup in those areas. The mortality rate among black residents for 2008-2012 was highest in District III (1,198.4 deaths per 100,000) and lowest in District V (1,104.5). The highest mortality rate for white residents was also in District III (978.8) and the lowest was in District IV (812.0).

The age-adjusted mortality rate for the nation was 732.8 deaths per 100,000 population in 2012. Mississippi's rate of 940.7 was 28% higher than the nation. This means that people in Mississippi are 28% more likely to die in a given year than the average U.S. resident when age, a substantial predictor of mortality, is accounted for. In 2011, Mississippi had the highest age-adjusted mortality rate of all 50 states and the District of Columbia.

Leading Causes of Death

Table 7. Leading Causes of Death by Race

Deaths, Mortality Rates, and Percentage of Total Deaths from Ten Leading Causes, by Cause and Race

Cause of Death	Number				Rate*			
	Total	White	Black	Other	Total	White	Black	Other
Total of Ten Leading Causes	22,375	15,161	6,993	221	709.1	676.3	796.3	439.7
Heart Diseases	7,248	4,922	2,269	57	230.6	217.9	262	124.5
Malignant Neoplasms (Cancer)	6,468	4,302	2,112	54	199.4	187.2	233	115.1
Emphysema and Other Chronic Lower Respiratory Diseases	1,726	1,435	286	5	54.6	62.4	33.5	n/a
Accidents	1,596	1,118	434	44	53.4	58.7	42.1	56.5
Cerebrovascular Disease (Stroke)	1,509	994	500	15	48.5	44.2	59.5	n/a
Diabetes Mellitus	1,039	499	519	21	32.2	22	58.8	38.5
Alzheimer's Disease	920	737	181	2	30.6	32.7	25.3	n/a
Nephritis, Nephrotic Syndrome and Nephrosis (Kidney Disease)	714	386	319	9	22.9	17.1	37.8	n/a
Septicemia	596	366	221	9	18.9	16.2	25.9	n/a
Pneumonia and Influenza	559	402	152	5	18	17.9	18.4	n/a

* Rates expressed as per 100,000 population

Rates in cells marked n/a were based on less than 20 events and are unstable

Source: MSDH -MSTAHRS

The ten leading causes of death for Mississippians are listed in Table 7 above. One interesting fact to note is that the order of the leading causes varies based on race. While all racial groups have heart disease and cancer as the first and second leading causes of death, certain conditions, like emphysema, are more significant contributors to mortality in specific races than in others. The following pages describe each of the ten leading causes in greater detail.

Mortality (Heart Disease)

Figure 15. Heart Disease Mortality by Race
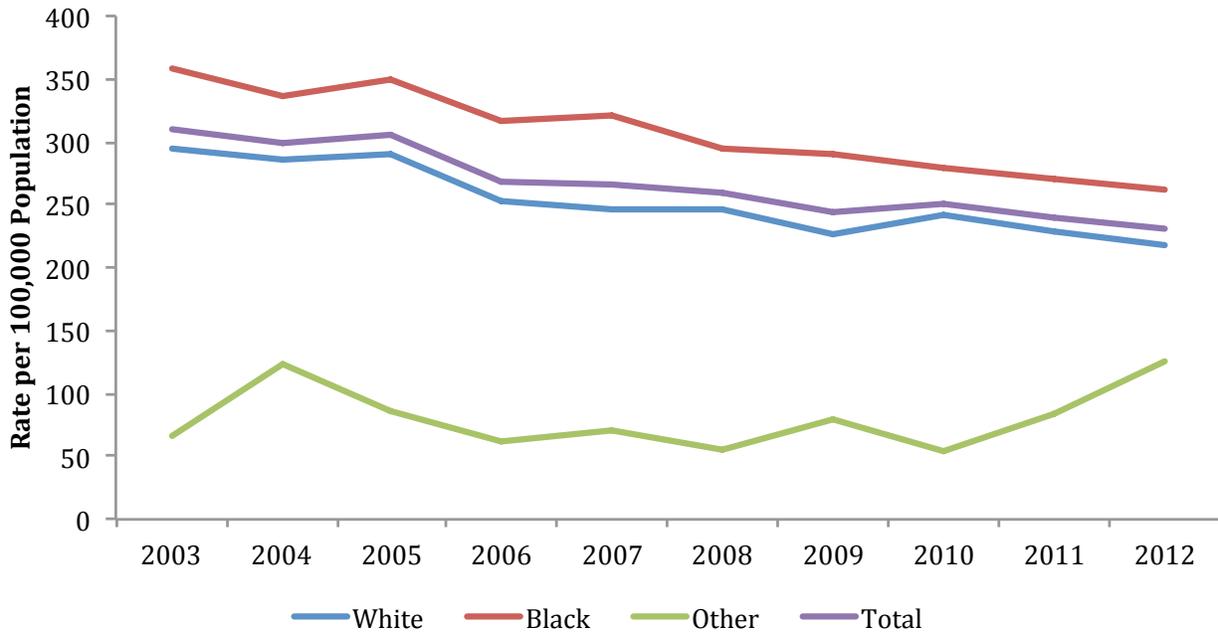
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Figure 16. Heart Disease Mortality by Gender
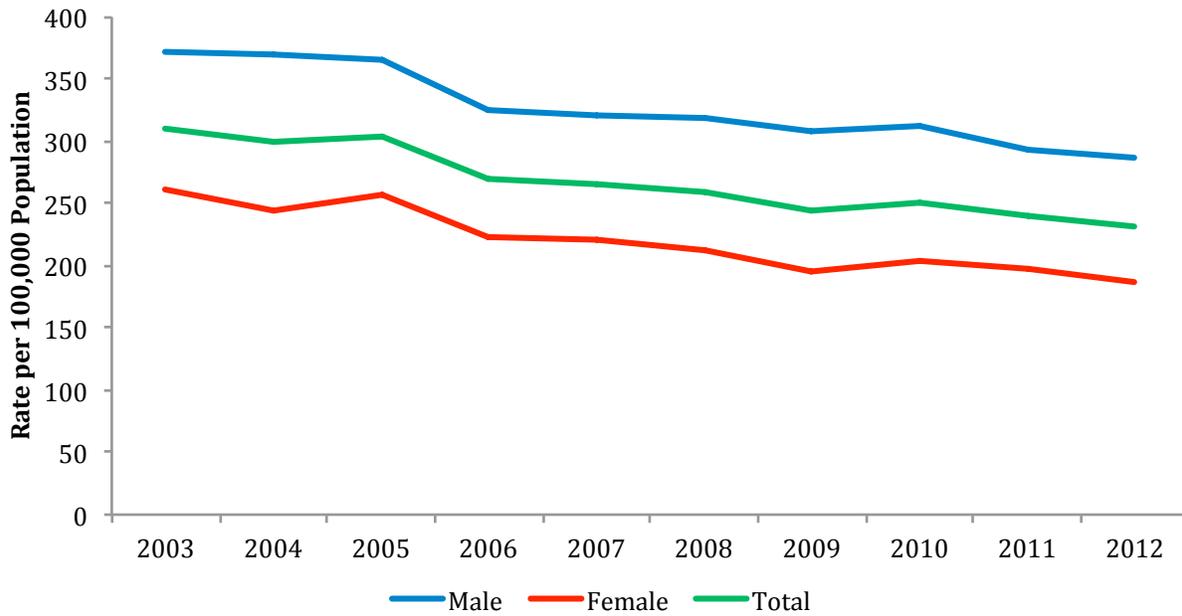
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

The term, "heart disease" is used to refer to a group of diseases and conditions of the heart and its supporting

blood vessels. Diseases that are forms of heart disease include, but are not limited to: hypertensive heart disease, pulmonary heart disease, coronary heart disease, and heart failure. The most common and preventable type of heart disease is coronary heart disease[15].

Heart disease mortality has been declining for several years. The 2003 rate in Mississippi was 309.6 deaths per 100,000 persons, decreasing to 230.6 deaths per 100,000 persons in 2012. Trends by race show a decline in heart disease mortality except for those include in the "other" racial category. Over the ten year period of 2003-2012 in Mississippi, black residents had the highest heart disease mortality rate (306.0 deaths per 100,000), while white residents had the second highest (251.7 deaths per 100,000) among the racial groups. The racial group "other" had the lowest heart disease mortality rates. However, the data show an increase in mortality from 65.7 deaths per 100,000 in 2003 to 124.5 deaths per 100,000 in 2012 for this "other" racial group. Gender differences exist as well. Males had a higher cumulative heart disease mortality rate (325.2 deaths per 100,000 persons) compared to females (219.3 deaths per 100,000 persons) from 2003-2012. Also, mortality rates differ by public health regions. Public Health District I had the highest cumulative mortality rate (279.3 deaths per 100,000 persons) compared to Public Health District IV which had the lowest cumulative mortality rate (255.0 deaths per 100,000 persons).

The mortality rate among black residents for 2003-2012 was highest in District III (327.7 deaths per 100,000 persons) and lowest in District II (277.2). The mortality rate among white residents was highest in District I (268.5) and lowest in District IV (232.1).

Mortality (Cancer)

Figure 17. Cancer Mortality by Race
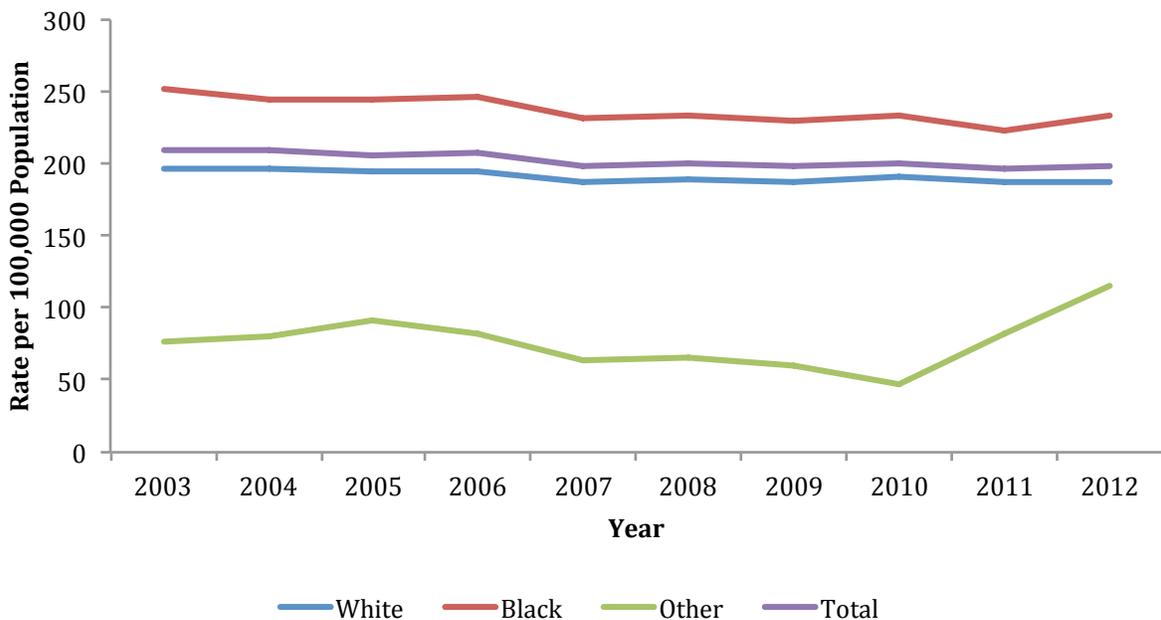
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

15 Ridker PM, Libby P, Buring J. Risk markers and the primary prevention of cardiovascular disease. In: Mann DL, Zipes DP, Libby P, eds. *Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine.* 10th ed. Philadelphia, PA: Elsevier Saunders; 2014:chap 42

Figure 18. Cancer Mortality by Gender
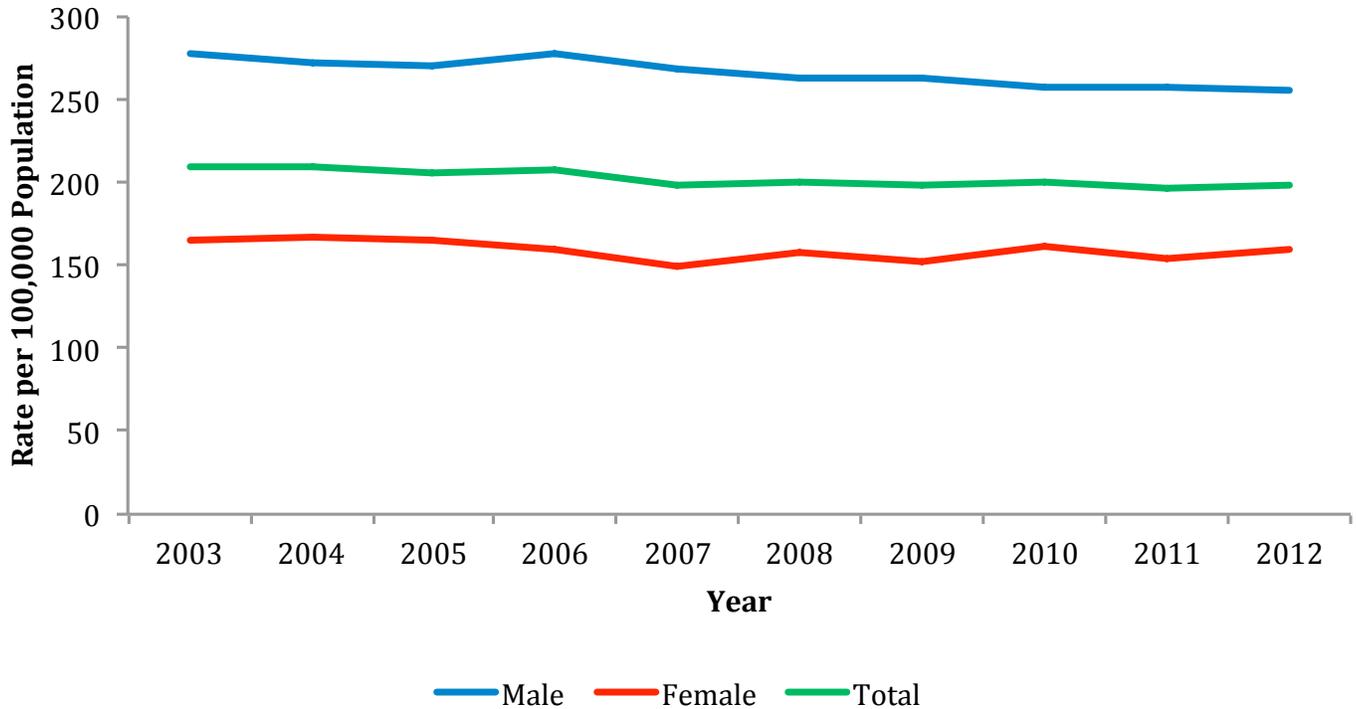
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Malignant neoplasms, commonly known as cancer, is a term used for diseases in which abnormal cells divide without control and are able to invade other tissues. Cancer is not just one disease but many diseases. There are more than 100 different types of cancer (National Cancer Institute). Screening for cervical, colorectal, and breast cancers - some of the most common types of cancers - helps find these diseases at an early, often highly treatable stage.

From 2003-2012, Mississippi's cancer mortality rate was 202.3 deaths per 100,000 persons. For that same period, black residents had a higher mortality rate (236.6 deaths per 100,000 persons) when compared to white residents (190.6 deaths per 100,000 persons). Additionally, the "other" racial category had the lowest cumulative mortality rate of 75.4 deaths per 100,000 persons. There are gender differences with respect to cancer mortality. Females had a lower cumulative mortality rate (159.2 deaths per 100,000 persons) compared to males (265.8 deaths per 100,000 persons) from 2003-2012. Public Health District III had the highest cumulative cancer mortality rate (228.2 deaths per 100,000 persons) while Public Health District IV had the lowest cumulative mortality rate (186.4 deaths per 100,000 persons).

Mortality (COPD)

Figure 19. COPD Mortality by Race
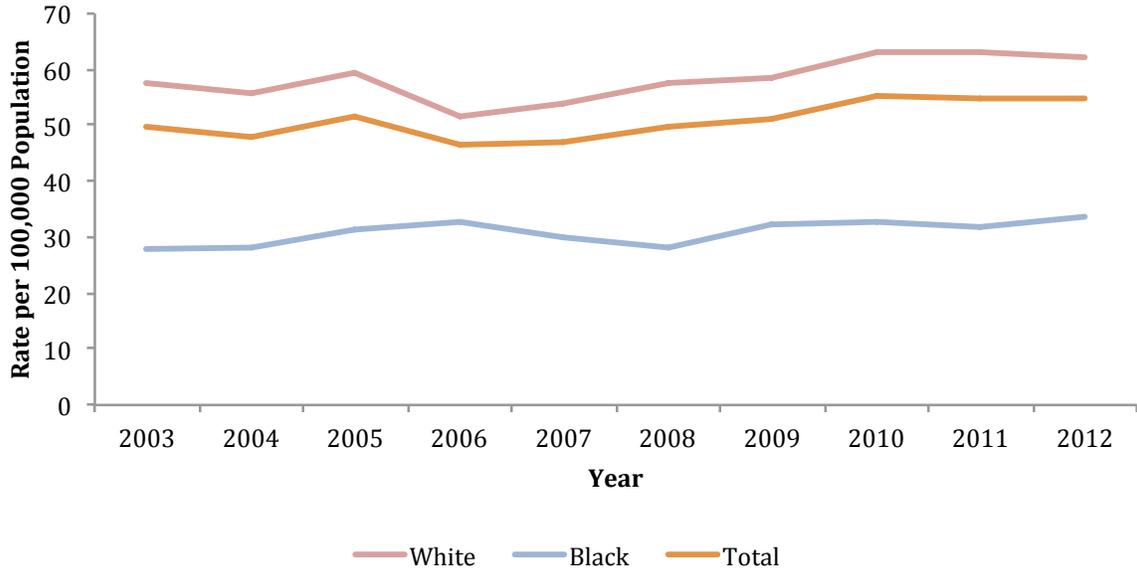
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Figure 20. COPD Mortality by Gender
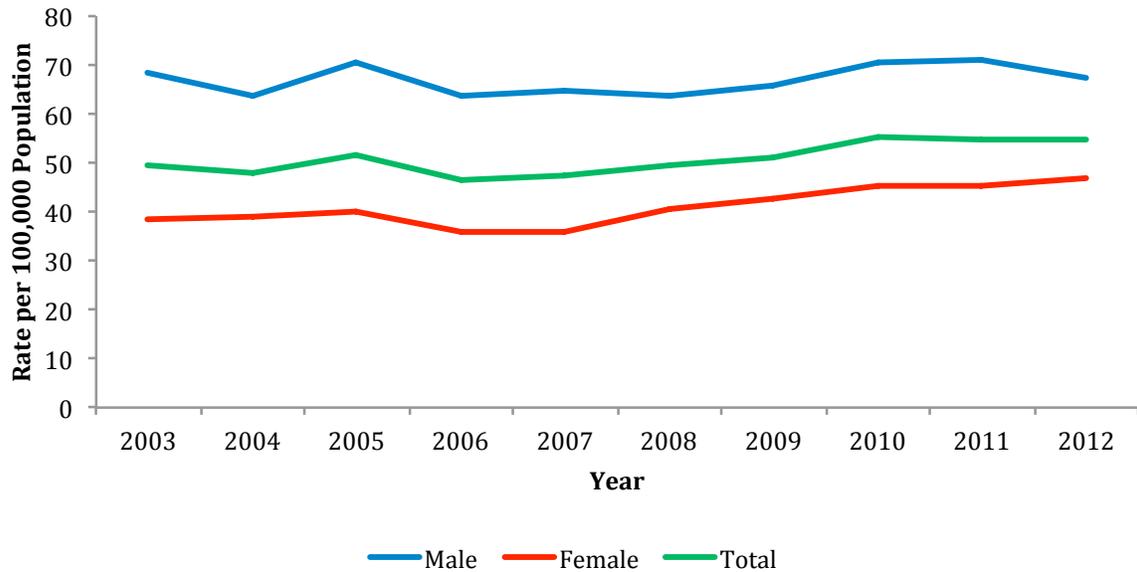
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Chronic obstructive pulmonary disease (COPD) refers to a group of lung diseases that make it hard to breathe over time. Emphysema and chronic bronchitis are the most important COPD conditions and they frequently coexist. The age-adjusted mortality rate for COPD in Mississippi was 54.6 deaths per 100,000 for 2012, compared to 41.6 deaths per 100,000 in the U.S. As demonstrated in Figure 20, COPD mortality rates have been relatively stable over time with a slight increasing trend overall from 2003 to 2012. Over that period, COPD was the fourth leading cause of death in Mississippi.

The COPD mortality rate for white residents (62.4) was substantially higher than for black residents (33.5). In other words, overall white residents were almost 2 times more likely than black residents to die from COPD. The COPD mortality rate was also substantially higher for males than females, at 67.5 and 46.8 per 100,000 respectively. Males are 1.5 times more likely to die from COPD than females. Mississippians over 65 experience the highest rates of COPD mortality – the rate for people age 65-74 was 198.5 per 100,000 in 2012 and 453.3 per 100,000 for ages 75-84.

The death rate for COPD is higher in Public Health District II compared to the other eight districts. The rates among white residents are also higher in District II and higher among black residents of District VII.

Mortality (Unintentional Injury)

Figure 21. Unintentional Injury Mortality by Race
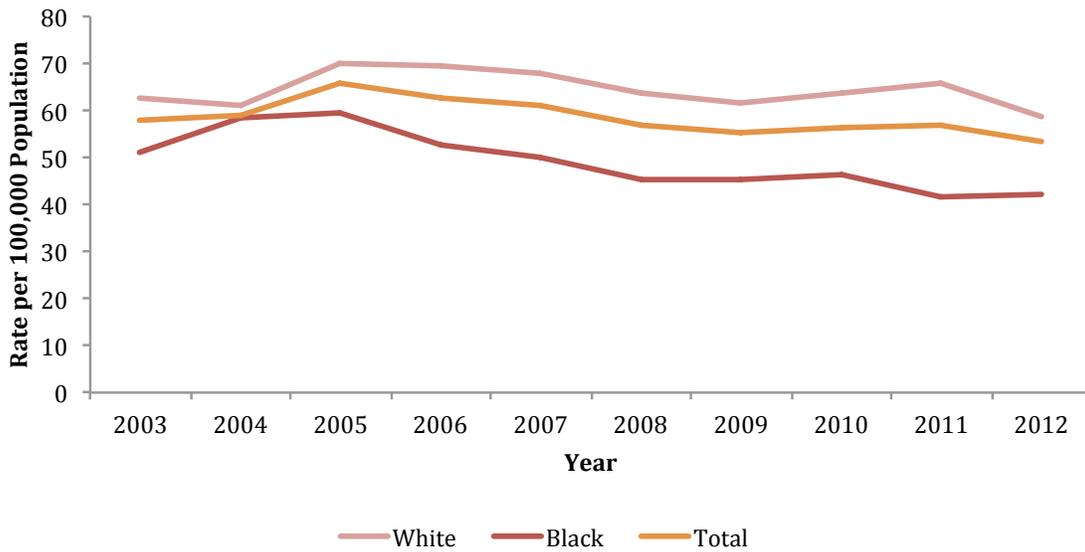
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Figure 22. Unintentional Injury Mortality by Gender

Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

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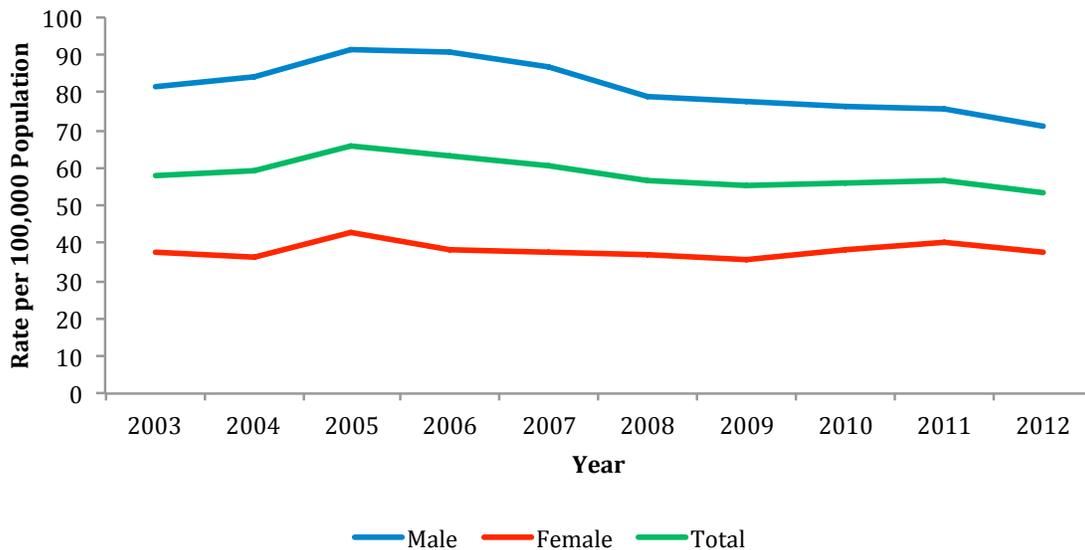
Unintentional injuries are events that occur that are not deliberate, planned, or done with purpose. The most common unintentional injuries result from motor vehicle accidents, falls, fires, drowning, poisonings, and oxygen deprivation.

Unintentional injury mortality has fluctuated over the years. In fact, the overall unintentional injury mortality decreased from 57.9 deaths per 100,000 persons in 2003 to 53.4 deaths per 100,000 persons in 2012. During the ten-year span of 2003-2012, the highest mortality rate (65.7 deaths per 100,000 persons) occurred in 2005. The cumulative unintentional injury mortality rate was 58.4 deaths per 100,000 persons from 2003-2012. There are gender differences in mortality of unintentional injuries. Mississippi females have a lower cumulative mortality rate (38.1 deaths per 100,000 persons) compared to Mississippi males (81.5 deaths per 100,000 persons) from 2003-2012. By comparison, the U.S. rate of unintentional injury deaths in 2013 was 26.6 deaths per 100,000 persons for females and 53.1 deaths per 100,000 persons for males.[16] Public Health District IX had the highest cumulative unintentional injury mortality rate (71.6 deaths per 100,000 persons) compared to Public Health District V which had the lowest cumulative mortality rate (46.3 deaths per 100,000).

The mortality rate among black residents for unintentional injuries was highest in District VI (55.8 deaths per 100,000 persons) and lowest in District V (38.3). The mortality rate among white residents was highest in District IX (78.2) and lowest in District V (54.4)

Mortality (Motor Vehicle Accidents)

Figure 23. Motor Vehicle Accident Mortality by Race
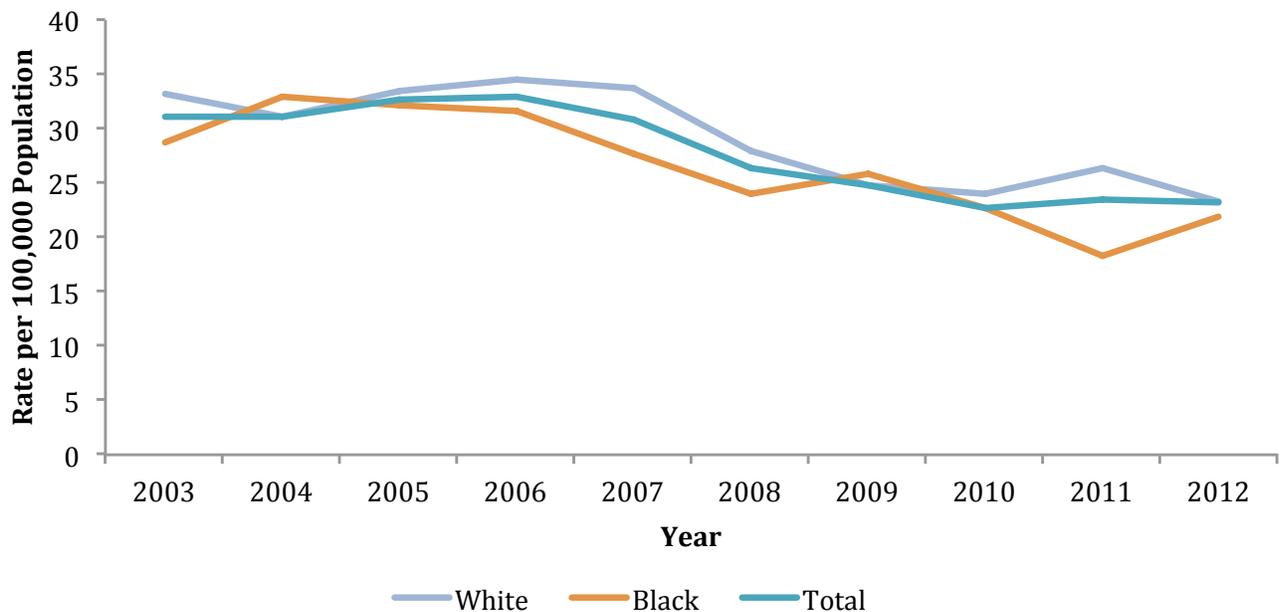
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

16 CDC National Vital Statistics Report Volume 64, Number 2

Figure 24. Motor Vehicle Accident Mortality by Gender
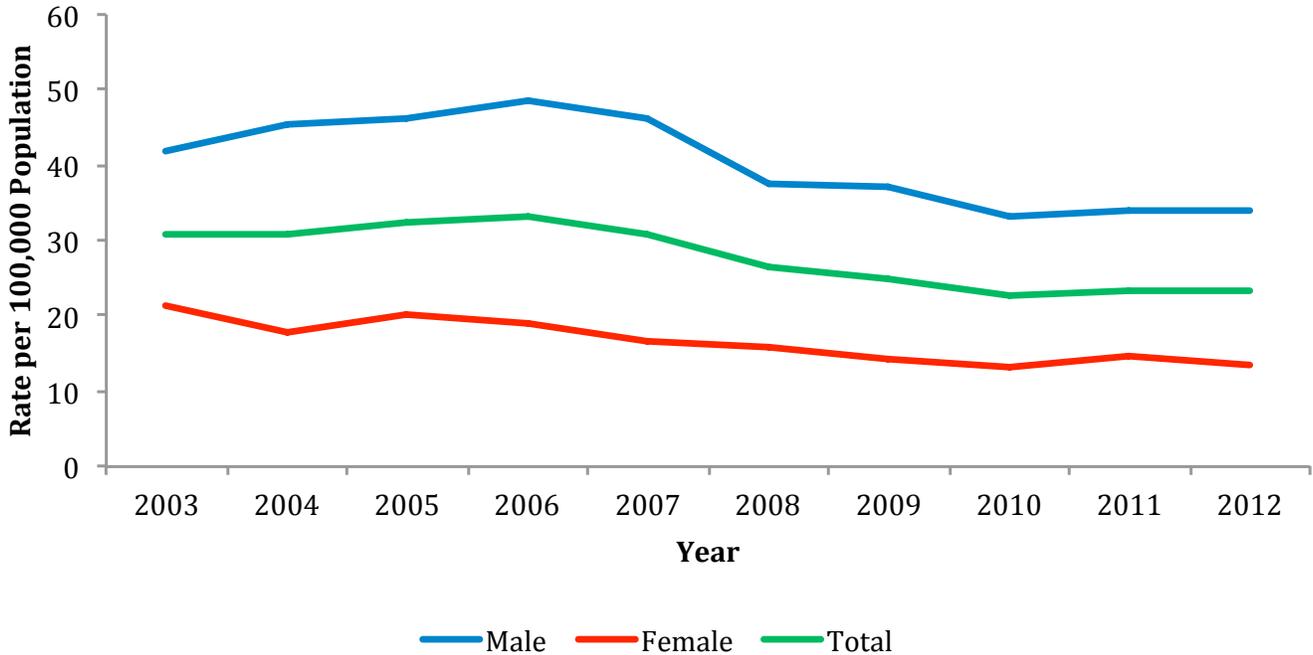
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

The largest contributor to unintentional injury mortality in Mississippi is motor vehicle accidents. A motor vehicle accident is an unintended collision of at least one motor vehicle with a stationary or moving object or person, resulting in injuries, death, or loss of property.

From 2003-2012, Mississippi's motor vehicle accident mortality rate was 27.9 deaths per 100,000 persons. For that same period, white residents had a slightly higher mortality rate (29.3 deaths per 100,000 persons) compared to black residents (26.5 deaths per 100,000 persons). There are gender differences with respect to mortality by motor vehicle accidents. Females had a lower cumulative mortality rate (16.6 deaths per 100,000 persons) compared to males (40.4 deaths per 100,000 persons) from 2003-2012. Public Health District VI had the highest cumulative motor vehicle accident mortality rate (33.8 deaths per 100,000 persons) compared to Public Health District V, which had the lowest cumulative mortality rate (22.5 deaths per 100,000 persons).

The mortality rate among black residents for motor vehicle accidents during 2003-2012 was highest in District VI (31.8 deaths per 100,000 persons) and lowest in District IX (18.9). The mortality rate among white residents was highest in District III (37.7) and lowest in District IV (24.0).

Mortality (Stroke)

Figure 25. Stroke Mortality by Race
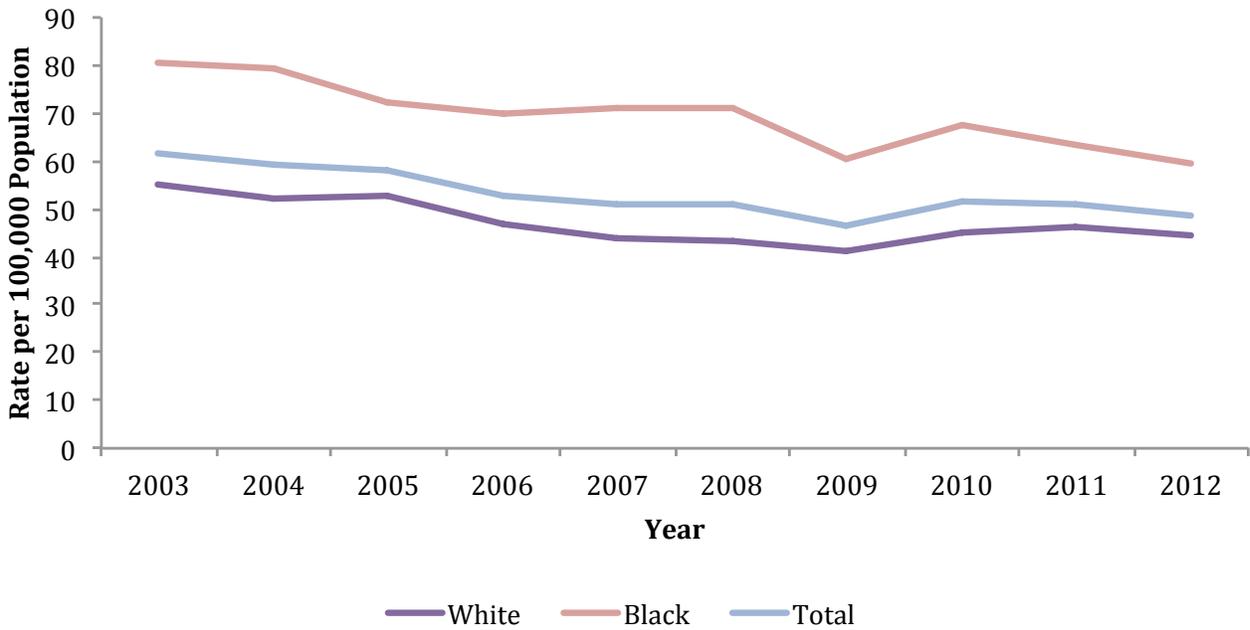
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Figure 26. Stroke Mortality by Gender
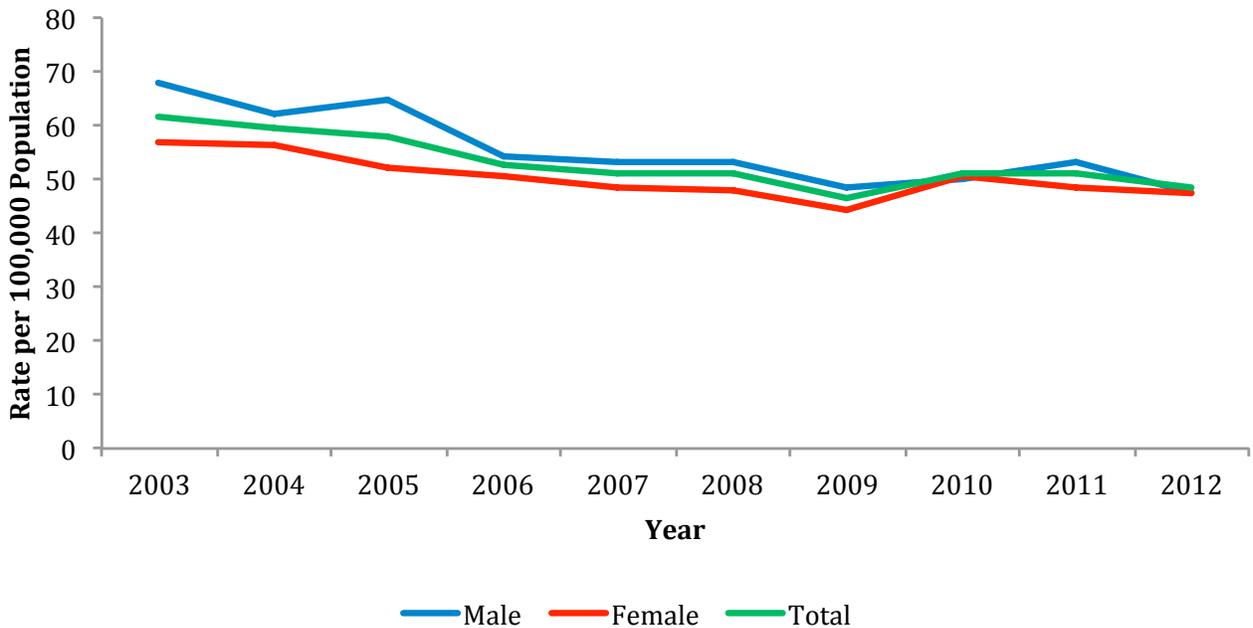
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Stroke results from the obstruction of a blood vessel in the neck or brain causing the brain tissue to be starved of oxygen or the rupture of a blood vessel in the brain which causes hemorrhage into the brain tissue. Stroke is usually manifested as sudden onset of paralysis, weakness, or numbness on one side of the body, loss of speech or difficulty talking, partial loss of the field of vision, and dizziness or loss of consciousness.

Stroke mortality rates have generally declined from 2003 to 2012. The 2003 rate in Mississippi was 61.7 deaths per 100,000 persons, declining 21% to 48.5 deaths per 100,000 persons in 2012. White residents consistently had the lowest stroke mortality of all racial groups, with a total rate of 46.8 deaths per 100,000 over the ten-year time period. Conversely, black residents had the highest stroke mortality rate, with a cumulative rate of 69.2 deaths per 100,000 persons for the same period. Geographic disparities exist when comparing stroke mortality. Public Health District III had the highest cumulative stroke mortality rate (66.6 deaths per 100,000 persons) compared to Public Health District I which had the lowest cumulative mortality rate (46.1 deaths per 100,000 persons).

The mortality rate among black residents for 2003-2012 was highest in District III (80.2 deaths per 100,000 persons) and lowest in District I (63.6). The mortality rate among white residents was highest in District II (54.6) and lowest in District I (39.7).

Mortality (Diabetes)

Figure 27. Diabetes Mortality by Race
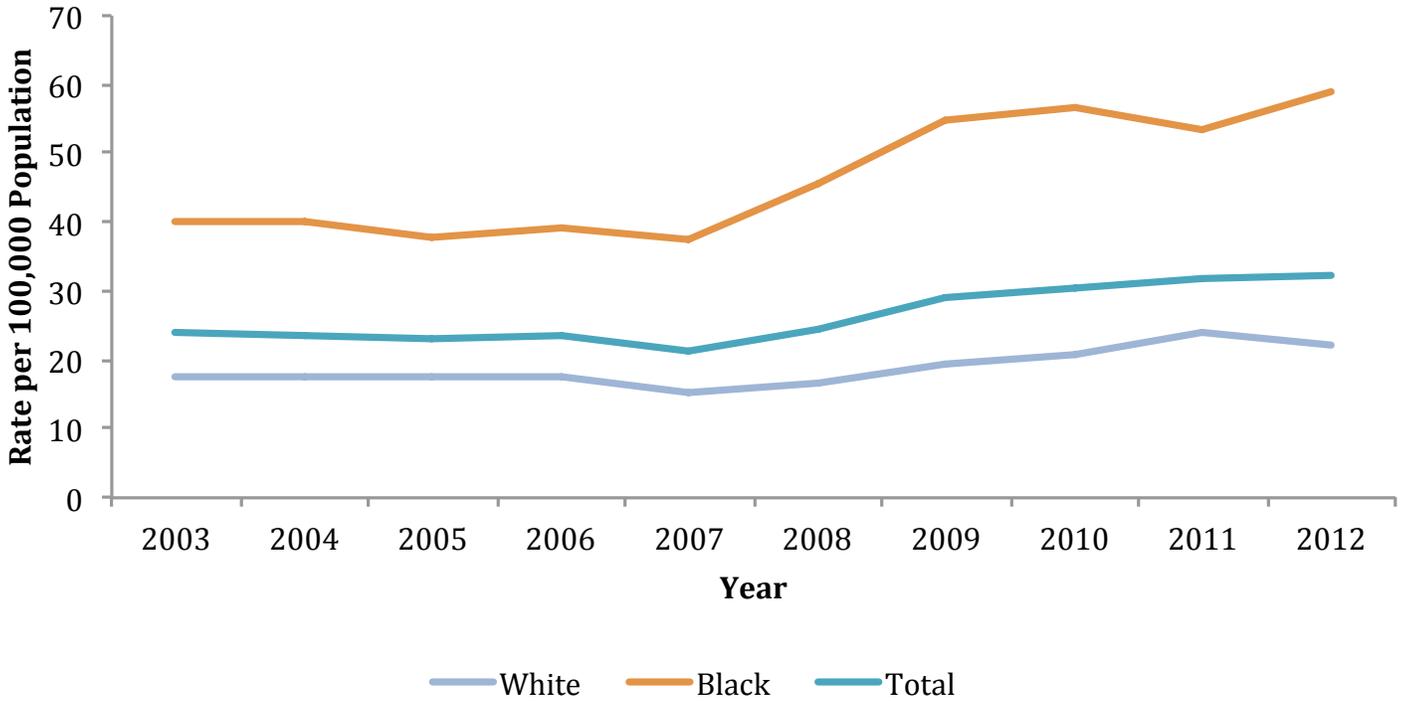
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Figure 28. Diabetes Mortality by Gender
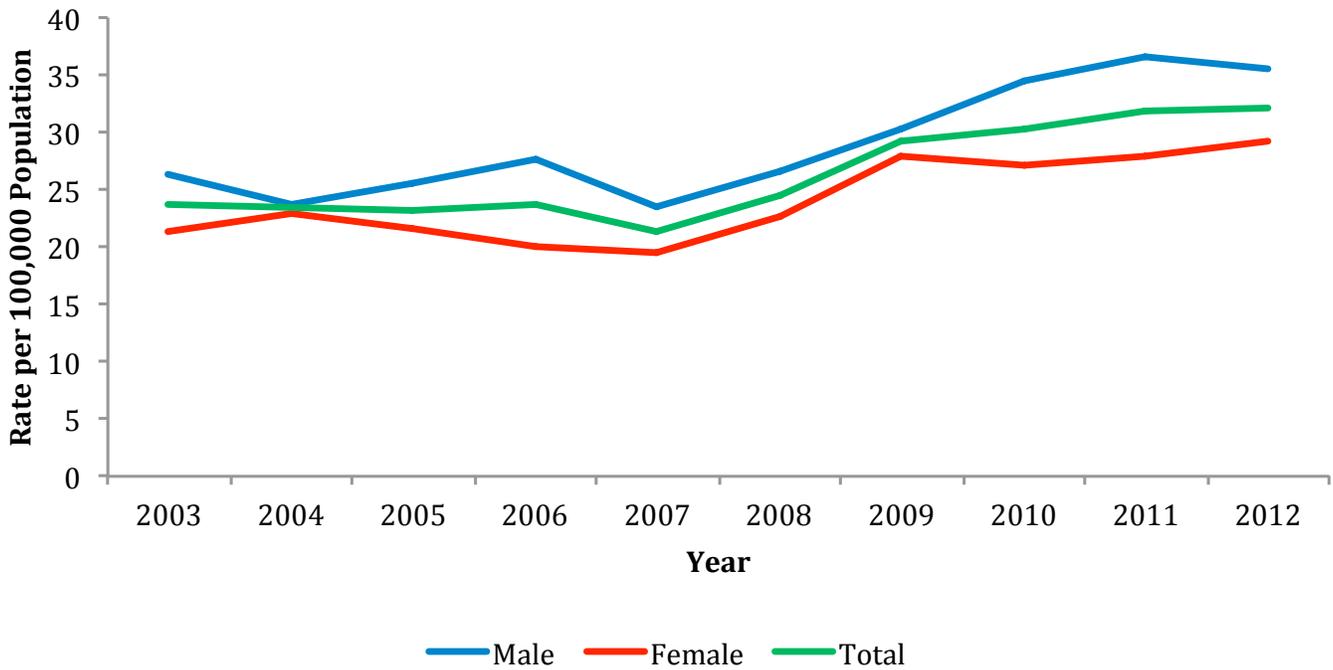
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Diabetes (mellitus) is a group of diseases marked by high levels of blood glucose resulting from defects in insulin production, insulin action, or both[17]. Diabetes can lead to serious complications, including heart disease, blindness, kidney failure, lower-extremity amputations, and premature death.

In 2012, the age-adjusted death rate related to diabetes in Mississippi was 32.2 deaths per 100,000 persons. During this same period, the Mississippi diabetes death rate related to diabetes was higher for males than females; males had a diabetes-attributed death rate of 35.6 deaths per 100,000 persons while females had a diabetes-attributed death rate of 29.1 deaths per 100,000 persons.

Black residents also had the highest death rate due to diabetes, at 58.8 deaths per 100,000 persons, while white residents had a diabetes-attributed death rate of 22.0 deaths per 100,000 persons.

In 2012, Mississippi had the second highest diabetes death rate in the nation. In 2011, diabetes was also the 8th leading cause of death in Mississippi, accounting for over 3% of Mississippi deaths.

Gender differences exist as well. Males had a higher cumulative diabetes mortality rate (29.2 deaths per 100,000 persons) compared to females (24.1 deaths per 100,000 persons) from 2003-2012. Also, geographic disparities exist when comparing diabetes mortality rates. Public Health District I had the highest cumulative diabetes mortality rate (43.8 deaths per 100,000 persons) compared to Public Health District IX which had the lowest cumulative mortality rate (14.7 deaths per 100,000 persons).

One limitation of this data is that it does not account for unreported diabetes-attributed death cases in Mississippi.

Information on self-reported diabetes prevalence can be found on page 121 of this report.

17 DiabetesCare.net

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Mortality (Alzheimer's Disease)

Figure 29. Alzheimer's Disease Mortality by Race
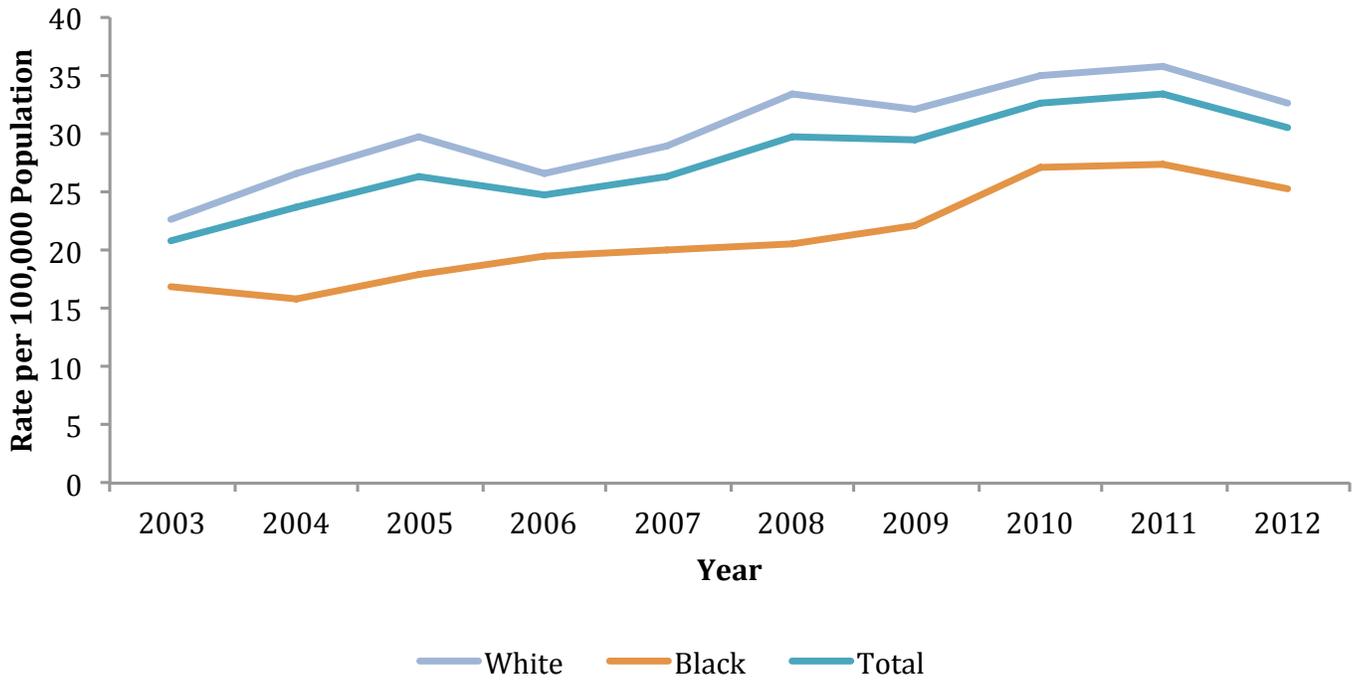
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Figure 30. Alzheimer's Disease Mortality by Gender
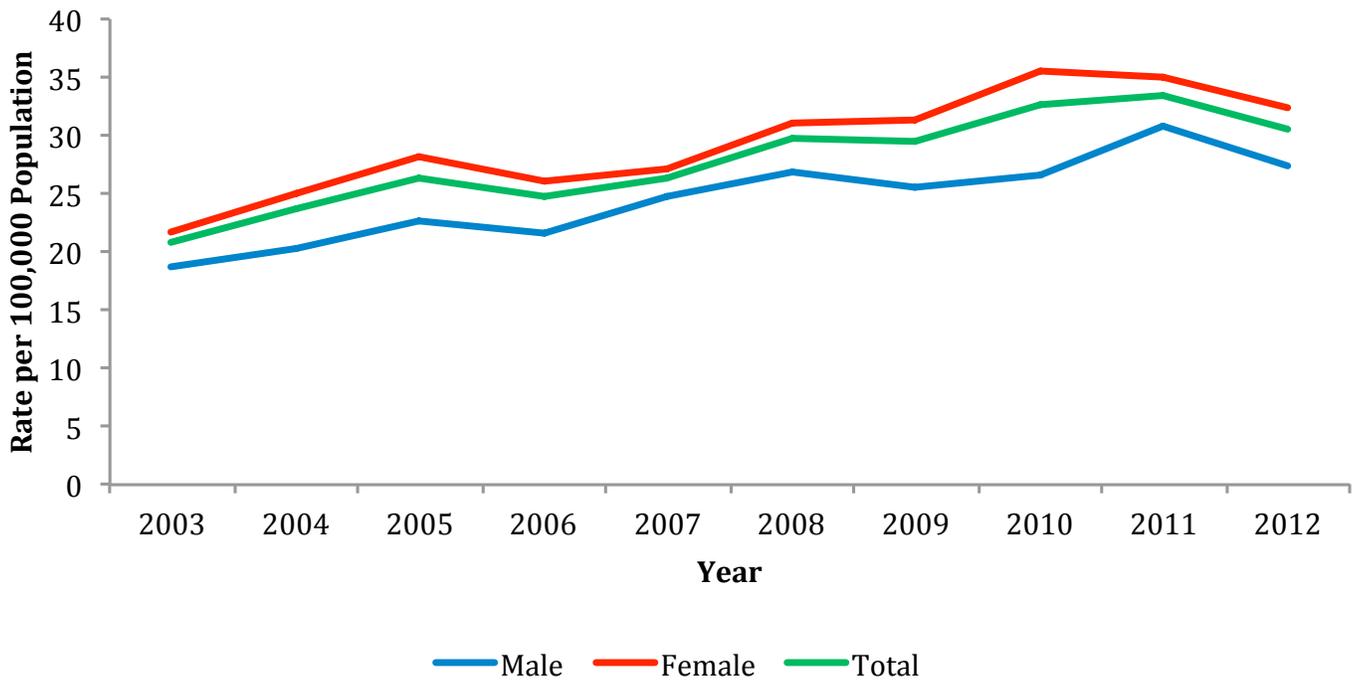
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Alzheimer's disease is the most common form of dementia and is characterized by worsening memory and changes in behavior. It generally affects the elderly but early onset forms of the disease can appear in the 40's and 50's. Mortality rates from Alzheimer's disease have been increasing in recent years. Nationally, Alzheimer's disease has risen from the eighth leading cause of death in 2003 to sixth in 2012. In Mississippi during that same period, it has risen from ninth place to seventh place. However, the mortality rate is rising faster in Mississippi than it is nationally (7.7% from 2003 to 2012 nationally vs. 47.1% in Mississippi). It is possible that some of the increase in Alzheimer's disease mortality is attributable to increased awareness and diagnosis of the disease. Mississippi's Alzheimer's disease mortality rate of 30.6 deaths per 100,000 in 2012 was 29% higher than the national rate of 23.8.

Even after adjusting for the fact that the female population is older than the male population (women have a longer life expectancy), females had an 18% higher mortality rate from Alzheimer's disease than did men (32.3 vs. 27.4 deaths per 100,000 population in 2012). In 2012, white residents had a mortality rate from Alzheimer's disease was 29% higher than the rate for black residents in Mississippi (compared to 24% nationally). Regionally, over the five-year period from 2008-2012, District VIII had the highest mortality rates from Alzheimer's disease for both whites and blacks while District V had the lowest rates.

The mortality rate for Alzheimer's disease among black residents was highest in District VIII (26.7 deaths per 100,000 persons) compared to District V with the lowest (17.1). Similarly, the Alzheimer's disease mortality rate among white residents was highest in District VIII (40.6) and lowest in District V (21.4).

Mortality (Kidney Disease)

Figure 31. Kidney Disease Mortality by Race
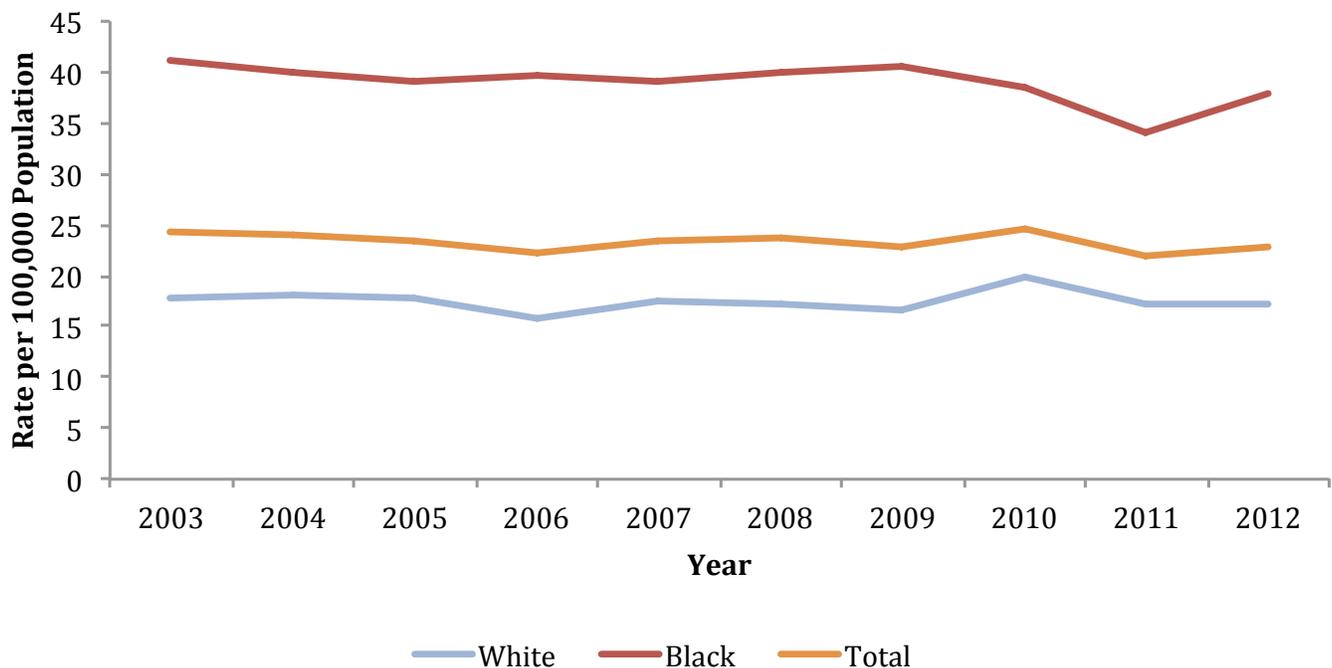
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Figure 32. Kidney Disease Mortality by Gender
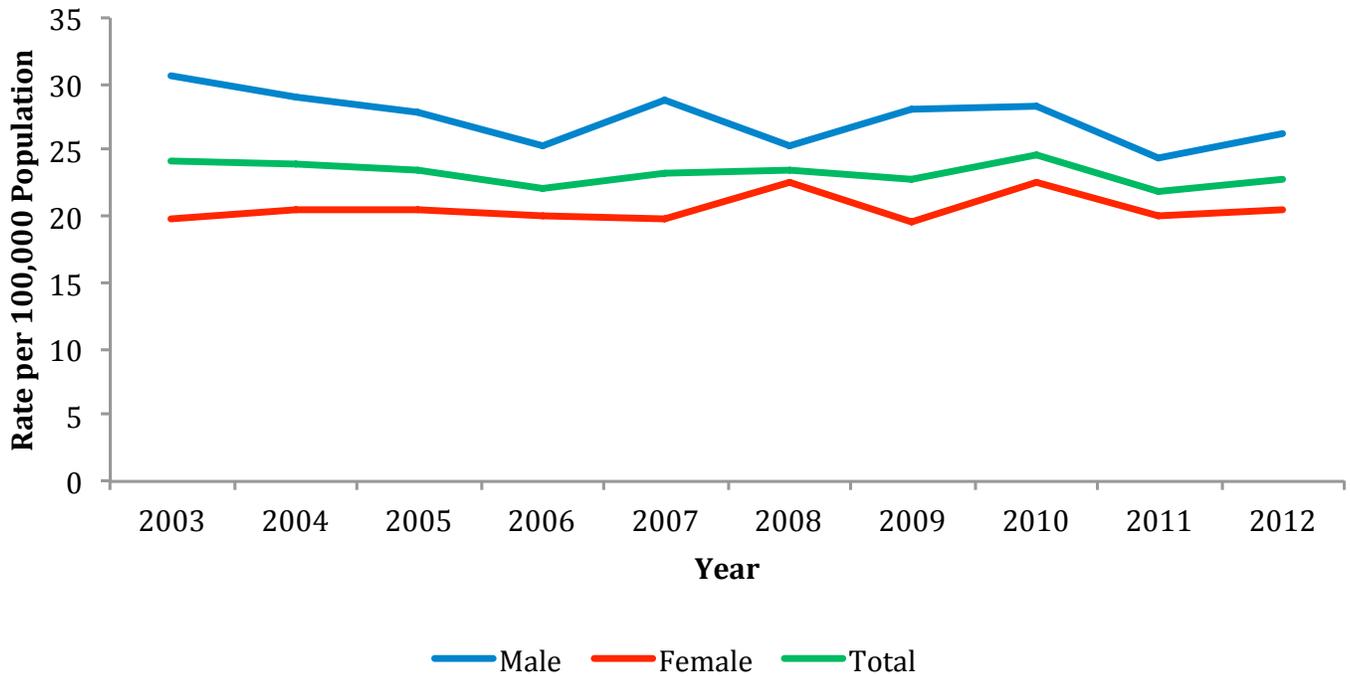
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Chronic kidney disease is a condition characterized by a gradual loss of kidney function over time. Chronic kidney disease may be caused by diabetes, high blood pressure, and other disorders. As kidney disease progresses, it may lead to kidney failure (which requires dialysis or a kidney transplant) or death (source: National Kidney Foundation).

Chronic kidney disease mortality rates declined slightly from 2003-2012. The 2003 rate in Mississippi was 24.2 deaths per 100,000 persons, declining 5.4% to 22.9 deaths per 100,000 persons in 2012. White residents consistently had the lowest chronic kidney disease mortality, with a total rate of 17.4 deaths per 100,000 over the ten-year time period. Conversely, black residents had the highest chronic kidney disease mortality rate, with a cumulative rate of 38.9 deaths per 100,000 persons for the same period. There are also gender differences in the mortality of chronic kidney disease. Females had a lower cumulative mortality rate (20.5 deaths per 100,000 persons) compared to males (27.3 deaths per 100,000 persons) from 2003-2012. Regional differences were present with respect to chronic kidney disease mortality. Public Health District III had the highest cumulative mortality rate (32.2 deaths per 100,000 persons) compared to Public Health District I which had the lowest cumulative mortality rate (19.3 deaths per 100,000 persons).

The mortality rate among black residents for 2003-2012 was highest in District III (45.9 deaths per 100,000 persons) and lowest in District V (33.0 per 100,000 persons). The white mortality rate was highest in District VI (44.8 per 100,000 persons) and the lowest in District V (13.7 per 100,000 persons).

Mortality (Septicemia)

Figure 33. Septicemia Mortality by Race
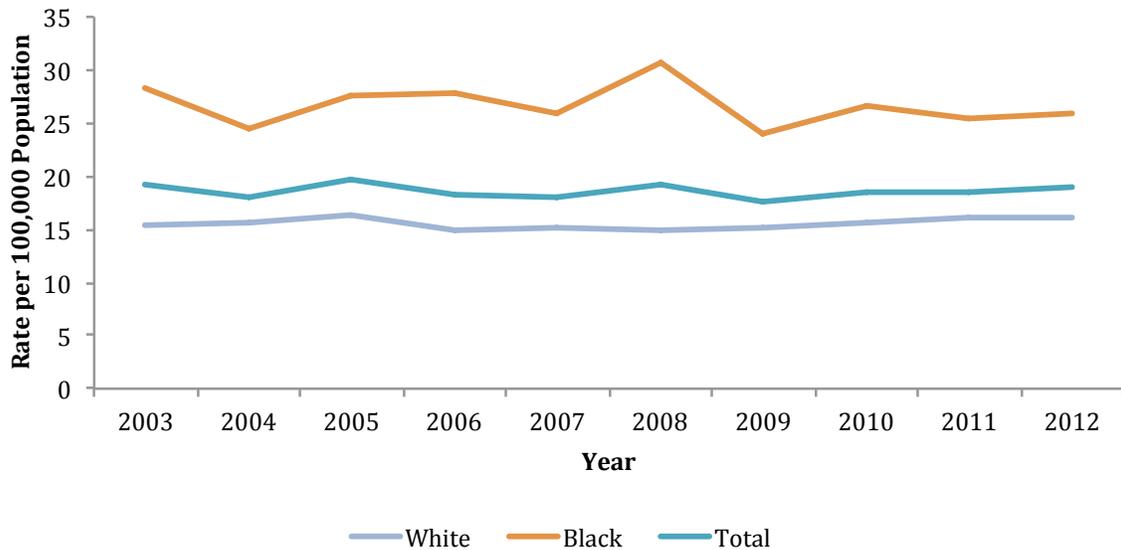
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Figure 34. Septicemia Mortality by Gender
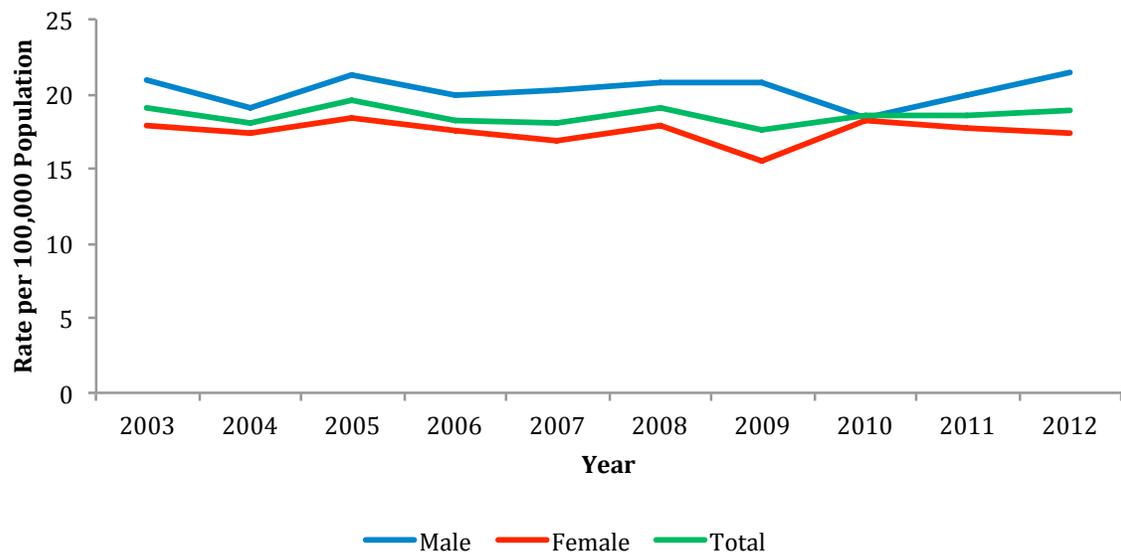
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Septicemia formerly called "blood poisoning" is a systemic disease caused by the spread of microorganisms and their toxins via the circulating blood.

Septicemia is among the top ten causes of death in Mississippi. For the period 2003-2012 there were approximately 2% of all deaths attributed to septicemia. Death from septicemia is more likely to occur in black residents (26.7 deaths per 100,000 population) compared to white residents (15.5 deaths per 100,000). The overall rate is 18.5 deaths per 100,000 for the same period. During the past 10 years the rate has remained approximately the same. From a regional point of view District VI (14.7 deaths per 100,000) had the lowest rate compared to the highest rate in District VIII (22.8 deaths per 100,000).

Mortality (Pneumonia and Influenza)

Figure 35. Pneumonia and Influenza Mortality by Race
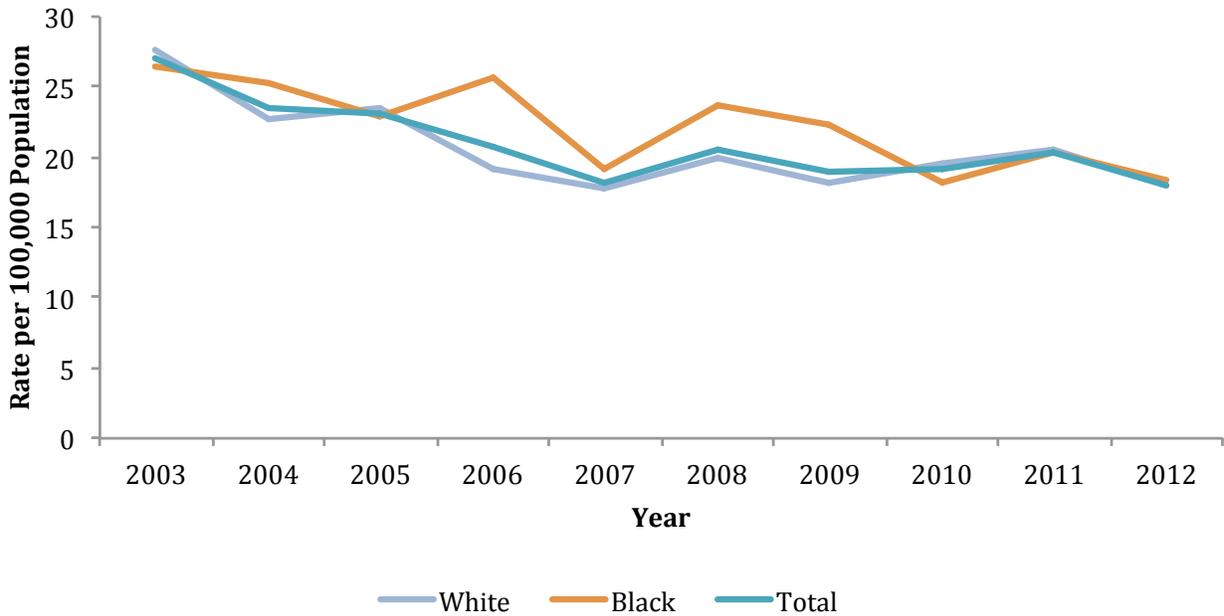
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Figure 36. Pneumonia and Influenza Mortality by Gender
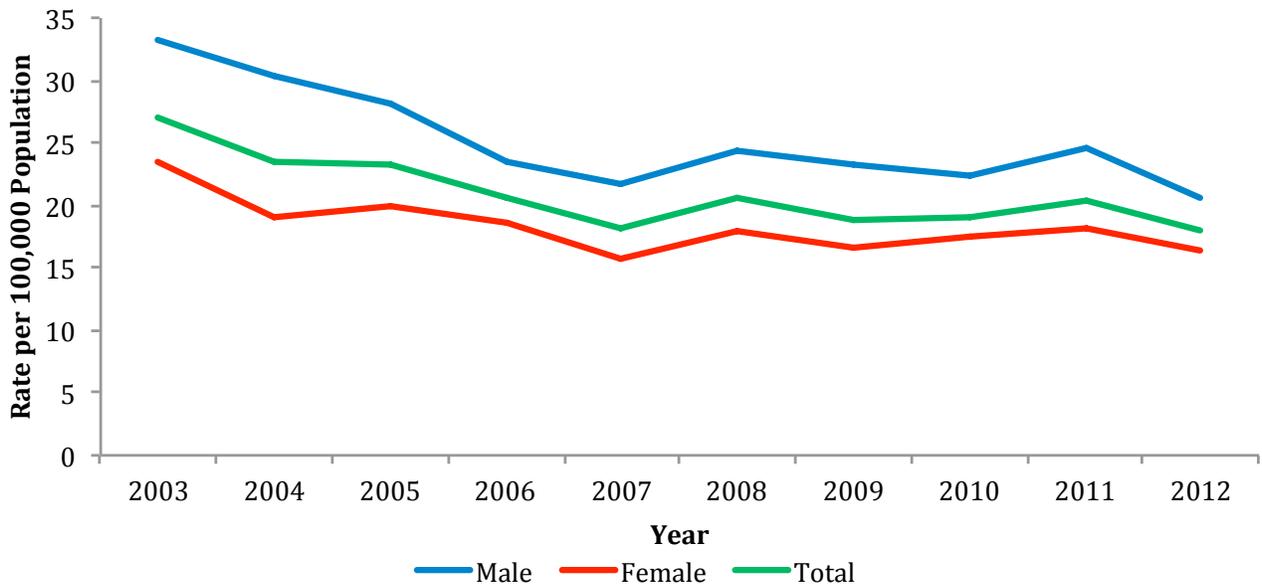
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Pneumonia and Influenza (flu) are infectious conditions that affect the lungs, leading to death in a small proportion of cases. Certain populations, such as older adults (over 65 years of age), infants, pregnant women, and those with impaired immune systems, are at higher risk for severe complications from pneumonia and influenza, including death. In 2011, over 53,000 Americans died from pneumonia and influenza. Pneumonia and influenza combined is the 8th most common cause of death in the U.S. and the 10th most common cause of death

in Mississippi Effective vaccines are available for influenza, and some forms of pneumonia, making immunization an important measure for reducing unnecessary deaths from these conditions.

The data displayed in Figure 35 and Figure 36 demonstrates a slight but steady decline in the death rate from pneumonia and influenza in Mississippi over the ten year period from 2003 to 2012. The death rate for black residents, which trended higher than the total rate from 2005 to 2009, has realigned with the total rate from 2010 onward. A consistent gender disparity is evident, with the death rate persistently higher in males when compared to females. The Mississippi death rate from pneumonia and influenza in 2011 was higher than the national rate, 20.4 per 100,000 compared to 17.3 per 100,000 for the nation overall.

Mortality rates vary across the Public Health Districts in Mississippi. The mortality rate among black residents from pneumonia and influenza for the period 2003-2012 was highest in District VIII (30.0 deaths per 100,000 persons) and lowest in District II (17.6). The mortality rate among white residents was highest in District III (26.8) and lowest in District I (15.3).

Information about pneumonia and influenza vaccination rates among older adults is presented later in this report, beginning on page 98.

Suicide and Homicide

Though not in the ten leading causes of death in Mississippi, deaths from suicide and homicide are of particular interest as they are, by definition, preventable, and they are among the leading causes of death in younger age groups. Additionally, both suicide and homicide disparately affect certain racial groups, with rates of suicide much higher in the white population than the black population, and rates of homicide substantially higher in the black population than the white. Information about these causes of death is presented on the following pages.

Mortality (Suicide)

Figure 37. Suicide Mortality by Race
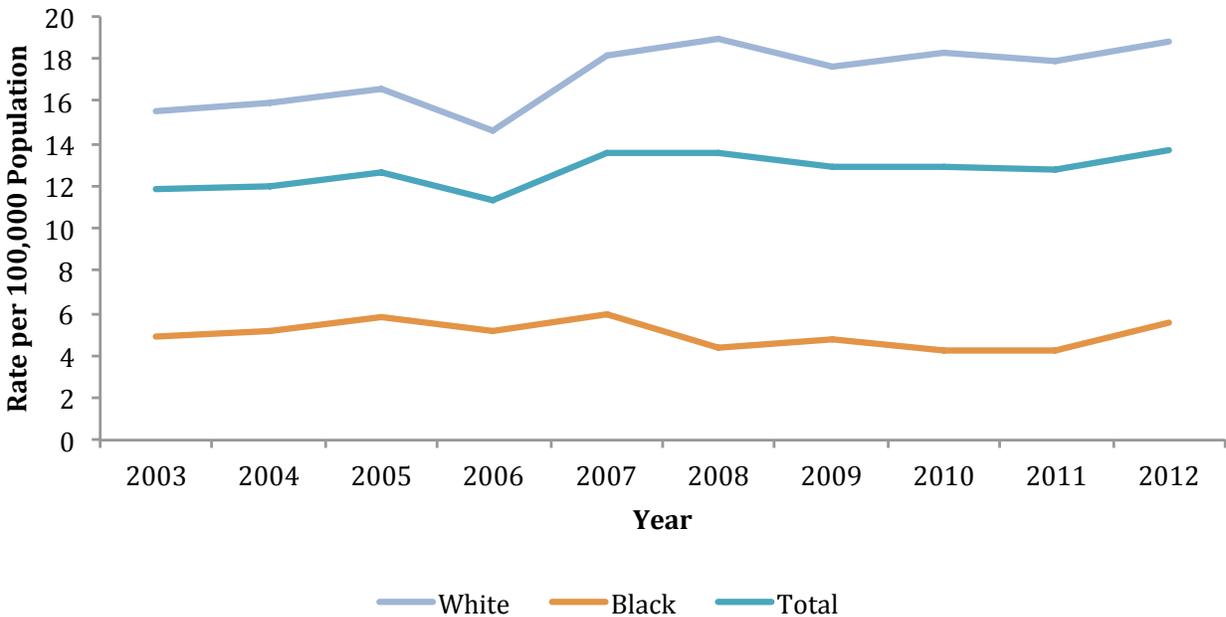
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Figure 38. Suicide Mortality by Gender
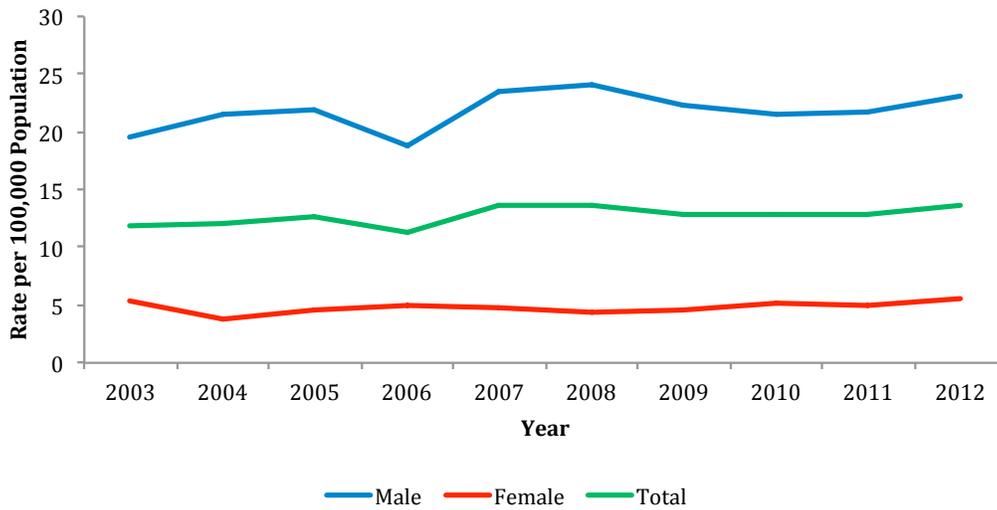
*Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)*

Suicide is the one of the most extreme outcomes of mental illness and claimed the lives of 40,531 persons nationwide in 2012; 402 of those were Mississippians. Suicide mortality in Mississippi increased from 11.9 deaths per 100,000 in 2003 to 13.7 in 2012 (a 15% increase). White residents in Mississippi were 3.4 times more likely to die from suicide than black residents in 2012 (18.8 vs. 5.5 deaths per 100,000). This was higher than the ratio for the nation in 2012 which was 2.6 (14.1 vs. 5.5). The disparity was even greater by gender. In 2012, males were 4.2 more likely than females to commit suicide (23.1 vs. 5.5 deaths per 100,000). Nationally, males were 3.8 times more likely than females to commit suicide (20.3 vs. 5.4).

White suicide rates showed little variation between Public Health Districts over the period 2008-2012 although the highest rate occurred in District IX. Additionally, for the same period, the suicide rate for the black population was much higher in District IX than the other districts.

The Healthy People 2020 objectives set a goal of 10.2 deaths per 100,000 from suicide. With rates increasing since 2003, both Mississippi and the nation are moving in the wrong direction.

Mortality (Homicide)

Figure 39. Homicide Mortality by Race
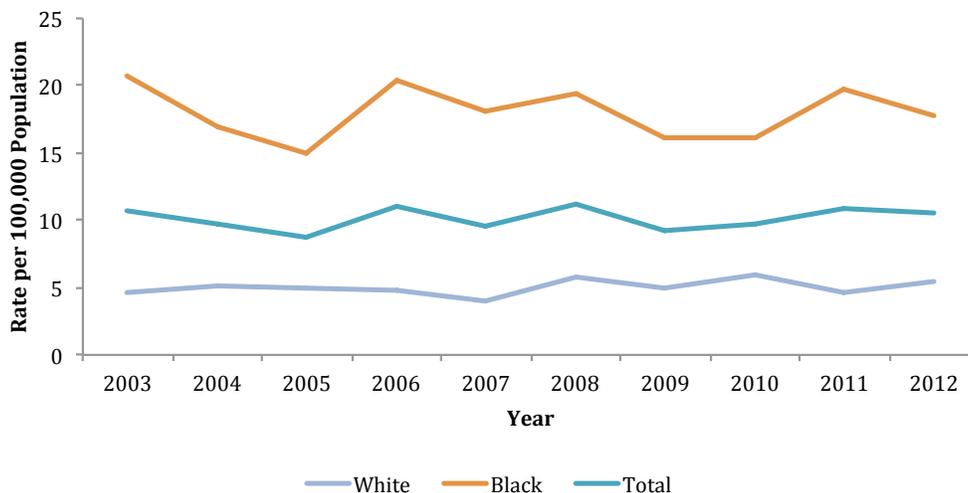
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

Figure 40. Homicide Mortality by Gender
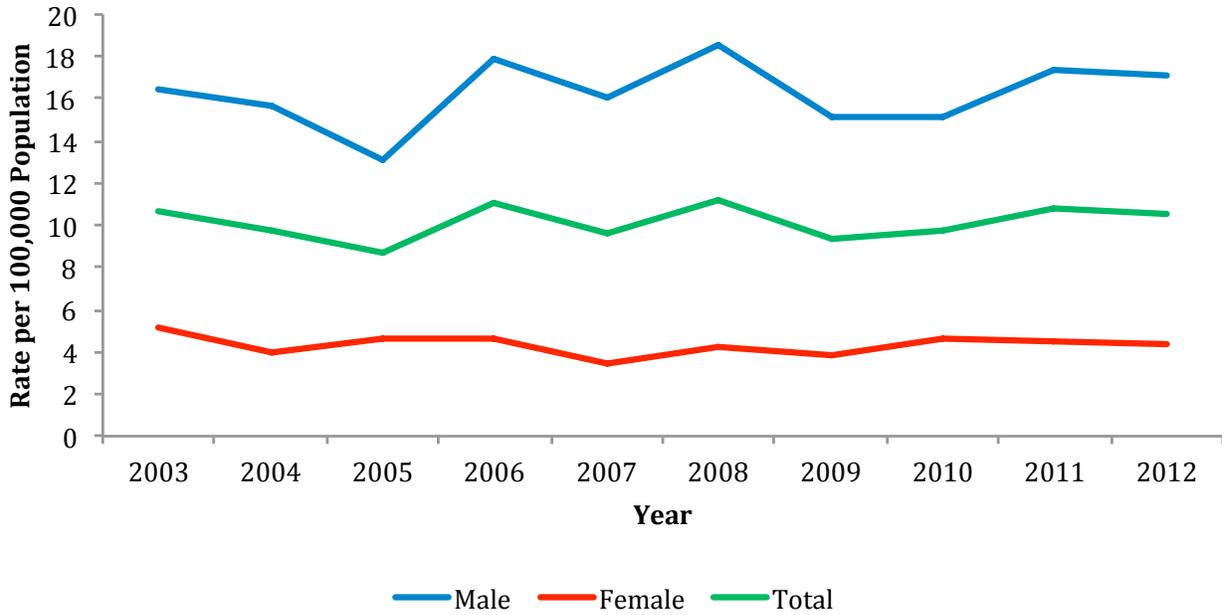
Source: MSTAHRS 2003-2012; Age-adjusted Rate (2000 U.S. Population)

The Healthy People 2020 target for homicide mortality is 5.5 homicides per 100,000 population. In 2012 the national rate was 5.3 indicating that the target has been met for the nation. However, Mississippi's age-adjusted homicide mortality rate in 2012 was twice the national rate at 10.6 homicides per 100,000 population. While this rate has fluctuated over the past ten years, the trend is essentially flat. Additionally, the rate for black residents was more than three times higher than the rate for white residents in 2012 (17.8 vs. 5.5). As troubling as this is, the disparity at the national level was even greater, with a rate among black residents in 2012 that was 5.7 times higher than the rate among white residents (18.1 vs. 3.2).

Males were also at higher risk than females and were four times more likely to die from a homicide than were women (17.1 vs. 4.3). The 15-24 and 25-34 age groups had the highest rates of mortality from homicides, peaking at 23.2 homicides per 100,000 population for the 25-34 age group in 2012. Because of the racial disparity in homicide rates, geographic distribution of homicide rates tends to be determined by the racial makeup of the area. However, for the five-year period from 2008-2012, District III had the highest homicide rates for black and white residents (22.1 and 9.4 homicide deaths per 100,000 population respectively). District V had the second highest rate among black residents (21.2) and District VII had the second highest rate among white residents (8.1).

Overall Self-Rated Health

Personal Health Rating

A widely used global measure of health status is self-rated health. Self-rated health refers to a single-item measure of health status where individuals are asked to rate their own health on a five-point scale (excellent, very good, good, fair, or poor). The link between self-rated health and mortality has been documented in several studies showing the same to be true in different cultures and in a broad range of age groups.

The self-reported status of one's health attempts to determine how people look at their personal health and how well they function physically, psychologically and socially while engaged in normal daily activities. How people view their own health may indicate dysfunction and disability not readily apparent in standard morbidity and mortality data.

Self-rated fair or poor health correlates with certain health risk factors, illness severity, and certain social and demographic characteristics. Health risk factors such as smoking and obesity are associated with fair or poor health, as are certain indicators of disease severity, such as insulin use and duration of diabetes.

In Mississippi, the 2013 BRFSS reflected a tremendous gap between lower and higher income groups regarding a health rating of fair or poor. People reporting a household income of less than $15,000 per year reported a fair or poor health rate of 46.4% which was almost seven times higher than those who earn $75,000 per year or more who reported a fair or poor health rate of only 6.8 percent.

There appears to be a strong correlation between low income groups and self-reported status of fair or poor health along with the self-reported days of poor physical and mental health.

Poor Physical Health Days

As is the case with mental health, there are similar patterns observed with poor physical health for more than seven days in the past month. Knowledge of this condition aids health professionals in determining the percentage of people who are unable to perform work or household tasks because of a physical illness or injury for at least seven days in the previous month.

Poor physical health is a general indicator of a person's health related quality of life. The number of poor days of physical health reveals information about the causes of morbidity in a population. People's self-assessment of their physical health, which includes physical illness and injury, is a good measure of recent health.

For Mississippi, the 2013 BRFSS revealed a substantial difference in days of poor physical health when viewed by the annual income of the respondents. Those whose income was less than $15,000 per year reported a rate of poor physical health at 38.0% while those with an annual income of $75,000 had a rate of only 7.7 percent. This means that the lower income groups were almost five times as likely to have experienced seven days or more of poor physical health than those in the higher category of income.

Poor Mental Health Days

A healthy mental state is essential for overall health and wellness. The number of poor mental health days within the past thirty days is another health indicator that is used to measure the quality of life of an individual.

Poor mental health includes stress, depression and other emotional problems that can prevent someone from effectively engaging daily activities like school, work, recreation and personal care. Occasional down days are normal, but persistent mental or emotional health problems should be evaluated by a qualified professional.

In Mississippi two groups of people are especially noticeable when looking at the numbers: females and those who have less that a high school education. Females reported a rate of more than seven days of poor mental health in the past month more than one and one-half times that of males—20.1% in 2013 to 13.2 percent. The other group that shows substantially higher rates for poor mental health more than seven days in the prior month is individuals who do not have a high school education. In 2013, people in this category reported a rate of 24.3% compared to only 9.4% for college graduated which is more than two and one-half times higher.

Limited Activity Because of Physical, Mental or Emotional Problems

This condition tells us to what extent physical, mental or emotional health interferes with normal day-to-day activities such as self-care, work, school or recreation. Having this information helps health professional to measure the effects of illnesses and disabilities

People who report having less than a high school education report much higher rates of limited activity. According to the 2013 Behavioral Risk Factor Surveillance Survey (BRFSS) those who did not finish high school had a rate of 42.8% compared to only 13.9% for those who were college graduates. This means that persons who did not complete high school are more than three times as likely to experience more than seven day of limited activity because of poor physical, mental or emotional health than college graduates.

The overall rate of reported limited activity based on physical, mental, or emotional problems in Mississippi for 2013 was 26.5 percent. The national average was 19.7 percent.

Infectious Diseases

Historically, infectious diseases were one of the largest drivers of morbidity and mortality for most of human existence. With advances in sanitation and the advent of antibiotics and vaccines, infectious diseases now play less of a role in shaping human health than chronic, non-infectious diseases, particularly in the developed world. However, infectious diseases still pose a threat to the health of Mississippians, particularly when it comes to sexual health. Many of the most prevalent reportable infectious diseases are sexually transmitted, though not all are.

Chlamydia

Figure 41. Chlamydia Rates by Year, United States and Mississippi
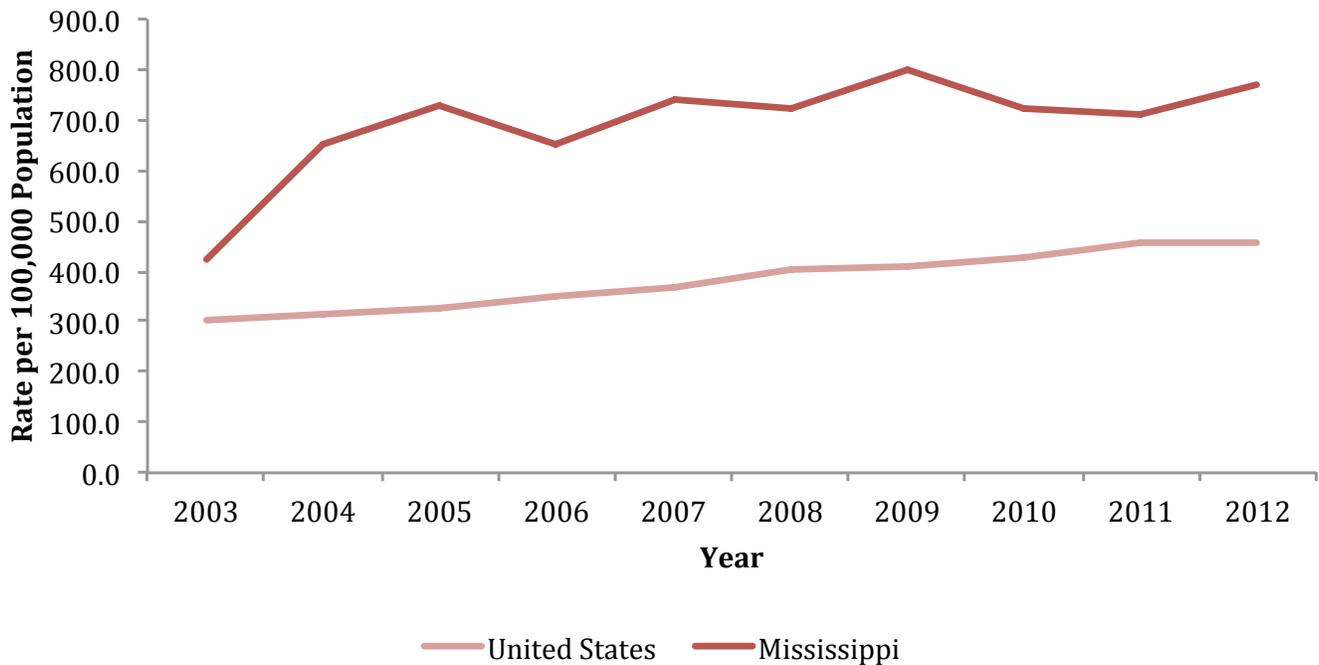
Sources: MSDH Annual Morbidity Report 2012; Centers for Disease Control and Prevention (CDC). Sexually Transmitted Disease Surveillance 2012. Atlanta: U.S. Department of Health and Human Services; 2014

Pelvic inflammatory disease, infertility and chronic pelvic pain are the adverse consequences of untreated chlamydial infection. In 2012, Mississippi had the highest rate of chlamydial infections among the 50 states (774 per 100,000 persons). Reported rates of chlamydia among women (1094.7 cases per 100,000) were 2.5 times greater than those among men (434.2 cases per 100,000). Adolescents and young adults aged 15-24 years make up only 15% of Mississippi's population, yet represented 76% of all cases reported in 2012. Among 15-24 year olds, the black population was disproportionately affected by chlamydia, representing 64% of cases in that age group. Additionally, 72% of those cases were female.

In 2011 and 2012, Hinds (14%), Harrison (6%), De Soto (4%), and Forrest (4%) counties had the highest overall number of reported cases among 15-24 year olds. Black females were disproportionately affected, having the highest proportion of cases in each of the highest morbidity counties. Less than 1% of all chlamydia cases were co-infected with HIV, 8% of cases were diagnosed with at least one additional infection of chlamydia, 13% of cases had a gonorrhea infection, and 0.2% of cases were diagnosed with primary, secondary, or early latent syphilis during 2012.

Gonorrhea

Figure 42. Gonorrhea Rates by Year, United States and Mississippi
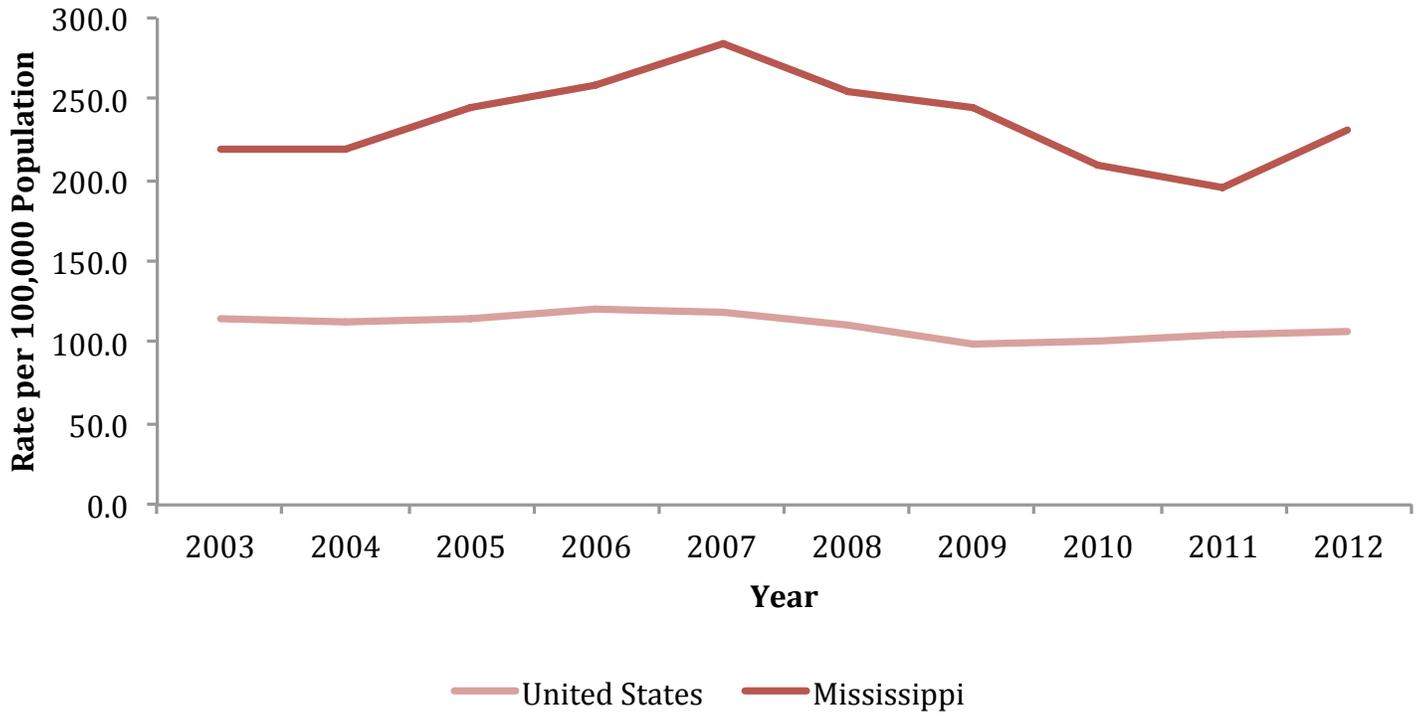
Sources: MSDH Annual Morbidity Report 2012; CDC Sexually Transmitted Disease Surveillance 2012. Atlanta: U.S. Department of Health and Human Services; 2014

In 2012, Mississippi ranked 1st among 50 states in gonorrheal infections (230.8 per 100,000 persons). For the past ten years, Mississippi has averaged over 7,000 cases annually. Although there was a statewide decrease in cases during 2007-2011, Mississippi saw an 18% increase from 2011 to 2012 (from 5,816 to 6,877 cases). Two-thirds of all cases occurred in 15-24 year olds, (29% in 15-19 year olds and 38% in 20-24 year olds). Among 15-24 year olds, the black population was disproportionately affected by gonorrhea, representing 74% of cases in that age group. In addition, 57% of those cases were female.

In 2012, Hinds (20%), Harrison (5%), De Soto, Washington, and Forrest (4% each) counties had the highest number of overall cases and cases among 15-24 year olds. Black females had the highest number of cases in Forrest and Washington Counties and black males had the highest number of cases in De Soto, Harrison, and Hinds Counties. Of all gonorrhea cases reported in CY 2012, 6% were diagnosed with at least one additional gonorrhea infection, 43% with chlamydia, and 0.3% with primary, secondary, or early latent syphilis. Two percent of cases were co-infected with HIV.

HIV Disease

Figure 43. Mississippi HIV Disease Incidence, 2008-2012
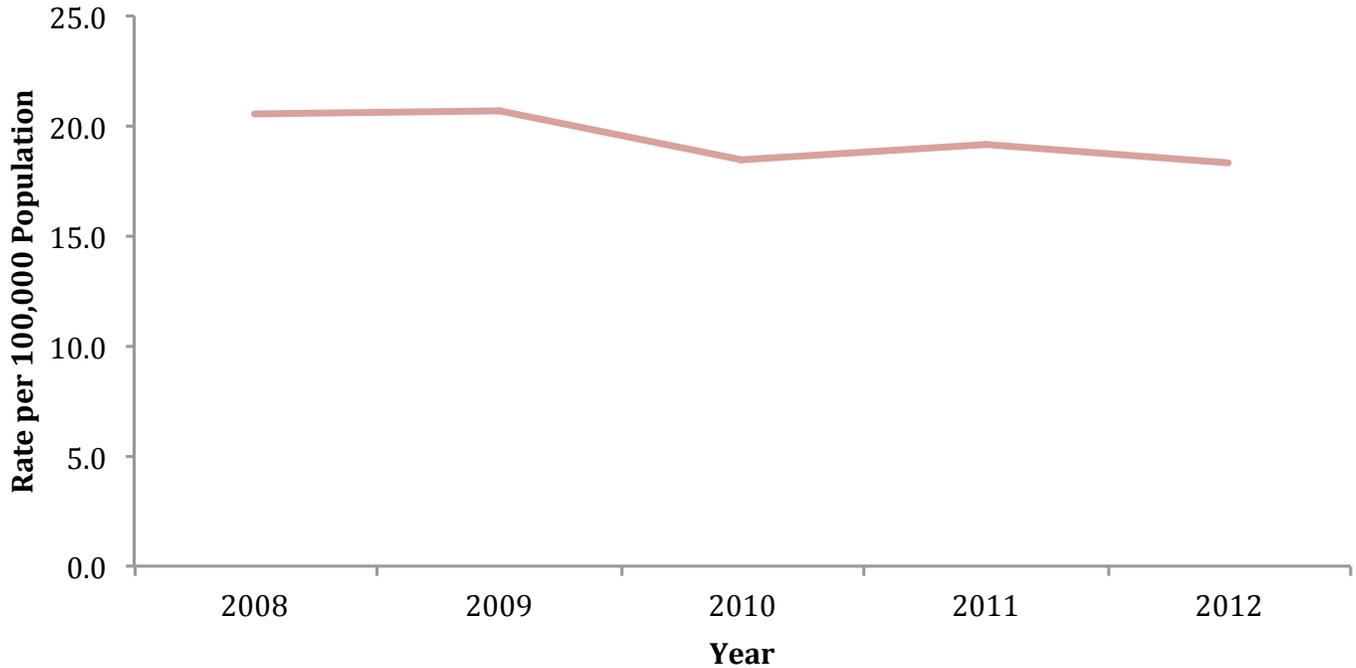
Source: MSDH Annual Morbidity Report 2012

Note: National Comparison Data Unavailable for HIV Disease. Complete national reporting has traditionally been available only for AIDS, not HIV Disease.

As of December 31, 2013, there were an estimated 10,473 Mississippians living with HIV. According to the 2012 National HIV Surveillance Report, Mississippi has the 10th highest rate of HIV infection in the United States. The state's capital city of Jackson has the eighth highest rate of HIV infection and in 2011, the eighth highest AIDS diagnosis of all metropolitan statistical areas (MSA) in the U.S. More than half of all HIV infection cases in the state occurred in six counties: Hinds (27%), Rankin (6%), Harrison (5%), DeSoto (5%), Forrest (5%), and Lauderdale (4%) counties. The greatest number of new cases of HIV disease occurred in District V, which includes the metropolitan Jackson area. About 47% of all persons living with HIV disease in Mississippi reside in the metropolitan Jackson area. In 2013, the prevalence of HIV (number of living cases) in District V was 623.2 cases per 100,000 persons. District III had the second highest case rate at 476.8 per 100,000 persons, followed by District VIII, with a prevalence of 306.0 cases per 100,000 persons.

Mississippi's black population is profoundly and disproportionately affected by HIV. Black residents comprise only 38% of the State's total population, but account for more than 75% of all new cases and had an incidence rate in 2012 nearly seven times that of white residents. Black men represented 59% of cases reported in 2012 and were the only group to experience an increase in cases over the ten-year period (2002-2012). Since 2007, the proportion of cases of HIV among women in Mississippi has steadily declined. In 2012, women represented 23.9% of newly diagnosed HIV disease cases. Among females, people identifying as black have the highest burden of disease, representing 75% of cases in 2012. Since 2008, female cases have decreased 35% (from 184 to 119 cases). In 2012, black females had rates nearly seven times higher than white females (17.9 vs. 2.7).

Comparing rates of infection by age, Mississippi is tied with Florida for the highest rate of infection nationally among 13-19 year olds and had the fifth highest rate of infection among 20-24 year olds. From 2001 to 2006, 30-44 year olds reported the highest number of new cases, representing 33% of cases in 2006. Since then, there has been a shift in the distribution of new cases to 15-29 year olds. This age group saw a 47% increase from 2006 to 2012. Cases among other age groups have remained stable. In 2012, 15-29 year olds represented 44% of new cases, 30-44 year olds represented 29% of new cases, and 45-59 year olds represented 21% of new cases. There has also been significant decline in HIV infection among infants due to effective treatment of pregnant women who are infected with HIV which prevents maternal transmission during pregnancy and at birth.

Primary and Secondary Syphilis

Figure 44. Primary and Secondary Syphilis Rates by Year, United States and Mississippi
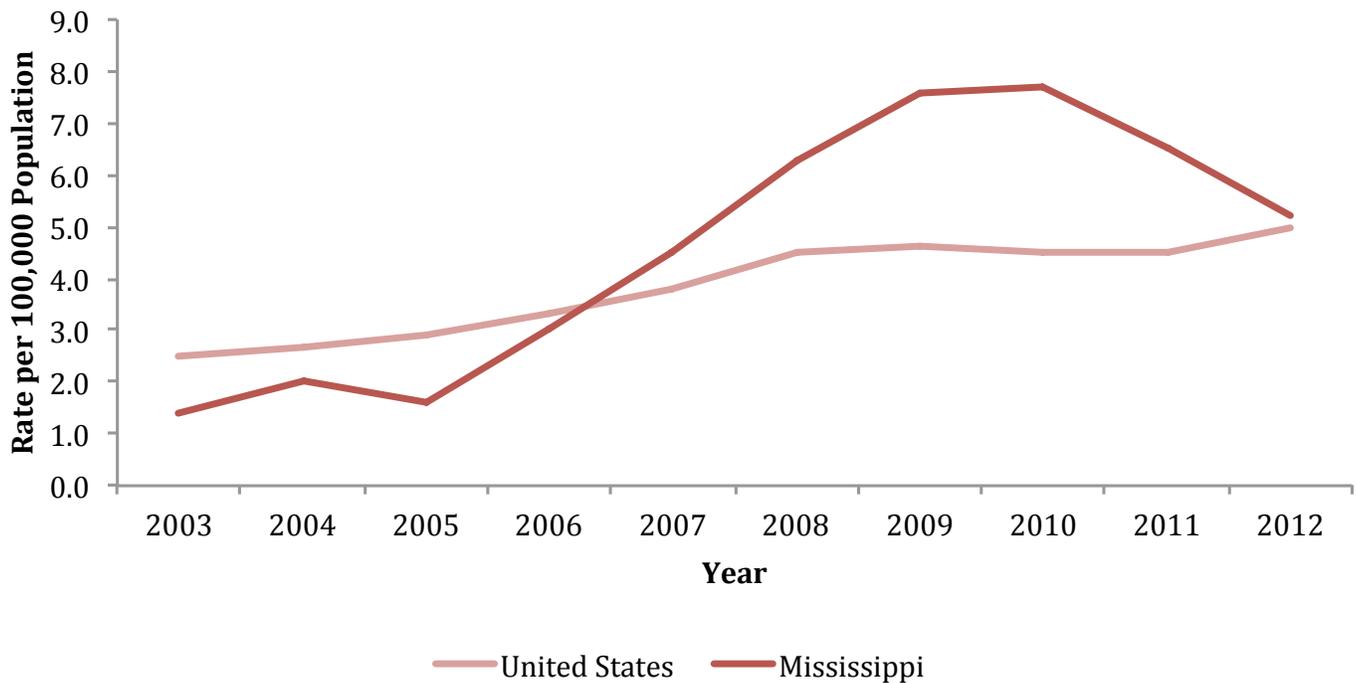
Sources: MSDH Annual Morbidity Report 2012; CDC Sexually Transmitted Disease Surveillance 2012. Atlanta: U.S. Department of Health and Human Services; 2014

The rate for primary and secondary syphilis (the stages in which syphilis is most infectious) was 6.3 per 100,000 in 2008 and 5 per 100,000 in 2012. Mississippi now ranks 11th in rates of primary and secondary syphilis among 50 states. From 2003 to 2010, Mississippi experienced a six-fold increase in primary and secondary syphilis cases (from 40 to 229 cases), but since 2010 the number of cases has decreased each year. Individuals between the ages of 20-29 represent 53% of P&S syphilis reported. There were very few cases of congenital syphilis in Mississippi from 2008 through 2012.

In 2012, 44% of all syphilis cases occurred in Hinds (District V), Warren (District V), and Harrison (District IX) counties. In Harrison County, 48% of cases occurred among black males and 36% occurred among black females. Among black male cases, 42% of cases occurred in 20-29 year olds. Among black females, 78% of cases occurred in 20 - 29 year olds. In Hinds County, 69% of cases were black males and 27% of cases were black females. Among black male cases, 50% were 20-29 years old and 22% were between the ages of 30 and 39 years old. Among black

female cases, 66% were between the ages of 20 and 29. In Warren County, 56% of cases were black males, 26% of cases were black females, and 19% were white females. Among black males, the cases were distributed among all age groups and in black females 86% were between the ages of 15 and 39. For white females, cases were distributed evenly among all age groups.

Tuberculosis

Tuberculosis (TB) refers to the number of new, active tuberculosis cases diagnosed each year per 100,000 people. Tuberculosis is a serious, potentially deadly communicable disease that is spread from person to person when sharing the same air. Once infected, the person has a risk of developing TB for the rest of their life. Fortunately, there is treatment that will greatly reduce that risk and if the person develops disease, there is treatment to cure the disease. People that are infected cannot spread TB to others. However, if that person progresses from infection to disease, they are then likely to infect other people and continue the spread of TB.

As demonstrated by Figure 45, Mississippi has made good progress in reducing the burden of new cases and maintaining one of the most significant overall downward trends in the U.S. However, TB elimination will not occur without decreasing the number of people who become infected and increasing the number of people who complete treatment once infected.

More than half of TB cases in Mississippi occur in persons between 25 and 64 years of age making TB in the workplace an ongoing concern. The majority of the remaining cases occur in persons over 64 years of age. Approximately 60% of new cases occur in black residents, and 30% in white residents. TB occurs more often in men. Access to medical care, life-style, community context and social environment are factors influencing the spread and control of TB. As numbers decrease, controlling TB will become increasingly challenging because knowledge and expertise in TB management will diminish due to reduced experience in managing TB.

Figure 45. Tuberculosis Rates by Year, United States and Mississippi
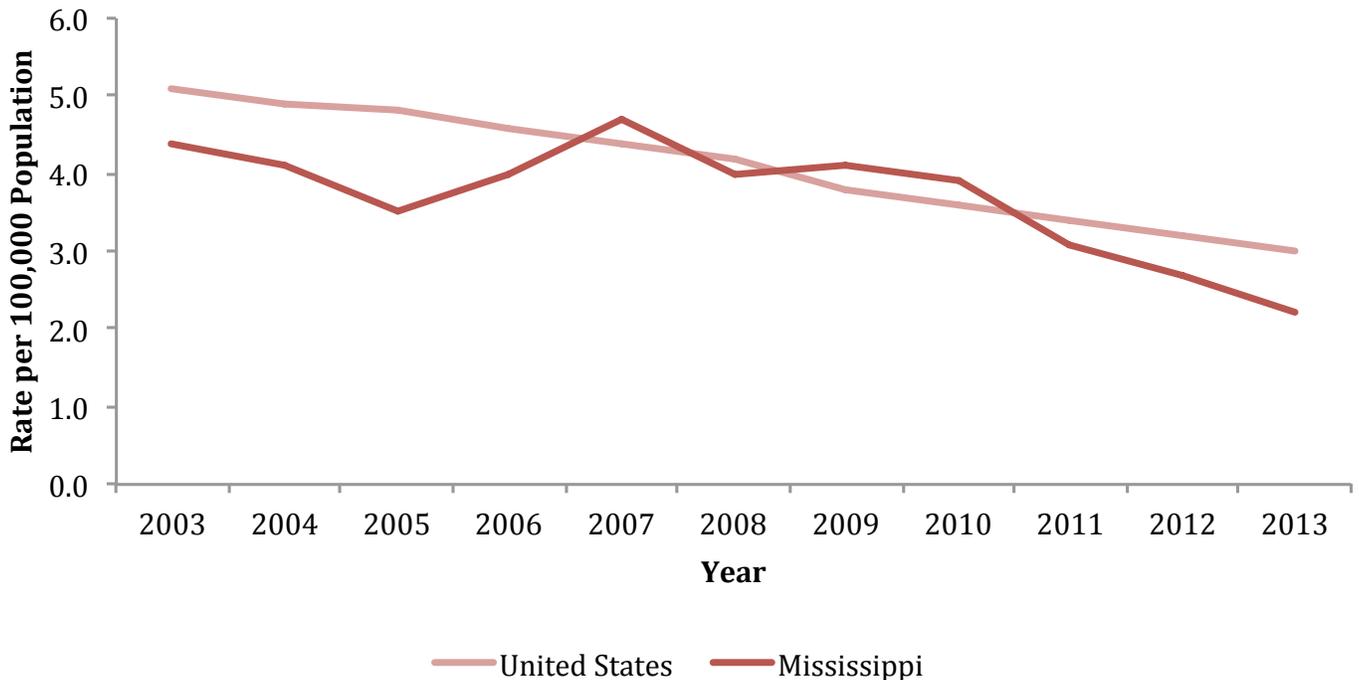
Source: MSTAHRS, 2003-2012 Age-Adjusted Rate (2000 U.S. Population)

Immunizations

Childhood Immunizations

The control of vaccine preventable diseases has been one of the premier accomplishments of modern public health. For U.S, children born between 1994 and 2013, immunizations have prevented an estimated 322 million illnesses, 21 million hospitalizations and 732,000 deaths. MSDH promotes childhood immunizations in numerous ways: administering the state Vaccines for Children program; administering the Mississippi CHIP vaccination program; providing immunizations at all county health departments; collaborating with private, rural health and FQHC clinics; and promoting the ACIP recommended practices for childhood immunizations.

The National Immunization Survey is a CDC assessment of vaccination status among children 19 to 35 months of age and currently evaluates the proportion of children fully immunized for pertussis, diphtheria, tetanus, measles, mumps, rubella, polio, varicella, hepatitis B, *Haemophilus influenzae* type b and *Streptococcus pneumoniae*. Since 2009, Mississippi's immunization rate in this age group has been near or above the national average (Figure 46). MSDH has been a national leader in childhood immunizations for school entry, ranking first in the nation in 2014, with >99.7% of children entering kindergarten fully immunized.

Figure 46. Vaccination Coverage Among Children 19-35 Months, by Year, Mississippi and United States
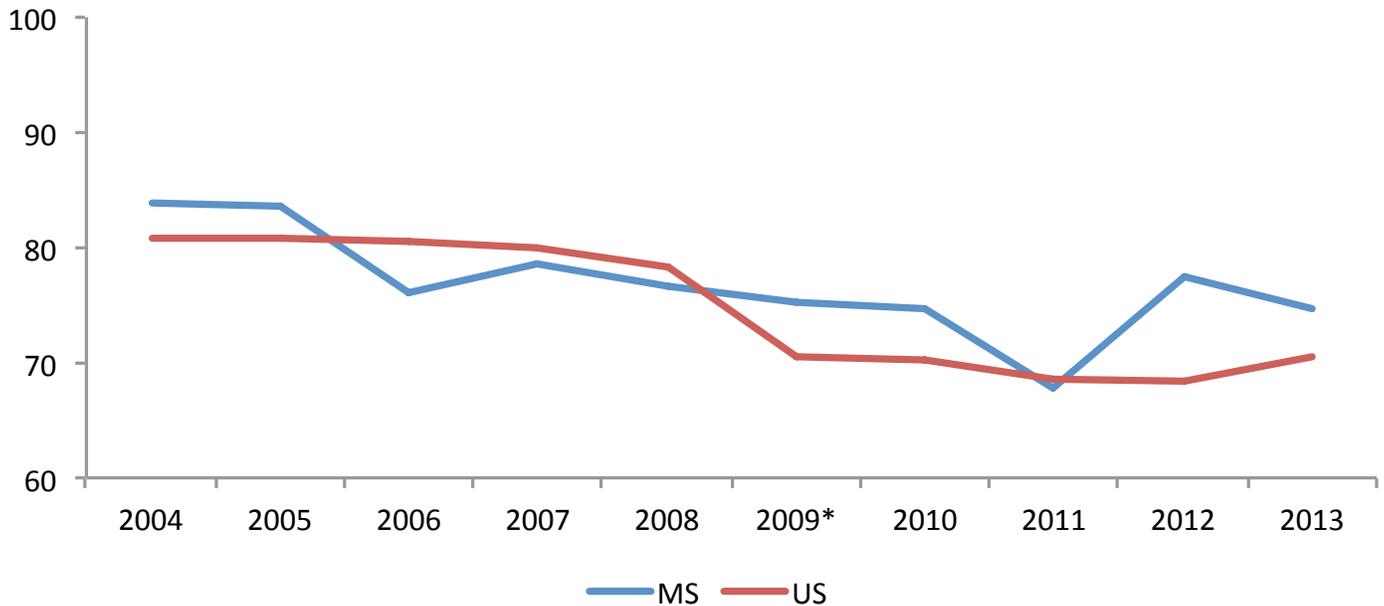
Source: CDC National Immunization Survey

Pertussis and Tdap

Pertussis ("whooping cough") immunity typically wanes 5-10 years after the childhood booster vaccination, leaving adolescents vulnerable to infection. Adolescents can then serve as a source of infection in children <1 year of age who have not yet been completely vaccinated against pertussis. In 2005 the Advisory Committee on Immunization Practices (ACIP) first recommended the Tdap booster (tetanus, diphtheria, and pertussis containing vaccine) for all adolescents aged 11-18 years.

In Mississippi, there was a large outbreak of pertussis in 2007, when 256 cases were reported. The number of cases trended down over the next several years with 49 reported cases of pertussis and no deaths in 2011. In 2012 the number increased to 77 reported cases with one pertussis-related death in a child <1 year of age.

In 2012 Mississippi joined 41 other states in instituting a requirement for Tdap among adolescents. All students entering 7th grade are required to have documentation of Tdap vaccination at seven years of age or older. This includes new, current and transfer students in both private and public schools. Mississippi has seen a steady improvement in the adolescent immunization rate, increasing from 19.6% in 2008 to 60.2% in 2013, but is still below the national average.

Figure 47. Estimated Adolescent Tdap Vaccine Coverage, United States and Mississippi, 2009-2013
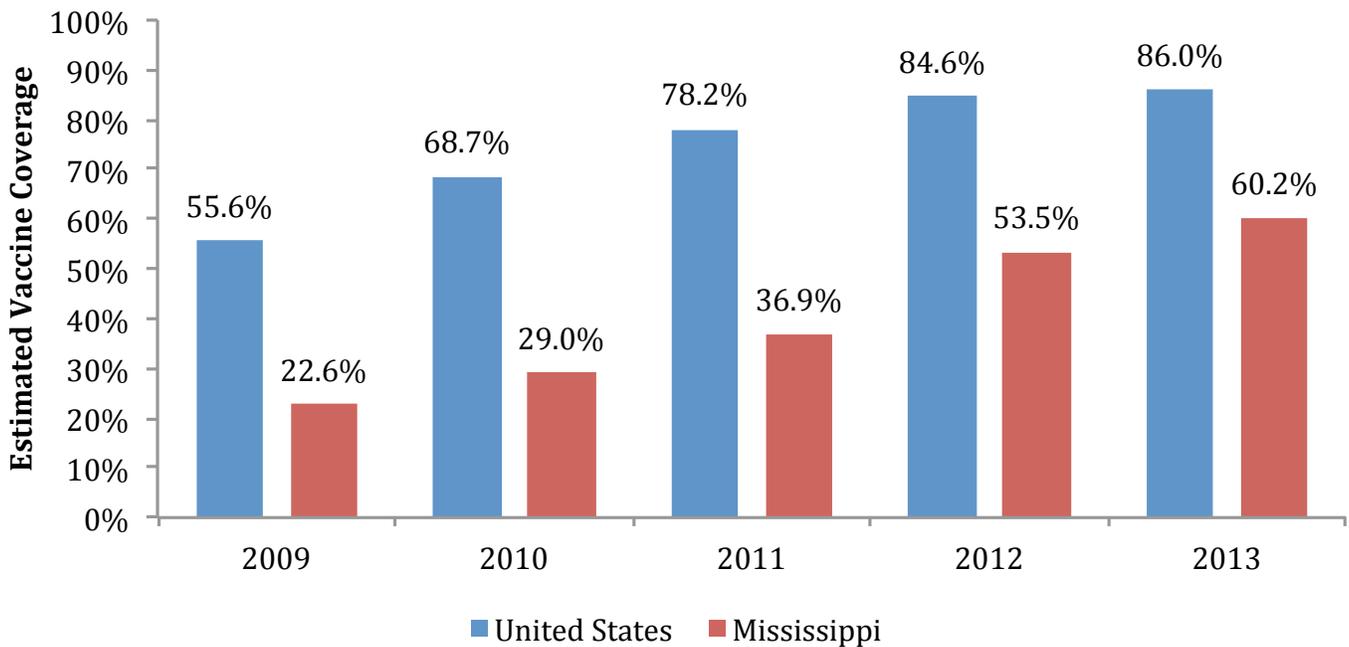
Source: CDC National Immunization Survey

Older Adult Influenza Vaccinations

Adults 65 years or older, especially those with underlying health conditions, are at greater risk of serious complications from the flu, compared with young, healthy adults. Individuals from this age group have the highest rates of hospitalization and on average account for 90% of influenza-associated deaths each year. Figure 48 indicates that 63% of older adults received a flu shot in 2013 which is relatively consistent with 65.4 in 2011 and 62.4 in 2012. Mississippi's coverage rates for 2013 are slightly above the national average of 62.8 for influenza vaccination in this population.

Annual influenza vaccination is the best protection for preventing influenza virus and its complications. Recommendations for all persons to get a flu shot is an ongoing educational effort, but especially among those at highest risk for complications.

Figure 48. Influenza Vaccination Rate, Adults Aged 65 and Older
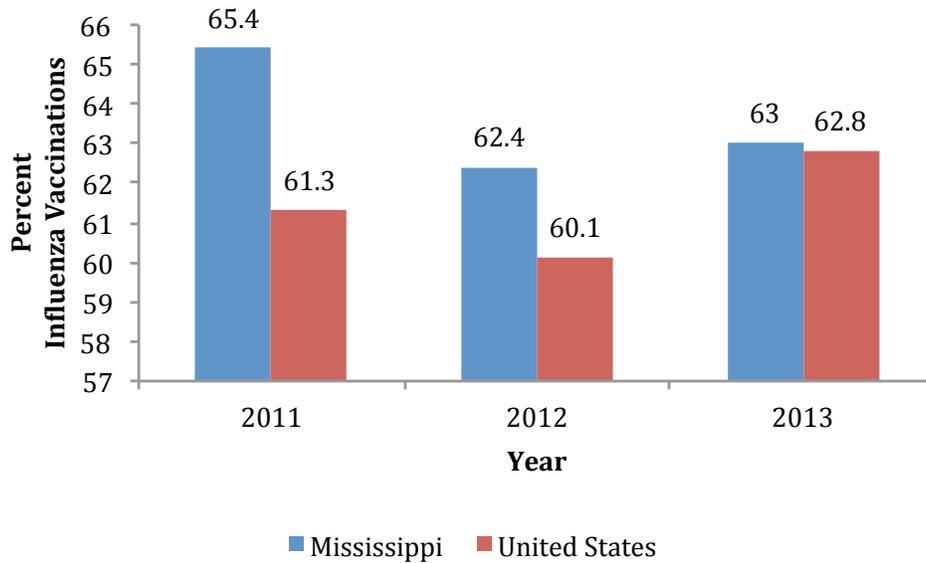
Source: Behavioral Risk Factor Surveillance System (BRFSS) 2011-2013

Older Adult Pneumonia Vaccinations

Pneumococcus is a deadly bacterial disease that causes pneumonia, blood stream infection and meningitis. This germ is responsible for approximately 900,000 cases of pneumonia, 12,000 cases of blood stream infection and 3,000 cases of meningitis in the U.S. annually. Blood stream infections alone caused about 3,300 deaths in Americans in 2012. Fortunately effective vaccines are available that protect against pneumococcus. Due to the high attack rate among older adults, the pneumococcal vaccine is recommended for everyone over 65 years of age.

As demonstrated in Figure 49, a majority of Mississippians over 65 report receiving a pneumococcal vaccine. Compared to national data, Mississippi trailed slightly in 2013 with 66.2% of Mississippi older adults receiving this recommended protection and 69.5% nationally.

Figure 49. Pneumonia Vaccination Rate, Adults Aged 65 and Older

Source: BRFSS 2011-2013

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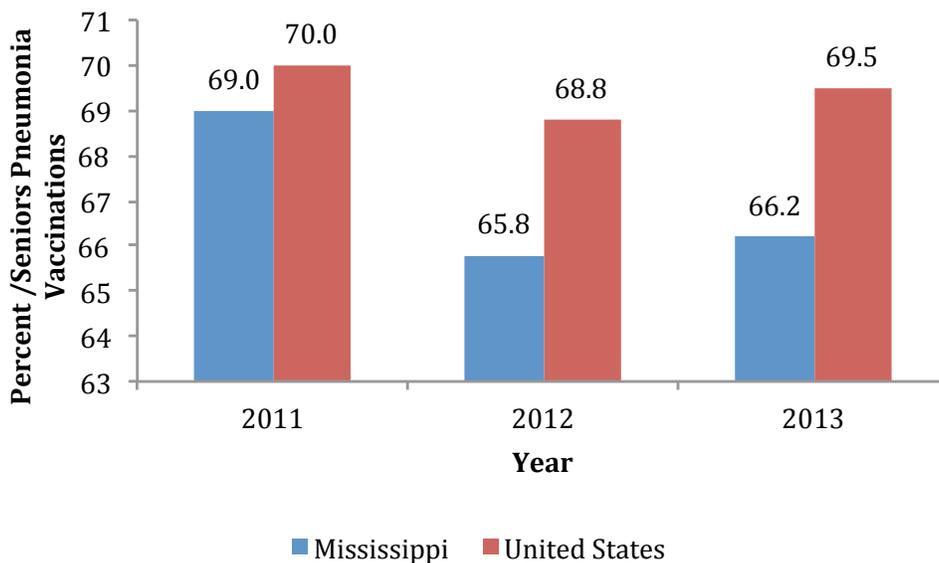
Chronic Disease Risk Factors

Behavioral Risk Factors

Fruit and Vegetable Consumption

Fruits and vegetables contribute important nutrients to the human body. Eating fruits and vegetables lowers the risk of developing many chronic diseases and can also help with weight management. Creating greater access to quality and affordable fruits and vegetables is an important step to increase fruits and vegetables consumption. When state leaders, health professional, food retail owners, farmers, education staff, and community members work together, more Mississippians can live healthier lives.

Adults in the United States consume fruit about 1.1 times per day and vegetables about 1.6 times per day. Only about 70% of all census tracts in this country currently have at least one store that offers a wide variety of fruits and vegetables. The following table compares Mississippi with national data for both adults and adolescents.

Table 8. 2013 Fruit and Vegetable Consumption

Report on Fruits and Vegetables, 2013: Behavioral Indicators							
	Adults				Adolescents			
	Percentage who report consuming fruits and vegetables less than one time per day		Median intake of fruits and vegetables (times per day)		Percentage who report consuming fruits and vegetables less than one time per day		Median intake of fruits and vegetables (times per day)	
	Fruits	Vegetables	Fruits	Vegetables	Fruits	Vegetables	Fruits	Vegetables
Mississippi	50.8	32.3	0.9	1.4	39.8	42.4	1.0	1.1
U.S. National	37.7	22.6	1.1	1.6	36.0	37.7	1.0	1.3

Sources: BRFSS 2011 and YRBS 2011

The following table compares Mississippi and national data using policy indicators of support for fruit and vegetable consumption.

Table 9. Policy and Environmental Indicators of Fruit and Vegetable Availability

Category	Report on Fruits and Vegetables, 2013: Policy and Environmental Indicators	U.S.	MS
Healthier Food Retail In Communities	Percentage of census tracts with at least one healthier food retailer within 1/2 mile of tract boundary	69.5	61.5
	States with healthier food retail policy	10	No
	Number of farmers markets per 100,000 residents	2.5	2.5
	Percentage of farmers markets that accept SNAP benefits	21.0	26.7
	Percentage of farmer markets that accept WIC Farmers Market Nutrition Program coupons	25.8	3.3
	States that authorize farmers to accept WIC Cash Value Vouchers	19	No

Category	Report on Fruits and Vegetables, 2013: Policy and Environmental Indicators	U.S.	MS
Schools, Child Care, and Early Education	Percentage of middle/high schools that offer fruits or vegetables at celebrations	33.6	33.3
	States with child care regulations that align with national standards for serving fruits/vegetables	10 / 4	Yes/Yes
	States with farm to school/preschool policy	28	No
Food System Support	Number of food hubs	213	2
	Percentage of cropland acreage harvested for fruits and vegetables	2.5	0.8
	States with state-level food policy council	27	Yes
	Number of local food policy councils	150	0

Source: http://cdc.gov/nutrition/professionals/data, *May 2013*

There are no indicators to determine fruit and vegetable consumption for preschool age children. However, Mississippi requires one fresh vegetable and two fresh fruits be served weekly in all licensed early childhood centers licensed by the state. Fruit juice is limited to once daily and is not served to infants. The use of starchy, high carbohydrate vegetables is also limited to one serving per meal. These regulations are actually stricter than the national standards.

Physical Activity

On average, physically active people outlive those who are inactive. Regular physical activity helps to maintain the functional independence of older adults and enhances the quality of life for people of all ages. Physical activity plays an important role in controlling obesity. The role of physical activity in preventing coronary heart disease is of particular importance, given that coronary heart disease is the leading cause of death and disability in the United State and Mississippi. It also reduces the risk of colon cancer, stroke, type two diabetes and its complications and osteoporosis. It is recommended that adults get 150 minutes of physical activity per week.

Physically inactive people are almost twice as likely to develop coronary heart disease as persons who engage in regular physical activity. The risk posed by physical inactivity is almost as high as several well-known coronary heart disease risk factors such as cigarette smoking, high blood pressure and high blood cholesterol. Physical inactivity is more prevalent than any other of these risk factors.

In 2013, 38.1% of Mississippians indicated no physical activity during the past 30 days. The median percentage nationally was much lower (25.3%). Mississippians with less education and in lower income levels reported the highest percentage of physical inactivity.

Figure 50. Percentage of Mississippians Reporting No Physical Activity Over Past 30 Days by Race and Education

Black   White
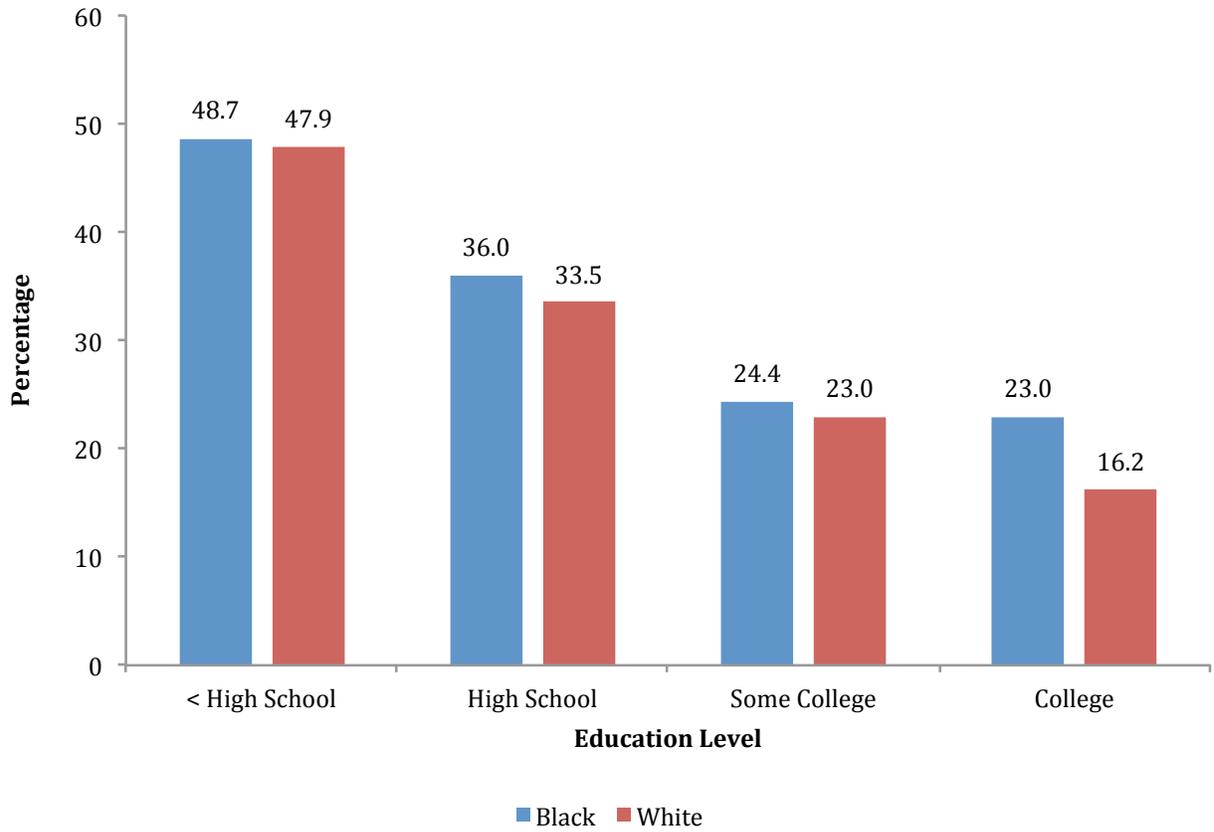
Source: BRFSS Mississippi 2012

Figure 51. Percentage of Mississippians Reporting No Physical Activity Over Past 30 Days by Race and Income

Black   White

Tobacco Use

Self-reported data from the Behavioral Risk Factor Surveillance Survey (BRFSS) from 2013 showed Mississippi to be the fifth highest among the 50 states and Washington, D.C. for smoking prevalence among adults, with 24.8% of adults reporting that they smoke. The national average for 2013 was 19%. The Healthy People 2020 goal for adult smoking prevalence is less than 12%. In Mississippi, smoking is most prevalent among black males, followed by white males, white females, and black females. Most smokers in Mississippi have annual household incomes less than $24,999 and have not completed high school (MS BRFSS data, 2012).

The Surgeon General's 2014 *Health Consequences of Smoking Report* documented a direct correlation between nicotine exposure during pregnancy and preterm birth, low birth weight, and stillbirth. Mississippi consistently has one of the highest infant mortality rates (IMRs) in the nation. In 2012, the MS IMR was 8.8 deaths per 1,000 live births. A disparity between white (7.2 deaths/1,000) and black IMRs (14.8 deaths/1,000) exists, with black infants twice as likely to die before their first birthday.

Although Mississippi Pregnancy Risk Assessment and Monitoring System (PRAMS) data from 2009 – 2011 show a decline in cigarette use during pregnancy, 16.6% of pregnant white women and 5.8% of black women used cigarettes during pregnancy. Many women continue smoking after childbirth. Evidence shows a link between environmental cigarette smoke and Sudden Infant Death Syndrome (SIDS), asthma, chronic otitis media, and chronic upper respiratory infections. The Surgeon General's report of 1986 stated there is no safe level of exposure to secondhand smoke.

Adults in Mississippi with less than a high school education are at great risk for being a current smoker and subsequently bearing the associated health burdens. Almost 36% of all adults in Mississippi with less than a high school education are current smokers. The February 2013 edition of CDC's *Vital Signs* reported that over a third of all adults with mental illness smoke cigarettes compared to 21% of adults without mental illness (USDHHS, 2013). The 2012 National Survey on Drug Use and Health estimates that 20.27% of Mississippians (approximately 587,830) have a mental illness, with 18.19% as the national average (NSDUH, 2014).

Similarly, Mississippi 2013 BRFSS data indicate that 19.1% of Mississippians (approximately 551,000) answered yes to the question, "Have you ever been told that you have a depressive disorder, including depression, major depression, dysthymia, or minor depression?" The U.S. average for this question was 17.6%. Thirty-six percent of Mississippians with mental illness smoke cigarettes compared to 21% smoked by those without mental illness. Sixty-eight percent of smokers with mental illness have tried to quit smoking in the past year. According to the 2011 National Health Interview Survey from the National Center on Birth Defects and Developmental Disabilities, 25.4% of adults with disabilities smoke verses 17.3% without a disability. Data from the Mississippi 2013 BRFSS report a smoking prevalence of 31.3% among the disabled verses 21% for adults without disabilities.

Tobacco Use Among High School Students

The Mississippi Youth Risk Behavior Survey (YRBS) measures the prevalence of behaviors (including tobacco use) that contribute to the leading causes of morbidity and mortality among youth. The 2013 Mississippi YRBS was completed by 1,584 students in 34 Mississippi public high schools during the fall of 2013. All Mississippi public high schools containing grades 9-12 were included in the sampling frame. The overall response rate was 80%. The results represent all students in grades 9-12.

The YRBS data reveal that Mississippi youth have a higher prevalence of tobacco use than the national average. White, male youth in Mississippi have a very high prevalence of cigarette use and smokeless tobacco use. White, Mississippi females have a very high prevalence of cigarette usage. Both white and black males have a high prevalence of cigar use. All Mississippi youth tobacco use prevalence rates exceed Healthy People 2020 targets for youth. These high, youth prevalence rates require significant, targeted counter marketing and educational efforts to reduce tobacco use within this population.

Table 10. Percentage of Youth Using Tobacco

Group	Currently Smokes Cigarettes*	Uses Smokeless Tobacco	Uses Cigars
U.S. Youth	15.7	8.8	12.6
MS Youth	17.2	10.3	13.6
MS White, Male Youth	27.2	29.5	15.7
MS White, Female Youth	24.8	2.1	12.2
MS Black, Male Youth	8.2	8.1	16.1
MS Black, Female Youth	9.0	1.7	9.6

*"Currently smokes cigarettes" is defined by the YRBS as smoking at least one cigarette during the 30 days prior to the survey.
Source: YRBS 2013

YRBS data indicate that about 41% of high school students nationally have ever tried cigarette smoking where in Mississippi 46% of Mississippi youth in high school have ever tried a cigarette.

Alcohol Abuse

Alcohol use has been linked with a substantial proportion of injuries and deaths from motor vehicle crashes, falls, fires and drowning. It also is a factor in homicide, suicide, marital violence, and child abuse and has been associated with high-risk sexual behavior. During 2012, males reported binge drinking (five or more drinks on one occasion during past 30 days) 2.5 times higher than females. Adults aged 18 to 24 reported the highest rate of binge drinking of any age group, at 20.8%. Approximately 85,000 deaths each year in the United States have been attributed to alcohol abuse. Alcohol abuse is strongly associated with injuries, violence, fetal alcohol syndrome, chronic liver disease, and risk of other acute and chronic health effects. The Healthy People 2020 target is 24.4%. Variation exists throughout the state and among the nine Public Health Districts. The following table reflects the differences seen from BRFSS 2012.

Table 11. Percentage at Risk Because of Binge Drinking by Public Health District and Race

	District I	District II	District III	District IV	District V	District VI	District VII	District VIII	District IX	State Total
White	20.4	20.4	7.0	12.3	13.8	10.5	8.7	7.7	14.1	12.4
Black	9.9	9.9	14.9	12.3	11.2	11.7	7.1	20.2	9.3	11.7
Total	15.9	15.9	11.6	12.4	12.2	11.0	8.1	11.4	13.7	12.1

Source: BRFSS, 2012

The highest percentage was among whites in District I (20.4%) and blacks in District VII (20.2%), whereas the lowest percentage was whites in District III (7.0%) and blacks in District VII (7.1%). The overall percentage range was 8.1% in District VII to 15.9% in District I.

The overall percentage reporting binge drinking during the past 30 days for 2012 is 12.1% compared to the U.S. at 16.9% (median). As with all self-reported sample surveys, BRFSS data might be subject to systematic error resulting from lower telephone coverage among populations of low socio-economic status, refusal to participate in the survey or to answer specific questions, or remembering information about the indicator.

Figure 52. Percentage Reporting Binge Drinking Over Past 30 Days
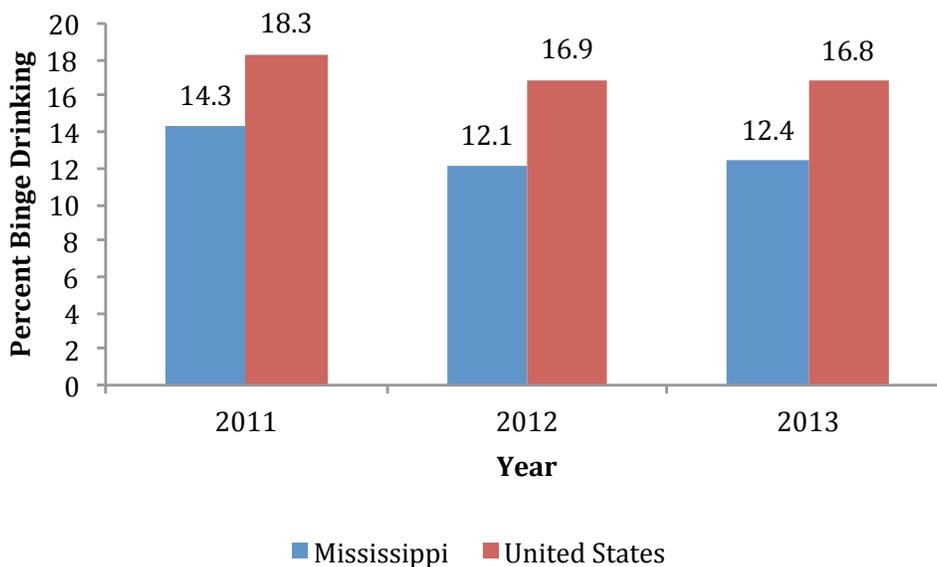
Source: BRFSS, 2011-2013

Intimate Partner Violence

One set of behaviors that is particularly damaging to health is intimate partner violence. While data about intimate partner violence is difficult to obtain due to the fear of coming forward that many victims have. Women who suffer from intimate partner violence are statistically more likely to contract HIV or another STI due to forced intercourse or prolonged exposure to stress. Additionally, there is relationship between intimate partner violence and depression and suicidal behavior.[18] Intimate partner violence can also have a profound impact on a person's risk of developing a chronic disease. A study of 2005 BRFSS data showed that for women and men, a history of nonconsensual sex was linked with high, cholesterol, stroke, and heart disease.[19] Based on 2013 YRBS data, of Mississippi teens in relationships over the previous year, 10.4% reported that they had experienced sexual dating violence, including kissing, touching, or being physically forced to have sexual intercourse when they did not want to. An estimated 1 in 3 women and 1 in 4 men will experience some form of physical violence by an intimate partner in their lifetime.[20] Clearly intimate partner violence is capable of posing a severe threat to the physical, mental, and emotional health of Mississippians.

Though there is no centralized record of all intimate partner violence occurring within Mississippi, data from state-funded domestic violence shelters and rape crisis centers can provide partial information about intimate partner violence. During the 2014 Fiscal Year, Mississippi's domestic violence shelters housed 2,020 women, men and children, and provided services to an additional 1,442 people. 46% of those sheltered identified as white, 49% identified as black, and 3% identified as Hispanic or Latino. 61% of women who were provided shelter had an annual family income of less than $5,000. Only 5% of those given shelter had a family income greater than $30,000. Sexual assault crisis centers provided assistance to 410 adult sexual assault victims (35 males and 375 females) and 419 children (93 males and 326 females). Services were also provided to 241 female adult survivors of child sexual abuse and 3 male adult survivors or child sexual abuse.[21] Because many cases of intimate partner violence and sexual abuse go unreported, these figures only provide a small glimpse of the extent of the problem.

18 World Health Organization. (2013). *Global and Regional Estimates of Violence Against Women, Prevalence and Health Effects of Intimate Partner Violence and Non-partner Sexual Violence.*

19 Smith, S., Fowler, K., & Niolon, P. (2014). Intimate Partner Homicide and Corollary Victims in 16 States: National Violent Death Reporting System, 2003-2009. *American Journal of Public Health*, 104(3).

20 Black, M.C., Basile, K.C., Breiding, M.J., Smith, S.G., Walters, M.L., Merrick, M.T., Chen. J., & Stevens, M. (2011). *The National Intimate Partner and Sexual Violence Survey: 2010 Summary Report.* National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

21 Mississippi State Department of Health Office Against Interpersonal Violence

Disease Risk Factors

Diabetes

While diabetes is a health outcome in itself, it also serves as risk factor for numerous health conditions. In 2012, the prevalence of self-reported diabetes among adults was higher in Mississippi (12.5%) than the U.S. average (9.7%). The prevalence of diabetes decreases as educational attainment increases. Among those without a high school diploma, 16.1% self-report diabetes, while 9.9% of those who pursued education beyond high school self-reported diabetes. There is a similar trend related to income (as measured against the federal poverty level (FPL)); the higher the household income, the lower the self-reported diabetes prevalence. In 2012, 18.8% of those making between 0% and 99% FPL reported having diabetes, while 7.7% of those with income greater than 300% FPL self-reported diabetes.

By race and gender, in 2012, black residents and females were the two groups with the highest prevalence of diabetes. Among black females, 17.6% self-reported diabetes. The second highest group reporting diabetes was black males; 14.2% of this group reported diabetes. Among other Mississippi groups in 2012, 9.3% of white females and 10.1% of white males reported diabetes.

These data are self-reported and likely underestimate the actual prevalence of diabetes due to the fact that many cases of diabetes remain undiagnosed.

Obesity

According to the Centers for Disease Control and Prevention (CDC), more than half of all Americans live with a preventable chronic disease, and many such diseases are related to obesity, poor nutrition and physical inactivity. Adult obesity in Mississippi has increased dramatically over the past 15 years and is expected to increase significantly in the next 20 years.[22] Overweight is defined as having a body mass index (BMI) that is 25 or higher. Obesity is defined as having a BMI that is 30 or higher. According to *The State of Obesity: Better Policies for a Healthier America,* Mississippi now has the highest adult obesity rate in the nation. Mississippi's adult obesity rate is 35.1 percent, up from 28.1 percent in 2004 and from 15.0 percent in 1990. *The F as in Fat: How Obesity Threatens America's Future 2012*, a report from Trust for America's Health and the Robert Wood Johnson Foundation, Mississippi's obesity rates could reach 66.7 percent by 2030.

Over the past 30 years, adult obesity rates have sharply risen, doubling since 1980. Today, that rate of increase is beginning to slow. There is increasing evidence that obesity rates are stabilizing for adults and children—but the rates remain very high, putting millions of Americans at risk for increased health problems. Rates of severe obesity (a BMI greater than 35) are continuing to increase in adults, and more than one-in-ten (8.4%) children becomes obese as early as ages of 2 to 5. In 2005, every state but one reported an increase in obesity rates; this past year, only six states (including Mississippi) experienced an increase. In 1980, no state had an obesity rate above 15 percent; in 1991, no state was above 20 percent; in 2000, no state was above 25 percent; and, in 2007, only Mississippi was above 30 percent. Between 2012 and 2013, six states had increases. Mississippi and West Virginia had the highest rates of obesity at 35.1 percent, while Colorado had the lowest rate at 21.3 percent. Nine of the 10 states with the highest rates of obesity are in the South.

22 *The F as in Fat: How Obesity Threatens America's Future 2011*

This growing epidemic has important consequences on our nation's health and economy. Obesity increases the risk of chronic diseases including heart disease and stroke, high blood pressure, diabetes, certain cancers, osteoarthritis, and gall bladder disease and gall stones.

Reports suggest over the next 20 years, Mississippi's obesity could contribute to 415,353 new cases of type 2 diabetes, 814,504 new cases of coronary heart disease and stroke, 751,568 new cases of hypertension, 487,642 new cases of arthritis, and 111,069 new cases of obesity related cancer.[23]

The following chart shows self-reported obesity and overweight rates and related health indicators for Mississippi for 2013.

Figure 53. Adult Obesity and Overweight Rates and Related Health Indicators for Mississippi (2013)
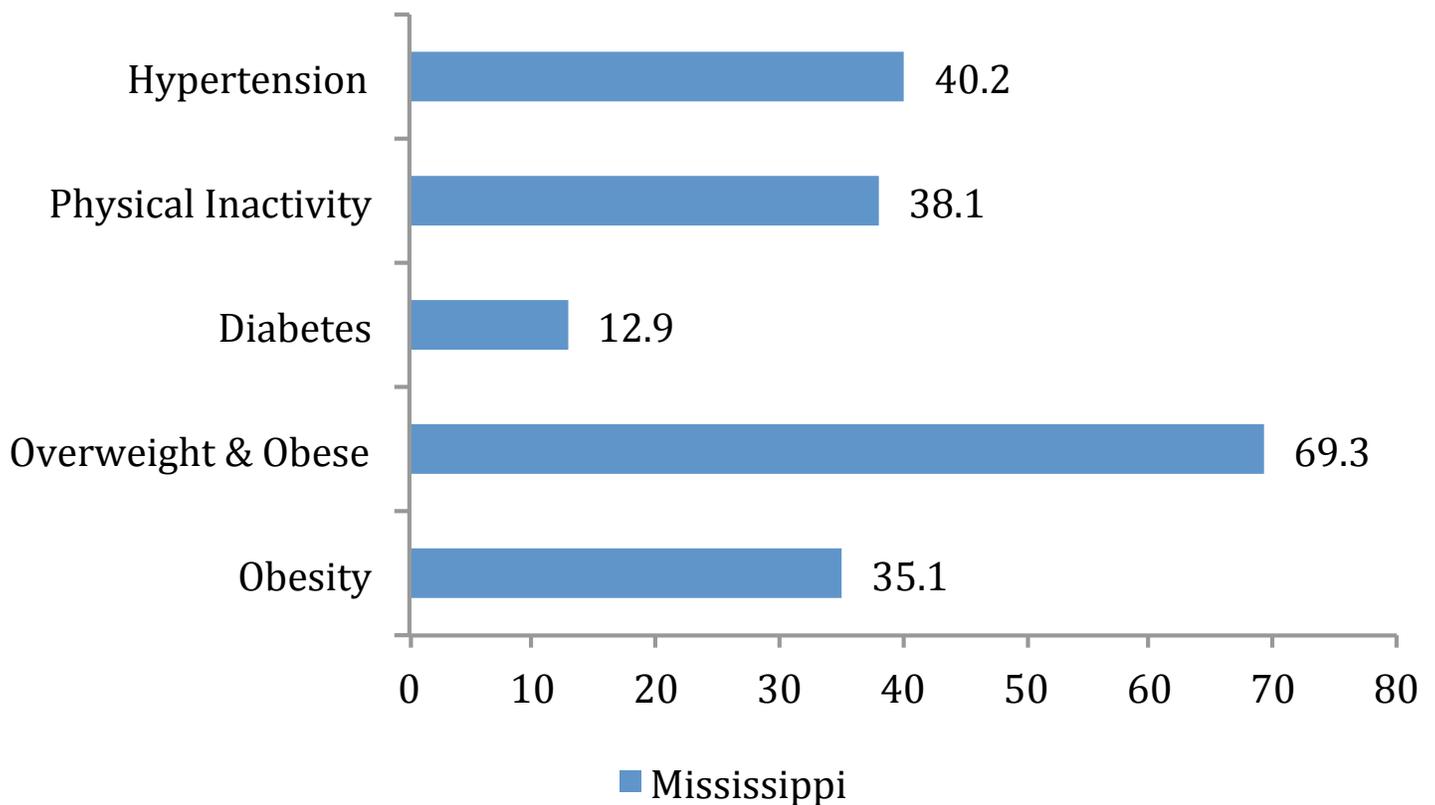
Source: BRFSS 2013

Obesity is also affecting children. Forty percent of Mississippi children are overweight or obese. High rates of obesity in Mississippi cause great concern because overweight children have an eighty percent chance of becoming overweight or obese adults. According to the Youth Risk Behavior Survey (YRBS) 2013 data, a total of 18,749 (15.4%) Mississippi public high school students were obese. The devastating impact of childhood obesity on the lives of children living in Mississippi is compounded by high rates of poverty, low rates of family educational attainment and historical social and political challenges. A direct result of the obesity epidemic, health care professionals are seeing a significant rise in chronic illness in children.

23 *Ibid.*

Obese children are more than twice as likely to have type 2 diabetes as children of normal weight. If current trends continue, experts warn that one of three American children born in the year 2000 and half of all children from ethnic and racially diverse populations will develop type 2 diabetes during their lifetime.

Figure 54. Children and Adolescent Obesity and Overweight Rates and Related Health Indicators for Mississippi

Indicator	Mississippi
Percentage Participating in Vigorous Physical Activity Every Day Ages 6-17***	27.7
Percentage of Obese Children Ages 10-17***	21.7
Percentage of Obese Low-Income Children Ages 2-4**	13.9
Percentage of HS Students who were Physically Active at least 60 minutes on all 7 days*	25.9
Percent of Overweight HS Students*	13.2
Percentage of Obese High School Students*	15.4
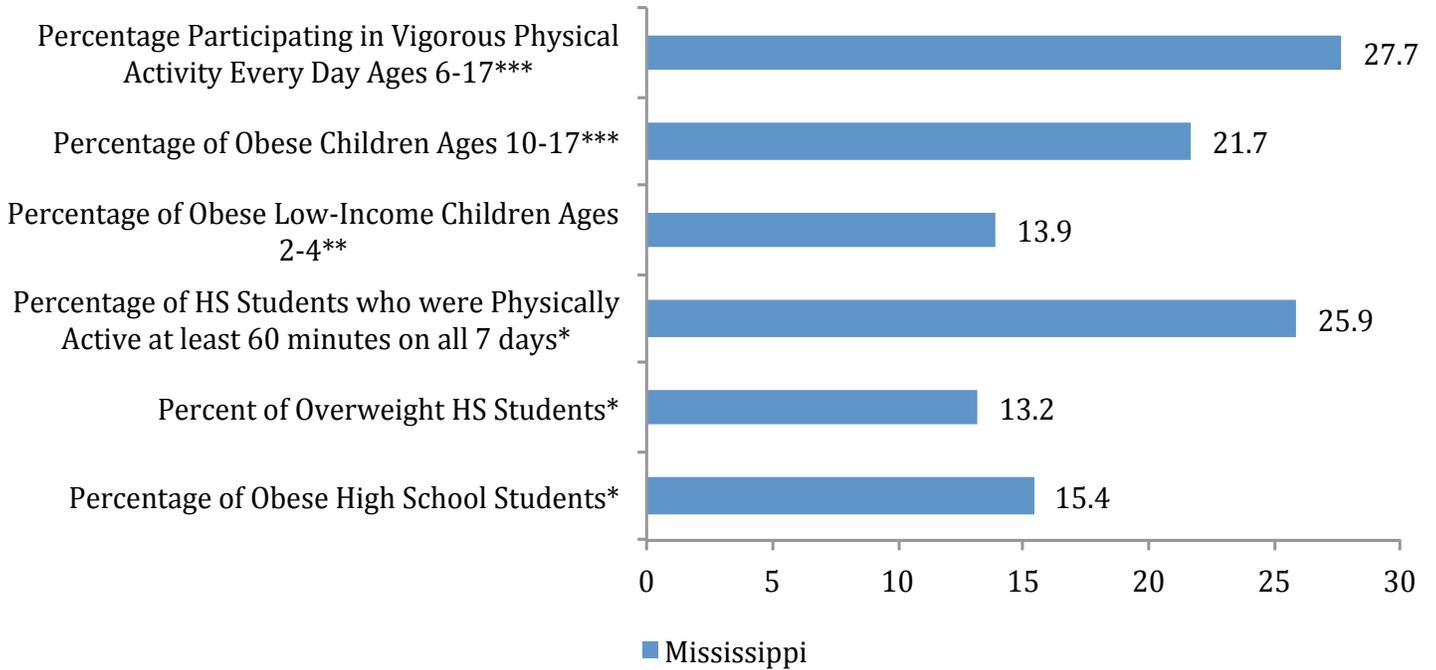
*Sources: *YRBS 2013, **2011 PedNSS, ***2011 National Survey of Children's Health*

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Maternal and Child Health

Infant Mortality

Figure 55. Infant Mortality by Gender of Child, Mississippi
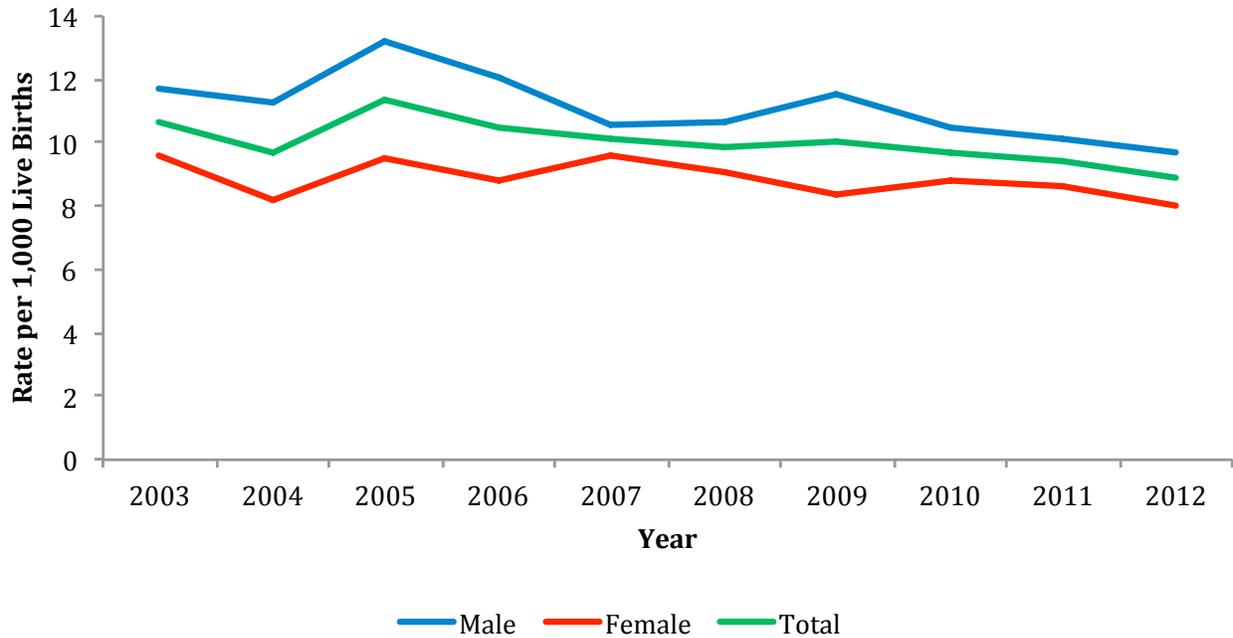
Source: MSTAHRS, 2003-2012

Infant mortality is defined as the death of an infant before his or her first birthday, and it is often used when measuring a population's health.[24] Mississippi achieved its lowest infant mortality rate in ten years with 8.8 infant deaths per 1,000 live births in 2012. This was a 6% reduction in infant mortality from 2011 (9.4 per 1,000 live births to 8.8 per 1,000 live births).[25] The number of sudden infant death syndrome (SIDS) deaths were also substantially reduced, showing a 50% decline from 42 SIDS deaths to 21 SIDS deaths.[23] Over time, infant mortality has declined steadily throughout the decade, with a few spikes. The rate has consistently decreased since 2009 (see Figure 55). Although these are noteworthy developments, there are still changes to be made. Mississippi's rates are still much higher than the 2012 U.S. infant mortality rate (5.98 infant deaths per 1,000 live births), and disparities exist within Mississippi's improved rates.[26]

Comparing white infant mortality rates to black infant mortality rates, we find that black infants have much worse outcomes. This disparity also exists nationally. In 2012, Mississippi's black infant mortality rate (12.4 infant deaths per 1,000 live births) was more than two times its white infant mortality rate (5.4 deaths per 1,000 live births). There are also differences by gender, although not as marked. The male infant mortality rate was 9.7 male infant deaths per 1,000 live births compared to 8 female infant deaths per 1,000 live births. Regionally, District III has the highest rates with 11 deaths per 1,000 live births.

24 http://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm

25 http://msdh.ms.gov/msdhsite/_static/23,14393,341,635.html

26 http://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_09.pdf

District VI has the lowest rates, with 7.2 deaths per 1,000 live births. It should be noted that there are sample size limitations when measuring infant mortality in smaller populations.

Prenatal Care

Prenatal care is key in preventing morbidity and mortality among mothers and babies. The Health Resources and Services Administration (HRSA) reports that out of over four million births in the United States, almost one third have complications associated with the pregnancy.[27] The risk of complications causing poor outcomes for the mother or baby can be reduced with adequate prenatal care starting in the first trimester.

Figure 56. First Trimester Prenatal Care by Race of Mother, Mississippi
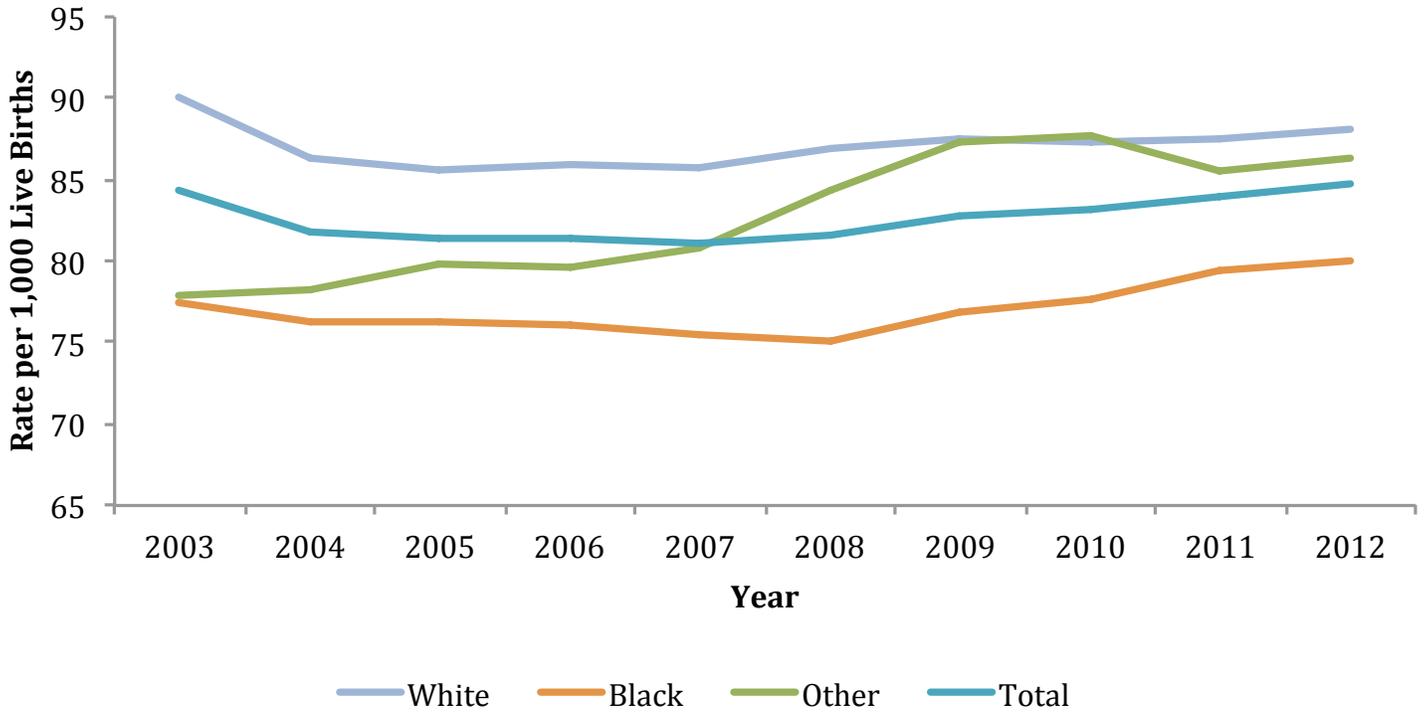
Source: MSTAHRS, 2003-2012

In Mississippi, between 2004 and 2012, the percentage of women receiving prenatal care in the first trimester increased slightly, from 81.4% in 2004 to 84.7% in 2012. Although there are differences by race (80.1% Black vs. 88.2% White in 2012), the overall improvement in prenatal care since 2004 can also be seen across all race/ethnicity groups. Mississippi's rates exceed the 77.9% benchmark of Healthy People 2020.[28] Examining regions in Mississippi, the best coverage can be found in District VI with over 90% of women receiving prenatal care in the first trimester during 2012. District I had the lowest rates, with 73.3% of women reporting first trimester prenatal care. The self-reported nature of the data is a limitation in it is subject to bias.

27 http://www.hrsa.gov/quality/toolbox/measures/prenatalfirsttrimester/

28 http://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health/objectives

Premature Births

A premature birth is a birth of a baby before 37 weeks of pregnancy. Premature births give babies less time to develop in the womb and result in complicated medical problems, especially among those born earliest.[29]

In 2012, the premature birth rate in Mississippi was 16.9 per 100 births compared to 11.5 per 100 in the U.S. The overall premature birth rate decreased slightly in Mississippi between 2003 and 2012.

In 2012, the premature birth rate for children born to black mothers (20.6 per 100) was substantially higher than for children born to white mothers (14.1 per 100). Mothers aged from 10-14 years had the highest rates of premature birth at 28.9 per 100 births. In 2012 unmarried women (18.9 per 100) tend to have higher rates of preterm births then married women (14.4 per 100).

Figure 57. Premature Birth (<37 Weeks Gestation) by Race of Mother
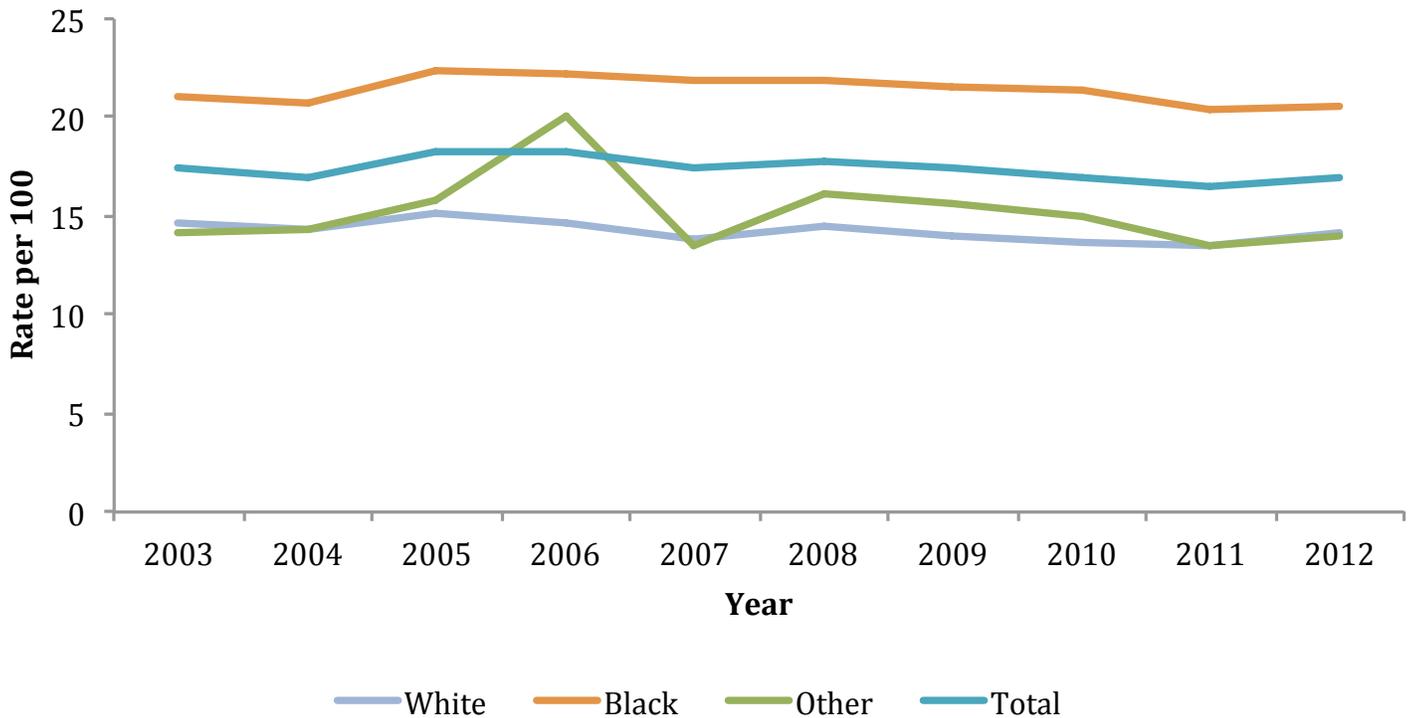
Source: MSTAHRS, 2003-2012

The premature birth rate in Mississippi is especially an issue in Public Health Districts III and II, where rates were as high as 19.3 and 19.1 per 100 births, and counties like Quitman and Claiborne had the highest rates of premature births 30.6 and 29.6 per 100 births.

29 Mayo Clinic, http://www.mayoclinic.org/diseases-conditions/premature-birth/basics/definition/con-20020050

Low Birth Weight

Figure 58. Low Birth Weight by Race of Mother
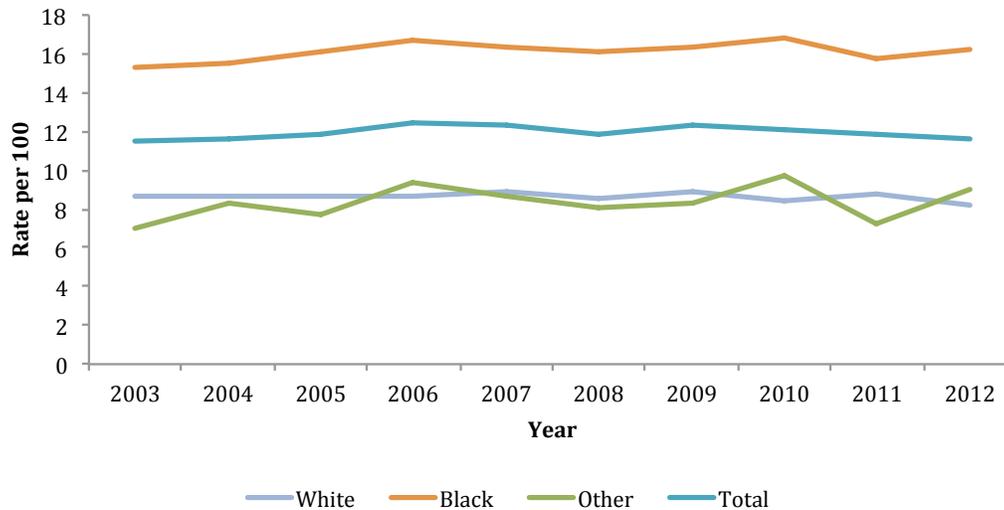
Source: MSTAHRS, 2003-2012

The Centers for Disease Control and Prevention (CDC) define low birth weight as a baby born weighing less than 2,500 grams (about 5.5 lbs.). CDC identifies low birth weight as "the single most important factor affecting neonatal mortality." Babies with low birth weights are at risk for a range of health conditions, including neurodevelopmental disabilities and respiratory disorders.[30]

The rate of low birth weight (LBW) in Mississippi has not changed significantly over the past ten years (11.5 LBW births per 100 live births in 2003 and 11.6 LBW births per 100 live births in 2012). Racial disparities persist, with substantially higher rates of low birth weight births occurring among minority mothers. In 2012, 16.2 low birth weight births per 100 live births were reported among black mothers, compared to 8.2 low birth weight births per 100 live births among white mothers. Regionally, disparities exist as well. For 2012, District III has the highest rates of low birth weight births with 14 low birth rate births per 100 live births compared to District IX that reported 9.3 low birth weight births per 100 live births. Mississippi's 2012 rate of 11.6% is notably higher than the national rate of 7.99 %, and the Healthy People 2020 target of 7.8 percent.[2] There are limitations in the data due to the small sample size from regions with low births.[31, 32]

Teen Births

Teen pregnancy refers to pregnancy in girls who are between the ages of 13 and 19, which may be intended or unintended. Teen pregnancy includes the number of live births, fetal losses, stillbirths and abortions per 1,000 girls aged 19 and under. Teen pregnancy can have a tremendous impact on a girl's life, which is understood to occur in a girl who hasn't completed her core education (secondary school). Teenage girls who become pregnant typically live at home, have few or no marketable skills, are financially dependent upon their parents and/or rely on public assistance, and are mentally immature. The children of teen mothers are more likely to be born prematurely and

30 http://www.cdc.gov/pednss/how_to/interpret_data/case_studies/low_birthweight/what.htm

31 http://www.cdc.gov/nchs/data/nvsr/nvsr62/nvsr62_09.pdf

32 https://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health/objectives

more likely to be of low-birth weight (less than five and a half pounds) when compared to the children of mothers who are aged 20 or 21 at the birth of their first child.

In 2012, a total of 305,388 babies were born to teen girls aged 15 to 19 years in the U. S., for a live birth rate of 29.4 per 1,000 girls in this age group.[33] The birth rate per 1,000 Hispanic females ages 15 to 19 (46 per 1,000) was slightly higher than rates among black teens (44 per 1,000), followed by American Indian teens (35 per 1,000), white teens (21 per 1,000), and Asian or Pacific Islander teens (10 per 1,000).[34]

In the same year, 4,778 babies were born to Mississippi teens aged 15 to 19, for a live birth rate of 46 per 1,000 teens in this age group. The birth rate for black Mississippi teens (54.9 per 1,000) was higher than the birth rate for white Mississippi teens (39.8 per 1,000). Both rates were higher than the rate for Mississippi teens identifying with other races (18.8 per 1,000).

The following chart depicts Mississippi live births per 1,000 teens by race for the period 2003 to 2012.

Figure 59. Teen Births (Age 15-19) by Race of Mother
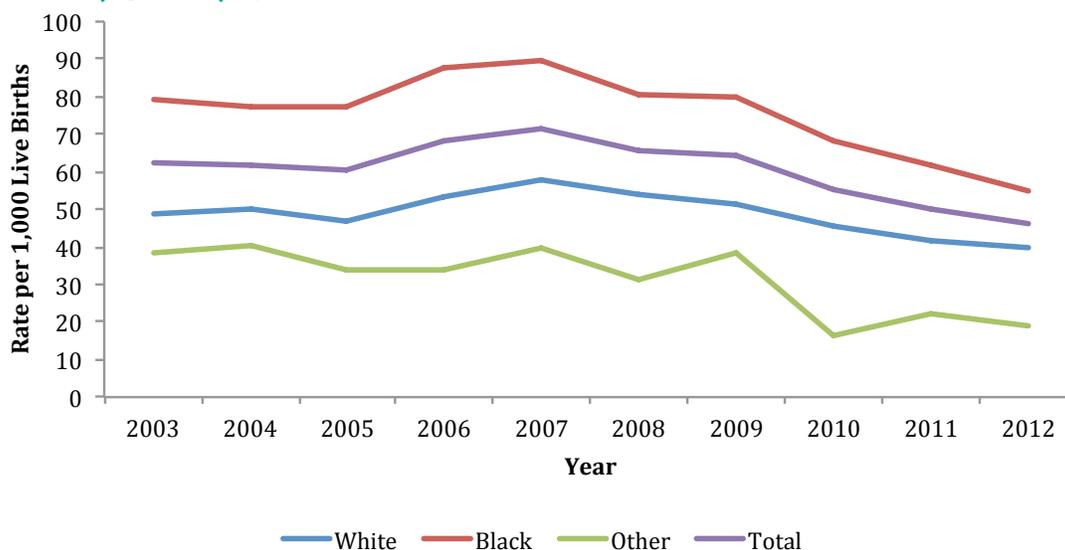
Source: MSTAHRS, 2003-2012

According to U.S. Department of Health and Human Services Office of Adolescent Health, Mississippi had the second highest teen birth rate of the 50 states and the District of Columbia in 2011.[35] The rates of teen pregnancy have been declining in the United States, but the number of pregnant teens in the U.S. remains high. Teenage pregnancy poses a serious risk to the health of teen mothers and their babies, and to society as a whole, which has to pay the economic and social costs of teen pregnancy.

Teen pregnancy can result in a number of negative consequences. It is necessary to understand the associated risk and protective factors in order to appropriately implement prevention efforts.

33 CDC Website; Teen Pregnancy: Teen Pregnancy in the U.S; Martin JA, Hamilton BE, Osterman MJK, Curtin SC, Mathews TJ. Births: Final data for 2012. *National Vital Stat Rep.* 2013; 62(9)

34 Child Trends Databank; (2014) Teen births; Available at: http://www.childtrends.org/?indicators=teen-births - See more at: http://www.childtrends.org/?indicators=teen-births#sthash.yiiN2uqv.dpuf

35 U.S. Department of Health and Human Services, Office of Adolescent Health; Mississippi Adolescent Reproductive Health Facts

Appendix 1. Map of Mississippi's Public Health Districts

PUBLIC HEALTH DISTRICTS

Northwest Public Health
District I

Northeast Public Health
District II

Delta/Hills Public Health
District III

Tombigbee Public Health
District IV

West Central Public Health
District V

East Central Public Health
District VI

Southwest Public Health
District VII

Southeast Public Health
District VIII

Coastal Plains Public Health
District IX

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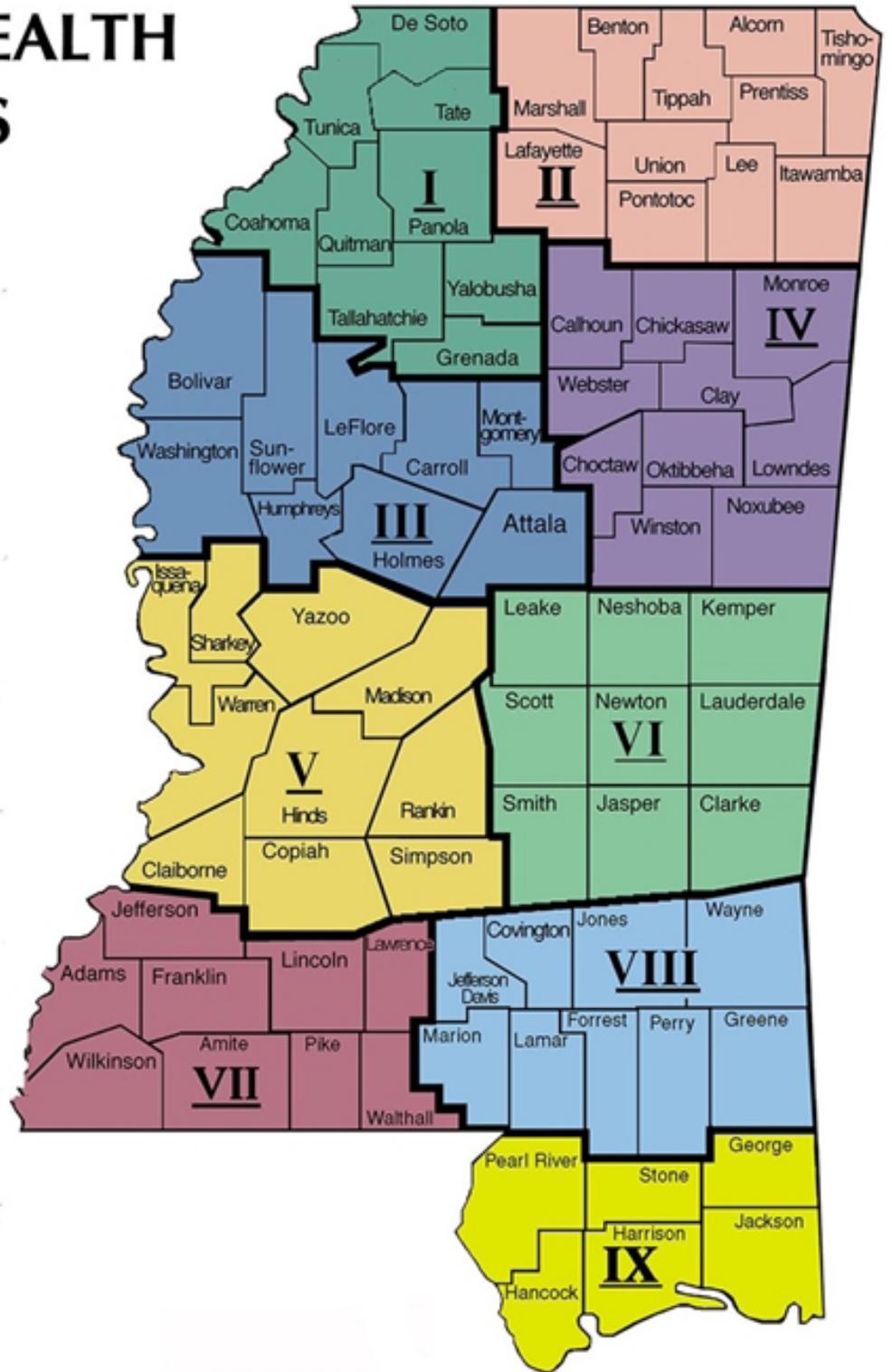
Mississippi Community Themes and Strengths Assessment

Table of Contents

Introduction

In 2014, the Mississippi State Department of Health embarked on a journey to develop a State Health Assessment (SHA) by adapting the Mobilizing for Action through Planning and Partnerships (MAPP) process. MAPP is a community-driven[36] strategic planning framework that assists communities in developing and implementing efforts around the prioritization of public health issues and the identification of resources to address them as defined by the 10 Essential Public Health Services. The MAPP process includes four assessment tools, as shown in the graphic below.
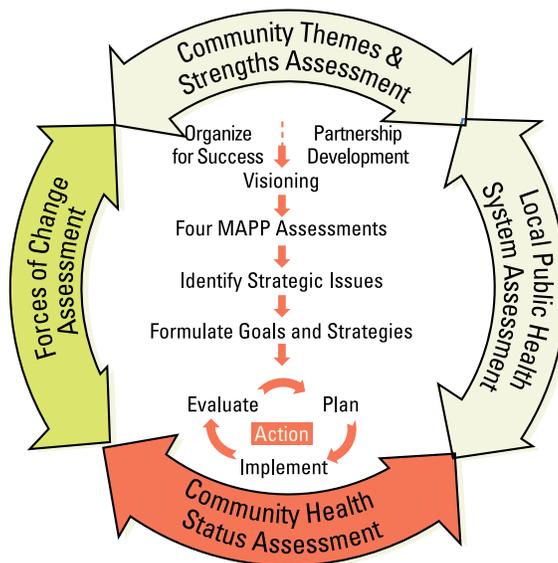
MAPP Model, Achieving Healthier Communities MAPP User's Handbook
http://www.naccho.org/topics/infrastructure/MAPP_Handbook_fnl.pdf

Within the MAPP process, there are four assessment tools. One of these assessment tools is the Community Themes and Strengths Assessment (CTSA). The CTSA is conducted to form an understanding of community issues and concerns and perceptions of quality of life across the state. The CTSA seeks to answer the questions:

- **What is important to our community?**
- **How is quality of life perceived in our community?**
- **What assets do we have that can be used to improve community health?**[37]

To answer these questions, the Mississippi State Department of Health conducted a statewide survey and facilitated a series of focus groups across the state.

36 For the purposes of the MAPP process, the Mississippi State Department of Health defines community broadly as the residents of the state of Mississippi and the state's partners through the state's public health system, including state and local government agencies, businesses, non-profits, academia, and other entities that influence the health and well-being of Mississippians.

37 National Association for County and City Health Officials, 2015.

Executive Summary: Key Findings of the Community Themes and Strengths Assessment

Community input from the statewide survey and community focus groups revealed the following key findings on participants' perspectives related to health and quality of life in their communities:

- Residents across the state recognized the critical role of social and environmental factors in shaping community health, and emphasized the importance of community safety and access to quality education and employment

- African American/Black residents and Delta Region residents were more likely than other participants to report dissatisfaction with quality of life in their communities. African American/Black and Delta Region residents were also more likely to report an insufficient presence of assets and resources to support health in their communities. Delta Region survey respondents were more likely than all other districts to negatively assess their communities as good places to raise children and grow old, and were more likely to perceive unequal access to community participation opportunities.

- Survey respondents from Northeastern Mississippi reported the highest satisfaction with their communities as good places to grow old and raise children.

- Commonly identified community challenges include community tension, lack of access to basic resources such as healthy food, healthcare, and affordable housing, lack of access to quality employment, lack of community infrastructure to support recreation and physical activity, lack of community safety, and distrust of healthcare providers.

- Churches were perceived as an important community asset that can be leveraged to bring community members together for collective action to improve community health.

- Participants across the state reported that cancer, obesity, and chronic diseases including diabetes, high blood pressure, heart disease and stroke are their top health concerns in their communities. Focus group and survey participants both emphasized the detrimental impact of poor eating habits and lack of physical activity in contributing to these health problems.

- Community residents across the state expressed concern regarding insufficient access to healthcare, and many focus group participants expressed distrust of healthcare providers in their communities and dissatisfaction with quality and affordability of healthcare.

Cross-cutting themes from both the focus group and summary input are discussed in the conclusion on page 52.

Survey Summary

1. Purpose, Methodology, and Executive Summary

Purpose

MSDH created a state survey to gather community input from residents on a variety of health issues, including health status, health care, social services, quality of life, social support, and economic opportunity. The results of survey will help MSDH understand Mississippi residents' perceptions of health and wellbeing in their communities, and identify barriers and obstacles to health and wellness.

Methodology

MSDH developed a 30-question survey for Mississippi residents about health status, health services, and quality of life. MSDH worked with the offices from the 9 public health districts across the state to distribute the survey. Respondents were recruited from a variety of community spaces, including workplaces, churches, schools, communities, and shopping centers. The survey was distributed in English, Spanish and Vietnamese. A total of 18,946 Mississippi residents completed the survey. Most respondents participated in the survey by completing a paper-based scantron survey and about 2,000 were completed online through SurveyMonkey®. In addition to basic analysis of each question, cross-tabs were also created to further analyze select questions.

Data Limitations

Each of the public health district offices recruited survey respondents through convenience sampling. While efforts were made for respondents to generally reflect state demographics, it is important to note that the sample is not a representative sample.

Executive Summary

A total of 18,946 Mississippi residents participated in the survey. Residents aged 45 and over, males, and residents identifying as White/Caucasian were underrepresented by the survey sample. 37% of survey respondents reported having a college degree or higher, and about half of respondents reported a household income of less than $25,000. 40% were privately insured, 41% had coverage other than private insurance, and 19% were uninsured.

In respondents' assessment of the health status of their communities, 52% described their communities as somewhat healthy, and 27% described their communities as either unhealthy or very unhealthy. Those with a higher level of educational attainment were more likely to negatively assess their community's health status. The majority of respondents rated their personal health as either healthy or somewhat healthy, and respondents with higher levels of educational attainment more frequently described themselves as healthy or very healthy. Respondents across all racial/ethnic groups included cancers, diabetes, high blood pressure, heart disease and stroke, and obesity as the top health related problems in their communities. Alcohol abuse, drug abuse, and being overweight were identified as the top three risky behaviors in respondents' communities.

Forty-seven percent of respondents felt there was a "broad variety of health services" available in the community. Those with higher levels of education perceived there to be a broader range while those with vocational training more were likely to report an absence of a broad variety of services. Over half the respondents in District 1 Northwest reported a sufficient number of health and social services while only 34% of respondents in District 3 Delta/Hills felt the services were sufficient. In addition, White respondents were more likely to report a sufficient number of services; 47% of White respondents reported sufficient services compared to 41% of African American/Black respondents.

Half of respondents reported satisfaction or strong satisfaction with quality of life in their communities. African American/Black respondents were more likely to report dissatisfaction with quality of life; over a quarter of African American/Black respondents (26%) reported dissatisfaction or strong dissatisfaction with quality of life compared to 16% of white respondents. Respondents from District 3 Delta/Hills were disproportionately likely to report low quality of life, and rated their communities lowest on nearly every quality of life indicator when compared with respondents from other districts. District 2 Northeast respondents reported disproportionately high quality of life.

Survey respondents identified the following top 5 most important factors for a healthy community as:

- Being a good place to raise children,

- Good schools,

- Low crime and safe neighborhoods,

- Good jobs and a healthy economy, and

- Access to healthcare

The majority of respondents reported that their community was a good place or a very good place to raise children (63%), and a good place or a very good place to grow old (66%). District 3 Delta/Hills respondents were least likely to report that their communities were good places to raise children and grow old, while District 2 Northeast respondents were most likely to report that their communities were both child and age friendly. 65% of respondents perceived their communities as safe or very safe, with White respondents and respondents with higher educational attainment being disproportionately likely to describe their communities as safe.

Forty-nine percent of survey respondents perceived that everyone in their community had the opportunity to "participate in and contribute to the community's quality of life," and 45% reported that all residents in their communities perceive that they can make their community a better place to live. African American/Black survey respondents were more likely than White respondents to report an absence or strong absence of opportunities to participate in community quality of life, and District 3 Delta/Hills respondents were most likely to report unequal access to opportunities for community participation. Two thirds of respondents either disagreed, strongly disagreed, or responded neutrally to the question of whether their community was working together to achieve shared goals, and African American/Black respondents were more likely than White respondents to perceive a lack of collective community action toward shared goals. Thirty-eight percent of respondents reported a presence or strong presence of civic responsibility and engagement as well as civic pride in shared accomplishments in their communities.

Only 32% of survey respondents perceived a presence or strong presence of economic opportunity in their communities. District 3 Delta/Hills respondents were by far the most likely of all districts to report an absence or strong absence of economic opportunity (57%). Respondents with higher levels of educational attainment were more likely to negatively assess the presence of economic opportunities in their communities.

Forty-five percent of respondents reported that there were support networks for individuals and families in times of stress and need in their communities. District 3 Delta/Hills respondents, African American/Black respondents, and respondents with lower educational attainment were more likely to negatively assess the presence of support networks in their communities. African American/Black respondents were nearly twice as likely as White respondents to report an absence or strong absence of support networks for people in need.

Overarching Themes

- Respondents from the District 3 Delta region consistently reported the lowest quality of life, and were the most likely of all districts to negatively assess their communities as good places to raise children and grow old. Delta residents were also more likely than other districts to perceive unequal access to opportunities to participate in the community.

- Respondents from District 2 Northeastern Mississippi reported the highest satisfaction with their communities as good places to grow old and raise children.

- Respondents with a vocational training education level had the lowest perception of personal health, the lowest satisfaction with the healthcare system, and did not perceive that a broad variety of health services were available in their communities.

- Racial disparities were noted in perception of quality of life and health services, with African American/ Black respondents reporting higher levels of dissatisfaction with quality of life and health services than White respondents. African American/Black respondents were also almost twice as likely to perceive an absence or strong absence of support networks for people in need compared to White respondents.

- Survey respondents included cancers, diabetes, high blood pressure, heart disease and stroke, and obesity as the top 5 health-related problems in the state. Most important risky behaviors included alcohol abuse, drug abuse, being overweight, dropping out of school, poor eating habits, and lack of exercise.

- When asked about most important factors for a healthy community, respondents most frequently mentioned environmental and social factors, including child-friendliness, access to education, and community safety.

2. Demographic Characteristics of Survey Respondents

Figure 2.1

Figure 2.2

Geographic Distribution by Public Health District

Public Health District	Number of survey respondents	Percent of total survey respondents	State Population Census 2012
District 1 Northwest	2,557	14%	322,373 (11% of state)
District 2 Northeast	2,309	12%	365,397 (12% of state)
District 3 Delta/Hills	2,424	13%	211,212 (7% of state)
District 4 Tombigbee	1,406	7.5%	245,601 (8% of state)
District 5 West Central	1,440	7.5%	640,418 (21% of state)
District 6 East Central	2,910	15%	242,912 (8% of state)
District 7 Southwest	1,955	10%	172,718 (6% of state)
District 8 Southeast	2,231	12%	308,460 (10% of state)
District 9 Coastal/ Plains	1,714	9%	475,835 (16% of state)
State Total	18,946	100%	2,984,926

As of 2012, the population of Mississippi was 2,984,926. Districts 5 West Central and 9 Coastal Plains were the most populous, comprising 21% and 16% of the state's population, respectively. A total of 18,946 citizens across the state participated in the survey. The table above shows the geographic distribution of citizens as well as the distribution of survey respondents. Based on the proportion of the population comprised by each district, Districts 1, 3, 6, 7, and 8 were overrepresented in the survey while Districts 5 and 9 were underrepresented.

Figure 2.3

Age

	Percent of total survey respondents	State Population (Census 2012)
18-24 years	20%	14%
25-34 years	25%	17%
35-44 years	19%	17%
45-54 years	17%	18%
55-64 years	13%	16%
65+ years	7%	18%

Figure 2.4
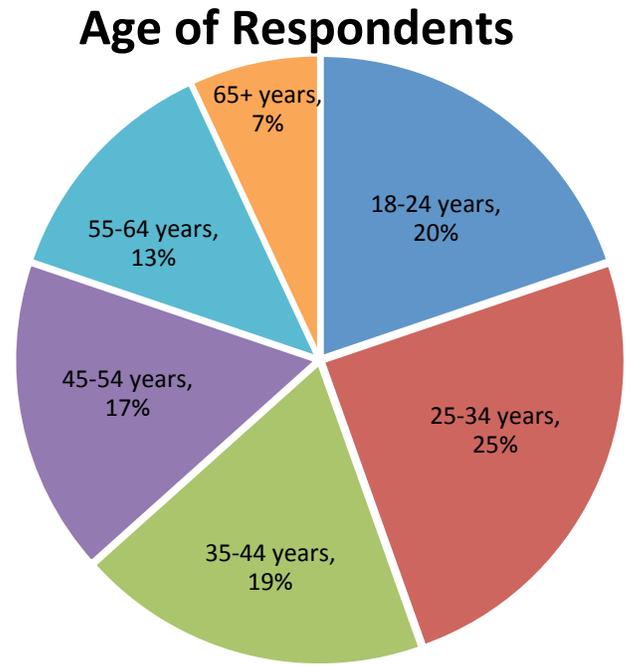
Age of Respondents

Survey respondents ranged in age from 18 to over 65. According to the 2012 census, roughly half of the adult population was between the ages of 18 and 44, and about half were 45 and over. Survey respondents between the ages of 18 and 44 comprised 64% of the total number of respondents, and respondents age 45 and over comprised 37% of total respondents, meaning that adults age 45 consisted of a smaller proportion of respondents.

Figure 2.5

Gender

	Percent of total survey respondents	State Population (Census 2012)
Female	73%	52%
Male	28%	48%

73% of survey respondents were female and 28% were male, meaning that women were overrepresented and men were underrepresented compared to the actual demographic distribution of the state.

Figure 2.6

Marital Status

	Percent of total survey respondents	Mississippi Population	United States Population
Married	45%	46%	49%
Not Married / Single	36%	33%	32%
Separated or Divorced	11%	15%	13%
Cohabitating	5%	--	--
Widowed	3%	7%	6%

Half of survey respondents were married or cohabitating, and half were single, separated/divorced, or widowed.

Figure 2.7

Race/Ethnicity

	Percent of total survey respondents	State Population Estimates (Census 2012)
African American/ Black	48%	37%
White/ Caucasian	47%	60%
Hispanic/ Latino	3%	3%
Asian/Pacific Islander	1%	1%
Native American (American Indian)	0.6%	0.6%
Multi-Racial	0.1%	1%
Other	0.8%	

Figure 2.8

Race/Ethnicity of Respondents
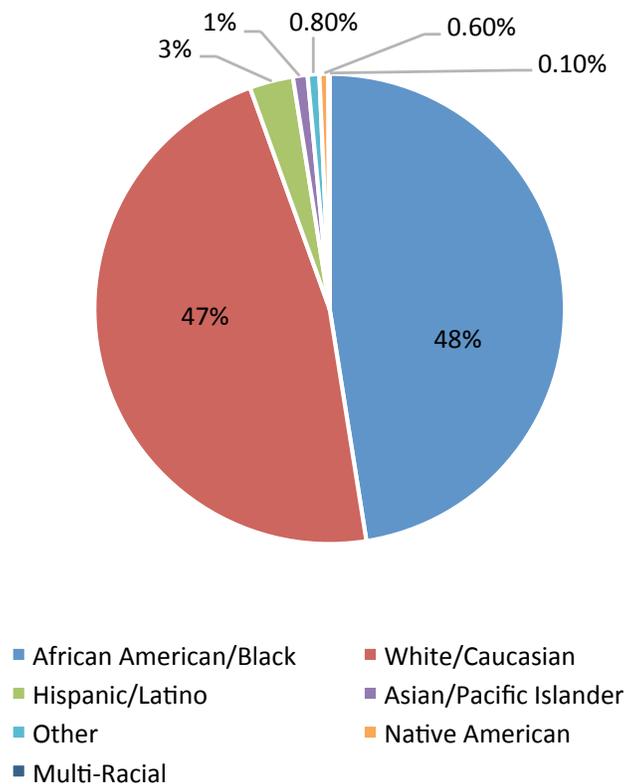
48% of survey respondents identified as African American/Black and 47% identified as White/Caucasian. The remaining 5% of survey respondents identified as Hispanic/Latino, Asian/Pacific Islander, Native American, Multi-Racial, or Other. According to Census estimates, the population of Mississippi was 37% African American/ Black and 60% White/Caucasian, with other race/ethnicities comprising the remaining 3% of the population. Because races/ethnicities other than White/Caucasian and African American/Black represent such a small proportion of the population, the sample of respondents for these groups is very small. Therefore, these smaller groups were combined for analysis of the influence of racial/ethnic considerations on survey outcomes.

Figure 2.9

Education (highest level completed)
(n = 18,742)
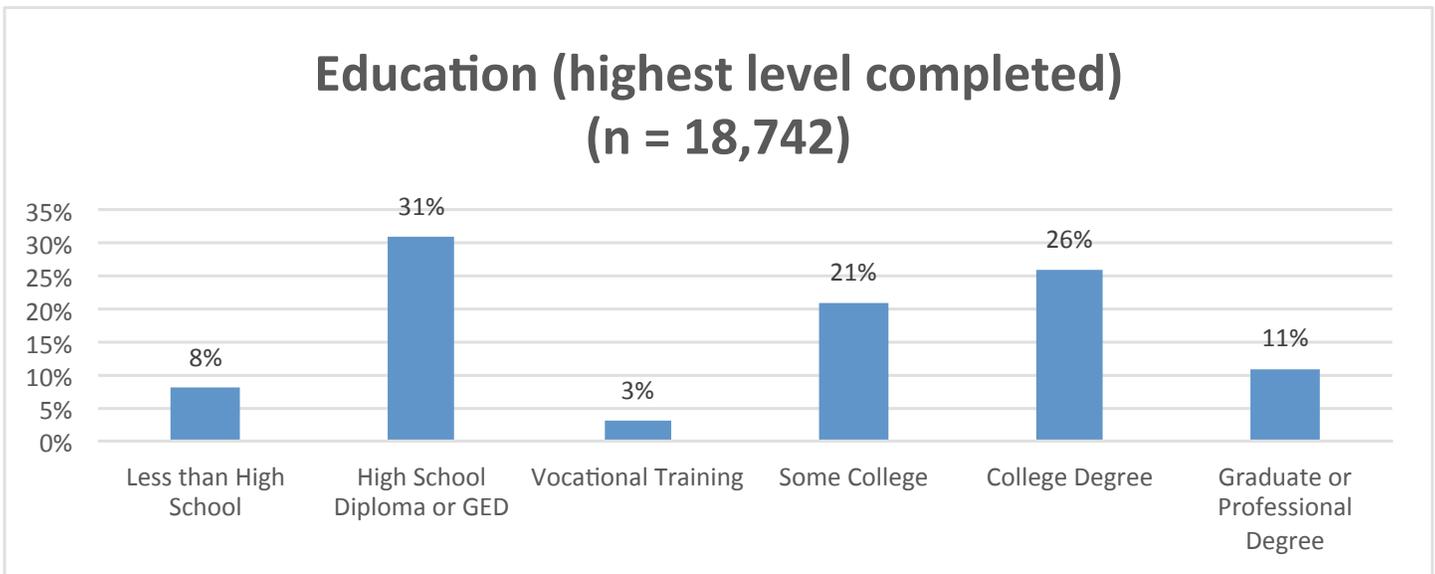
92% of survey respondents had a high school diploma/GED or higher, and 37% had a college degree or advanced degree as their highest level of educational attainment.

Figure 2.10

What is your curent employment status?
n = 18,689

- Employed
- Not employed
- Retired
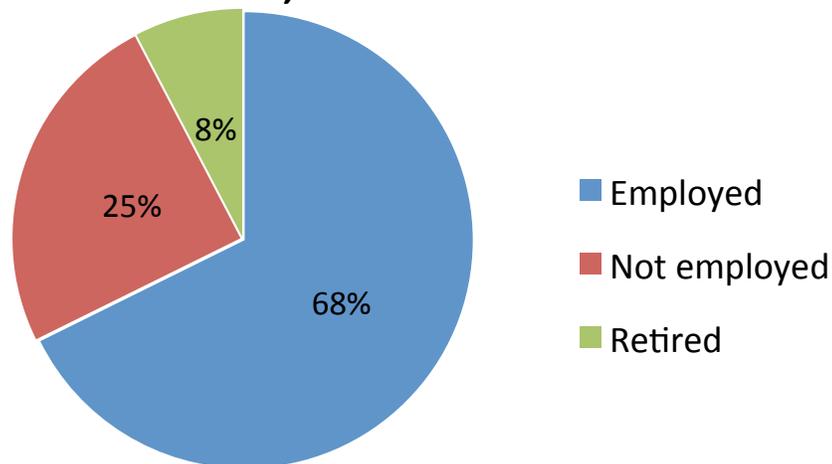
68% of survey respondents were employed, 25% were not employed, and 8% were retired. Survey respondents were more likely than the population overall to be unemployed; data from the Bureau of Labor Statistics (BLS) showed that the unemployment rate for Mississippi was 7.9% as of June 2014. However, it should be noted that the BLS definition of unemployment does not include people who are not actively seeking work. As such, some people who indicated that they were not employed in the survey may not be classified as "unemployed" by the BLS.

Figure 2.11

Annual Household Income (n= 18,025)
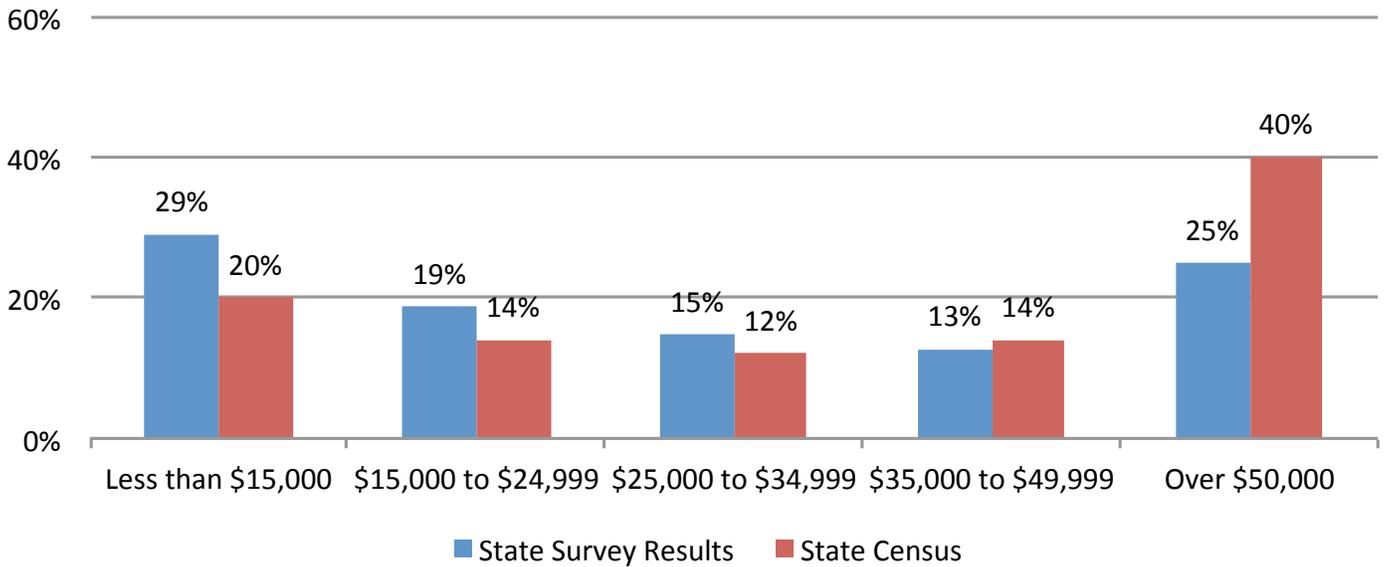
Roughly half of survey respondents reported an annual household income of less than $25,000, and 29% reported a household income of less than $15,000.

Figure 2.12

What kind of healthcare coverage do you have? (n=18,461)
(Survey sample vs. Census estimates for MS population)
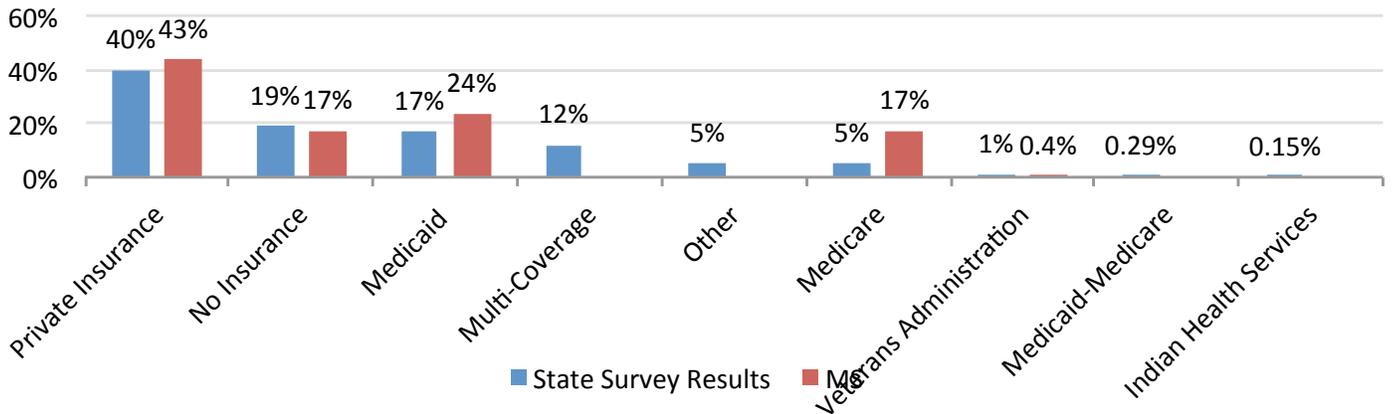
40% of survey respondents reported having private insurance, 19% had no insurance coverage of any kind, and the remaining 41% had health care coverage from a source other than private insurance.

Where did you get this survey?

Respondents received the survey from a variety of places throughout the community. Forty-four percent of respondents stated they received the survey from sources other than their workplace, a personal contact, church, community meeting, school, or a grocery or shopping store.

3. Health Status

Figure 3.1

How would you rate the overall health of our community? (n = 17,960)
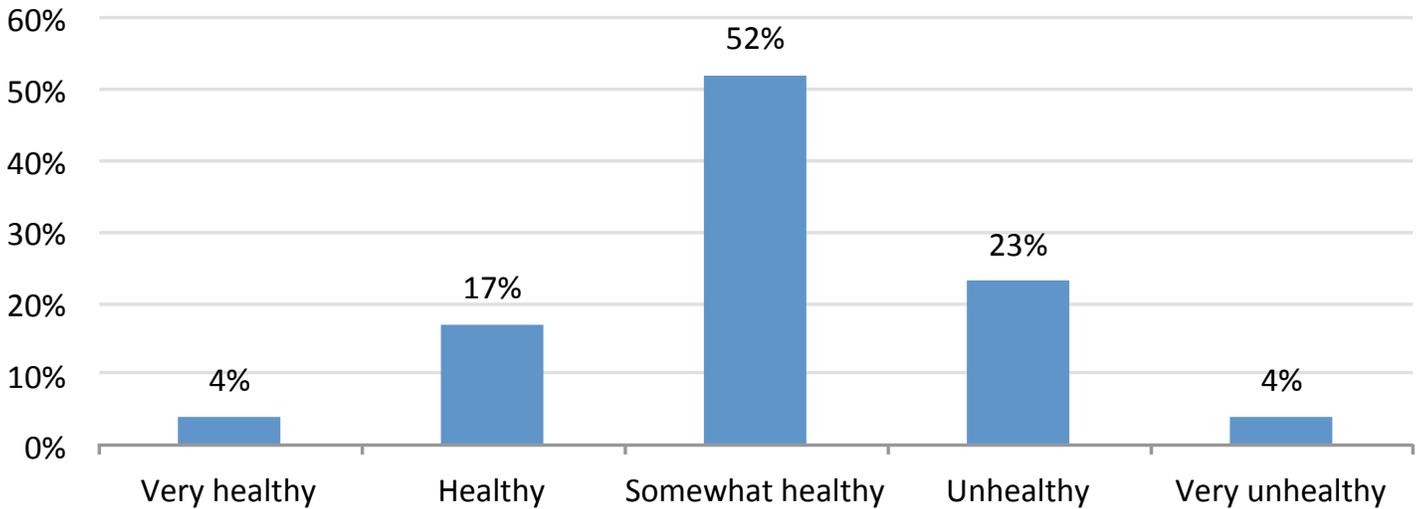
Similar to the results for individual districts, the majority of all respondents rated health of the community as somewhat healthy. Across individual districts, the response for "somewhat healthy" ranged from 44% in District 1 Northwest to 56% in District 4 Tombigbee and District 8 Southeast.

Figure 3.2

Overall Health and Education

	Graduate or Professional Degree	College Degree	Some College	Vocational Training	High School Diploma or GED	Less than High School
Very healthy and Healthy	17%	17%	19%	21%	23%	31%
Somewhat healthy	48%	52%	53%	52%	54%	49%
Very unhealthy and unhealthy	35%	31%	28%	27%	23%	21%

The numbers of responses for "very healthy" and "healthy" were combined, and "unhealthy" and "very unhealthy" were also combined for comparison of results by educational level. From these results, it is seen that that those with higher levels of education perceived the overall health of the community as less healthy. Out of all the college degree and graduate or professional degree respondents, only 17% of each group perceived the overall health as very healthy or healthy. In addition, 35% of respondents with graduate or professional degrees and 31% of respondents with college degrees felt the overall health was very unhealthy or unhealthy. This was higher than the respondents with other levels of education.

Figure 3.3

Overall Health and Race

	African American/Black	White
Very healthy and Healthy	21%	18%
Somewhat healthy	51%	55%
Very unhealthy and unhealthy	29%	26%

Since the majority of survey respondents were African American/Black (48%) or White (47%), the other races are not reflected in this table. However, of the Hispanic respondents (3%), the largest proportion of them (43%) rated the overall health of their community as very healthy or healthy. The rates between African American/Black and White respondents were similar in perceptions of overall health, as shown in Figure 3.3 above. The majority of respondents in both of the predominant racial groups rated their communities as somewhat healthy.

Figure 3.4

How would you rate your personal health? (n = 18,863)
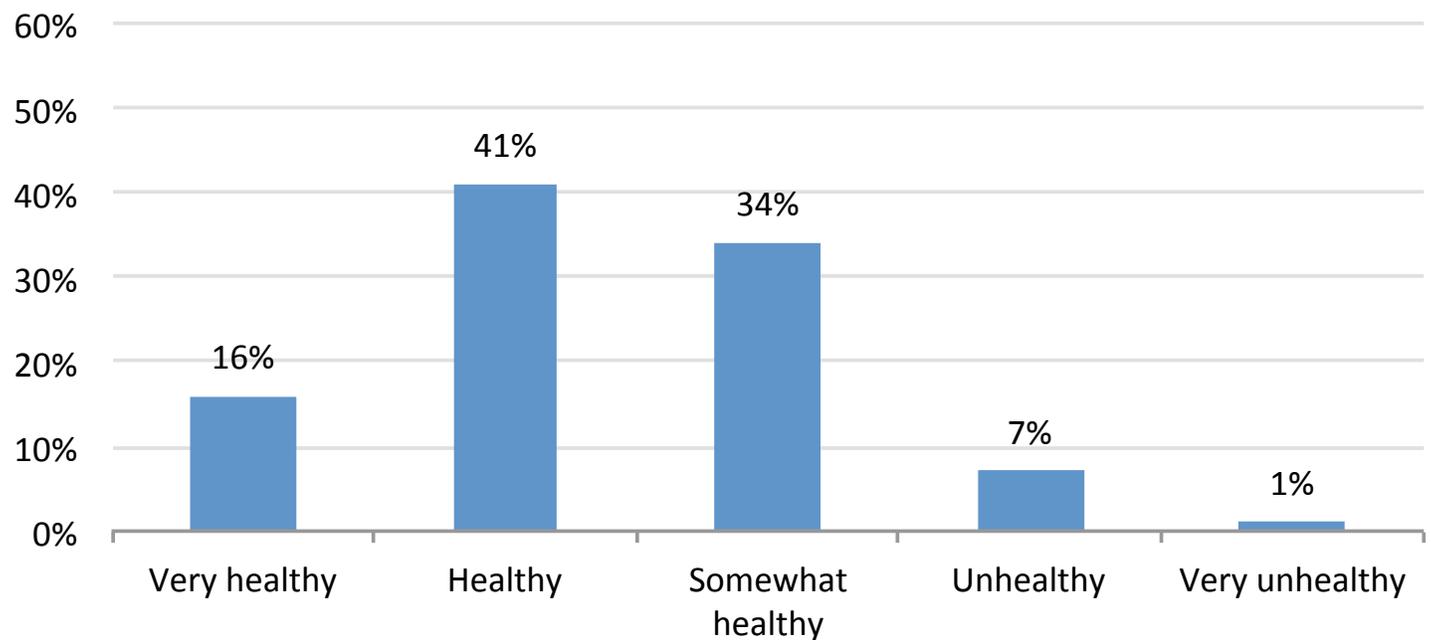
Overall, 57% of respondents rated their personal health as very healthy or healthy and 8% of respondents felt their personal health was unhealthy or very unhealthy.

Figure 3.5

Personal Health and Education

	Graduate or Professional Degree	College Degree	Some College	Vocational Training	High School Diploma or GED	Less than High School
Very healthy and Healthy	61%	60%	56%	21%	58%	54%
Somewhat healthy	32%	34%	36%	52%	34%	35%
Very unhealthy and unhealthy	6%	6%	8%	27%	8%	12%

The numbers of responses for "very healthy" and "healthy" were combined, and "unhealthy" and "very unhealthy" were also combined for comparison of results by educational level. As shown in Figure 3.5 above, respondents with vocational training as their highest educational level were more likely than other groups to view their personal health as "very unhealthy," "unhealthy," or "somewhat healthy."

Figure 3.6

Personal Health and Race

	African American/Black	White
Very healthy and Healthy	56%	60%
Somewhat healthy	36%	34%
Very unhealthy and unhealthy	8%	7%

Similar to Overall Health, since the majority of survey respondents were African American/Black (48%) or White (47%), the other races are not reflected in this table. Based on this information, a comparable proportion of African American/Black respondents (8%) and White respondents (7%) perceived their personal health as very unhealthy or unhealthy. Again, the Hispanic/Latino respondents had a healthier perception of their personal health at 62% rating it as very healthy or healthy.

Most Important "Health Related Problems"

"Health Related Problems" and Race

	Overall	African American/Black	White
Cancers	14%	14%	15%
Diabetes	12%	14%	11%
High blood pressure	11%	13%	9%
Heart disease and stroke	11%	9%	14%
Obesity -childhood and adult	10%	7%	13%

All respondents included cancers, diabetes, high blood pressure, heart disease and stroke, and obesity-childhood and adult in the top 5 health related problems. While White respondents rated cancers as the greatest (15%) health related problem, African American/Black respondents rated both cancers and diabetes as the greatest health related problem at 14%. Both the Native American and Hispanic/Latino respondents showed diabetes as the highest rated at 14% and 12%, respectively. For the remaining respondents who identified themselves as Hispanic/Latino, Asian/Pacific Islander, Native American, Multi-Racial and Other, the highest health related problem was also cancers at 11%.

Most Important "Risky Behaviors"

	Overall	African American/Black	White
Alcohol abuse	18%	17%	18%
Drug abuse	17%	15%	18%
Being overweight	14%	12%	16%
Dropping out of school	9%	11%	-
Poor eating habits	9%	8%	9%
Lack of exercise	-	-	9%

Alcohol abuse, drug abuse and being overweight were the top three most important risky behaviors for all the respondents. This demonstrates common top concerns for risky behaviors regardless of race. However, among the top five risky behaviors, African American/Black and Hispanic/Latino respondents included dropping out of school (11%), White respondents included lack of exercise (9%) and Native American respondents reported tobacco use (9%).

4. Health Services

Figure 4.1

Are you satisfied with the health care system in our community? (n = 18,872)
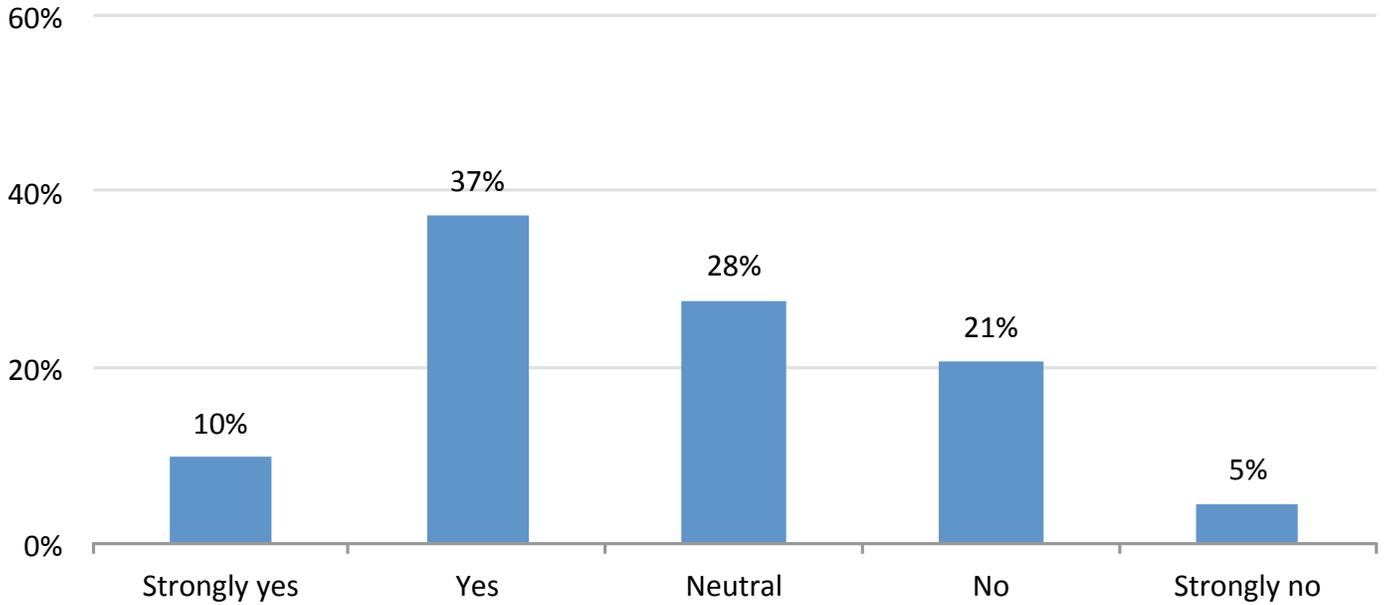
Overall, 47% of respondents reported satisfaction or strong satisfaction with the health care system in their community, while 54% reported their satisfaction as neutral, no or strongly no.

Health Care System Satisfaction across Districts

District 3 Delta/Hills respondents were disproportionately dissatisfied with the health care system in their communities, with 41% saying they were unsatisfied or strongly unsatisfied with their community's health care system, which was twice the dissatisfaction rate as District 2 Northeast respondents.

Figure 4.2

Educational Attainment and Satisfaction with the Health Care System

Satisfaction with the Health Care System	Graduate or Professional Degree	College Degree	Some College	Vocational Training	High School Diploma or GED	Less than High School
Satisfied or very satisfied	48%	50%	44%	39%	47%	53%
Neutral	24%	26%	29%	39%	29%	26%
Dissatisfied or very dissatisfied	27%	26%	26%	32%	24%	21%

Overall, only about 50% of respondents indicated that they were satisfied or very satisfied with the health care system in their area. Respondents with higher educational attainment were generally more likely to be dissatisfied with the health care system than respondents with lower educational attainment, but survey

respondents with vocational training were disproportionately more likely to express dissatisfaction with their communities' health care system. Respondents with less than a high school education were most satisfied with their communities' health care systems.

Figure 4.3

Race and Satisfaction with the Health Care System

Satisfaction with the Health Care System	African American/Black	White
Satisfied or very satisfied	44%	51%
Neutral	27%	28%
Dissatisfied or very dissatisfied	28%	22%

White respondents had a satisfaction rate of 51% while only 44% of African American/Black respondents were satisfied. About 50% of both groups states they were neutral or dissatisfied with the health care system.

Figure 4.4

Satisfaction with the Health Care System by Type of Insurance (n=18382)

Satisfaction with the Health Care System	Private Health Insurance	Indian Health Services	Medicaid	Medicare	Veterans' Administration	Multi-Coverage	No Insurance
Satisfied or very satisfied	48%	52%	51%	49%	45%	51%	39%
Neutral	26%	30%	29%	27%	27%	27%	31%
Dissatisfied or very dissatisfied	26%	18%	20%	24%	28%	22%	30%

The number of respondents indicating coverage through the Indian Health Service was very small. As a result, the figures about the Indian Health Service may be unreliable.

People with no insurance were less likely to indicate satisfaction with the healthcare system than people with all other forms of insurance (39%). They were also most likely to indicate dissatisfaction with the healthcare system out of all of the types of insurance coverage (30%).

Figure 4.4

Is there a broad variety of health services in your community? (n = 18,867)
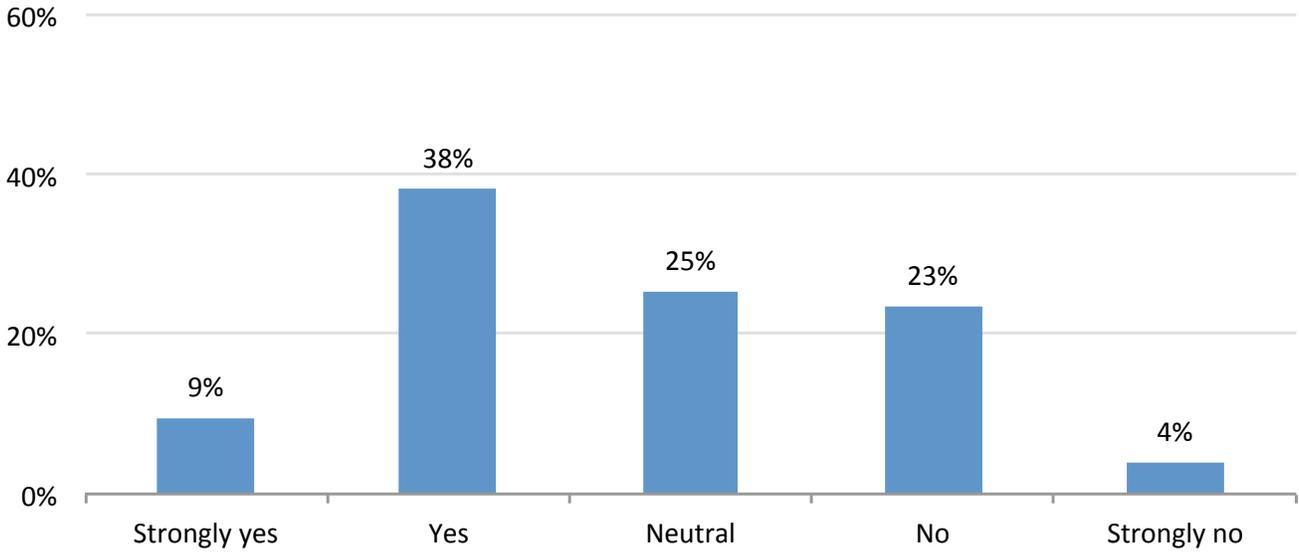
47% of respondents perceived the presence of a broad variety of health services in their communities, while 52% were neutral or did not feel there were a broad variety of health services available.

Presence of Broad Variety of Health Services across Districts

Perception of the breadth of health services varied widely across districts. 59% of respondents in District 8 Southeast positively assessed the breadth of services in their communities, significantly more than the 33% of respondents in District 3 Delta/Hills.

Figure 4.5

Educational Attainment and Perception of Presence of Broad Variety of Health Services

Perception of Presence of Broad Variety of Health Services	Graduate or Professional Degree	College Degree	Some College	Vocational Training	High School Diploma or GED	Less than High School
Presence or strong presence of variety	54%	50%	45%	45%	47%	46%
Neutral	19%	23%	26%	23%	28%	27%
Absence or strong absence of variety	28%	27%	29%	32%	25%	27%

Respondents with higher education attainment generally perceived the presence of a broad variety of health services in their communities. Respondents with vocational training were most likely of all educational levels to report an absence of a broad variety of health services.

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Figure 4.6

Race and Perception of Presence of Broad Variety of Health Services

Perception of Presence of Broad Variety of Health Services	African American/Black	White
Presence or strong presence of variety	44%	51%
Neutral	26%	25%
Absence or strong absence of variety	31%	24%

African American/Black respondents were more likely to negatively assess the bread of health services in their communities, with 31% reporting an absence or strong absence of breadth of services, compared to 24% of White respondents.

Figure 4.7

Perception of the Presence of Broad Variety of Health Services by Type of Insurance (n=18376)

Perception of Presence of Broad Variety of Health Services	Private Health Insurance	Indian Health Services	Medicaid	Medicare	Veterans' Administration	Multi-Coverage	No Insurance
Presence or strong presence of variety	47%	48%	47%	45%	50%	61%	41%
Neutral	23%	30%	29%	24%	25%	22%	29%
Absence or strong absence of variety	30%	22%	24%	31%	25%	17%	30%

The number of respondents indicating coverage through the Indian Health Service was very small. As a result, the figures about the Indian Health Service may be unreliable.

The perception of the presence of a broad variety of health services also varied depending on the kind of health insurance survey respondents had. People with no insurance were least likely to perceive the presence of a variety of services (41%), while people with multiple forms of health coverage were most likely to see their communities as having a variety of services (61%).

Figure 4.8

Is there a sufficient number of health and social services in your community? (n = 18,445)
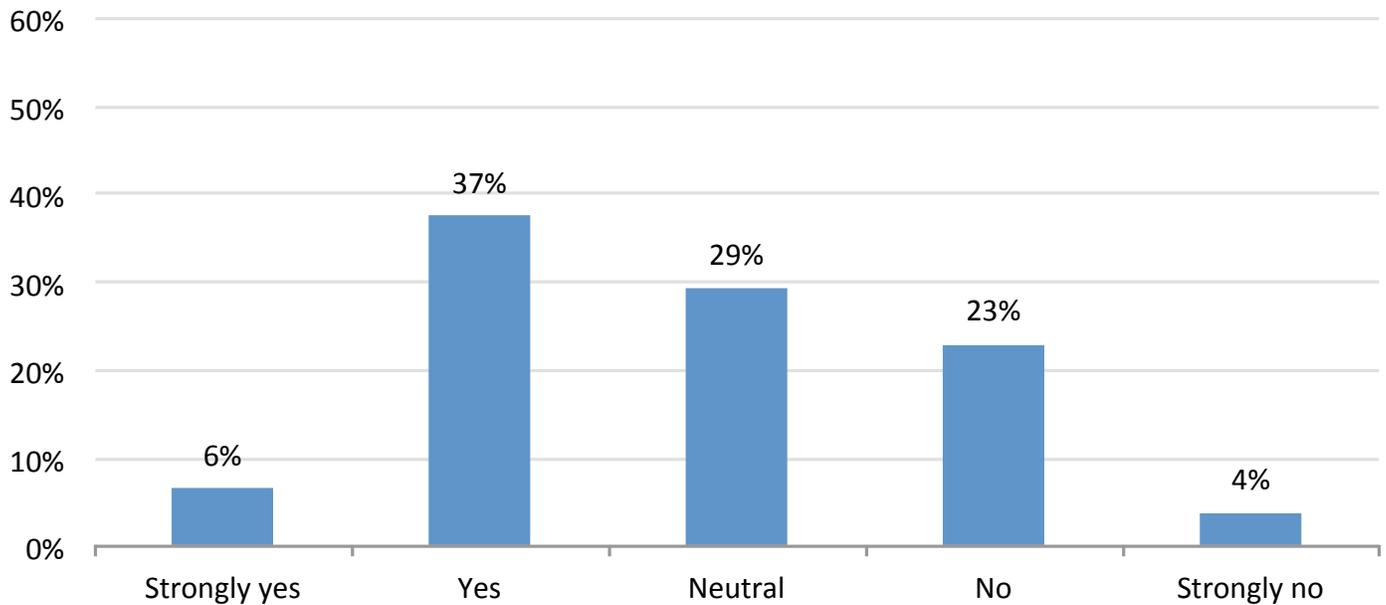
43% of survey respondents reported a sufficient number of health and social services in their communities, while a majority of respondents were neutral or reported no or strongly no.

Perception of Sufficient Number of Services across Districts

Just as the perception of the breadth of health services varied widely across districts, perceptions of the sufficiency of the number of health and social services also varied. Over half of District 1 Northwest respondents reported a sufficient number of health and social services in their communities, compared with only 34% in District 3 Delta/Hills.

Figure 4.9

Race and Perception of Sufficient Number of Services across Districts

Perception of Sufficient Number of Services across Districts	African American/Black	White
Sufficient or very sufficient	41%	47%
Neutral	28%	31%
Insufficient or very insufficient	31%	23%

White respondents were more likely than African American/Black respondents to report a sufficient number of health and social services in their communities.

5. Quality of Life

Overall Quality of Life

Are you satisfied with the overall quality of life in your community? (n = 18,388)

Figure 5.1
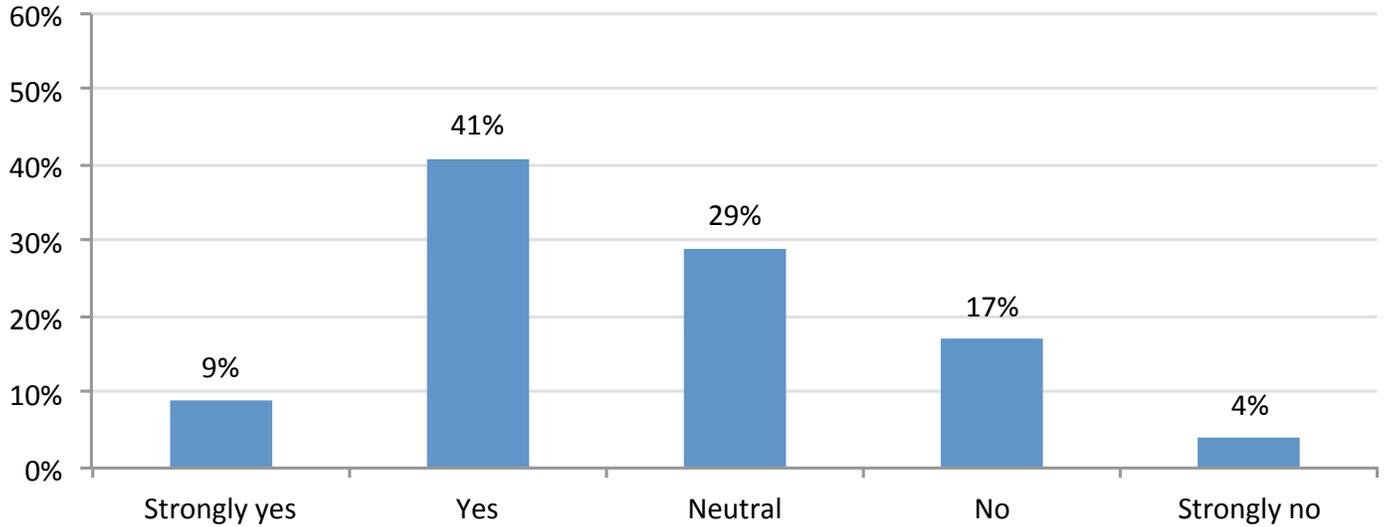
50% of respondents reported being that they were either satisfied or strongly satisfied with quality of life in their communities. 21% answered that they were unsatisfied or strongly unsatisfied with quality of life, and the remaining 29% of respondents responded as neutral.

Figure 5.2

Race and Quality of Life

Satisfaction with Quality of Life	African American/Black	White
Strongly Satisfied and Satisfied	43%	58%
Neutral	32%	27%
Unsatisfied and Strongly Unsatisfied	26%	16%

African American/Black survey respondents were more likely to report dissatisfaction with quality of life in their communities than white respondents. African American/Black respondents were most likely of all races to report dissatisfaction, with 26% saying they were unsatisfied or strongly unsatisfied with quality of life. White respondents reported the highest quality of life, with 58% describing themselves as satisfied or strongly satisfied with quality of life in their communities.

Quality of Life across Districts

Respondents from District 3 Delta/Hills were disproportionately likely to have a negative perception of quality of life in their communities compared to respondents from other districts. 34% of respondents from District 3 Delta/Hills reported dissatisfaction with quality of life, compared with 21% of respondents across the state.

Figure 5.3

Most important factors for a "Healthy Community"

Good place to raise children	18%
Good schools	14%
Low crime/safe neighborhoods	14%
Good jobs and healthy economy	9%
Access to health care	7%

When asked about the most important factors for creating a healthy community, respondents most frequently mentioned environmental and social factors, including child-friendliness, access to high quality education, and community safety, as the most important factors in shaping community health. Respondents were twice as likely to say that good schools and safe neighborhoods were important than they were to say that health care access was important. These responses correspond with evidence showing that social and environmental factors are more important determinants of health than access to care. Responses to this question also reflect that survey respondents consider child wellbeing particularly critical in shaping the health of their communities, and it underscores the importance of the following question, regarding child welfare, to gain insight into overall perception of community health.

Figure 5.4

Is your community a good place to raise children? (n = 18,451)
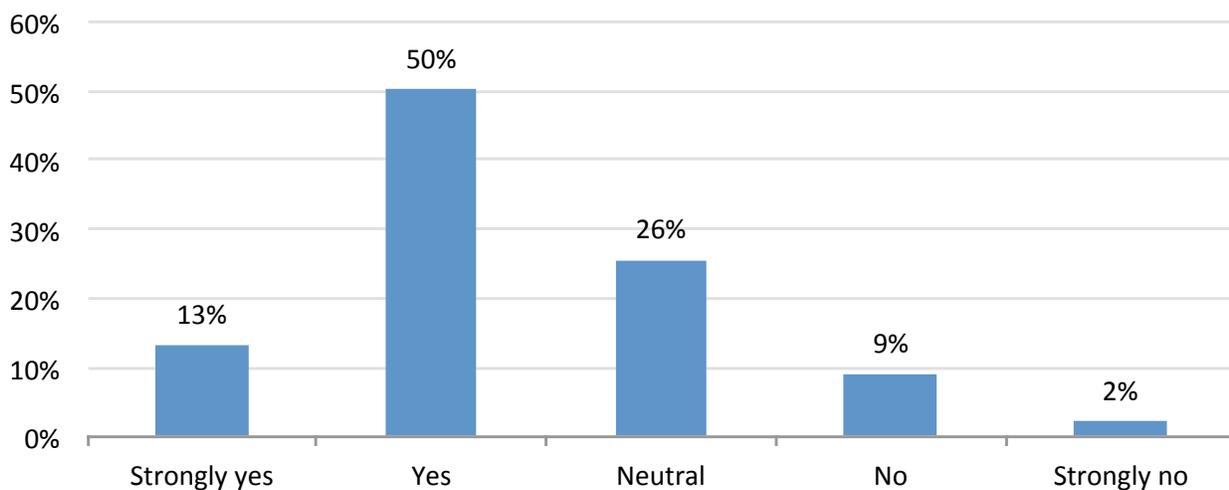
63% of respondents perceived their communities as good places to raise children. 11% felt their communities were not good for raising children.

Responses across Districts

Respondents from District 3 Delta/Hills were most likely to negatively assess their communities as good places to raise children and District 2 Northeast respondents were most likely to positively assess their communities. District 3 Delta/Hills respondents were three times more likely than District 2 Northeast respondents to say their communities were not good places to raise children. 75% of District 2 Northeast respondents believed their communities were child-friendly, while only slightly over half of District 3 Delta/Hills respondents believed this.

Figure 5.5

District 2 Northeast and District 3 Delta/Hills Comparison: Is your community a good place to raise children?

Legend: ■ District 2 ■ District 3
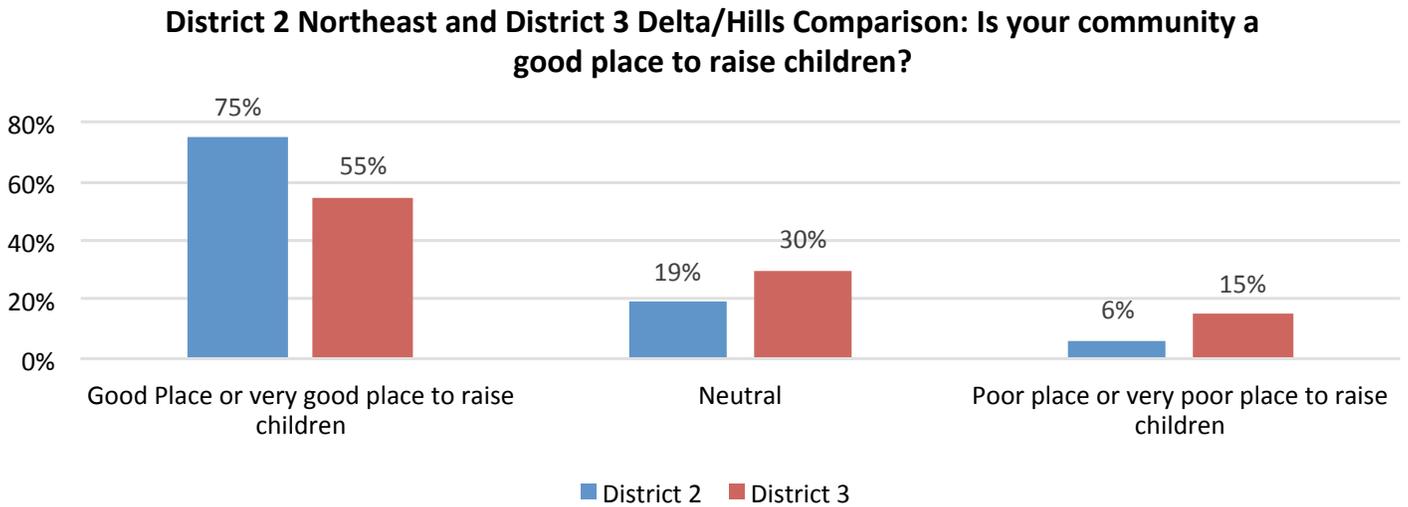
Figure 5.7

Is your community a good place to grow old? (n = 18,870)
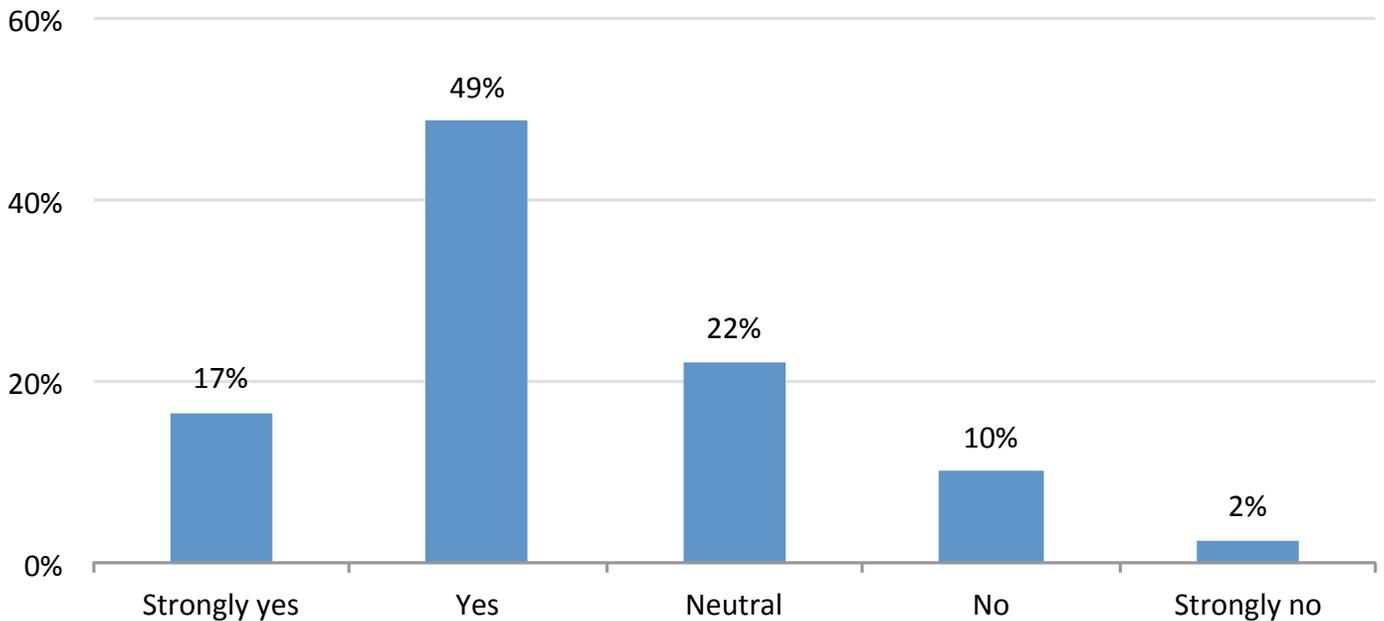
66% of respondents perceived their communities as good places to grow old, while 12% did not.

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Responses across Districts

Just as District 3 Delta/Hills respondents were most likely to negative assess their communities as good places to raise children and District 2 Northeast respondents were most likely to perceive their communities as good places to raise children, this same trend held true for perceptions about age-friendliness.

District 3 Delta/Hills respondents were more than twice as District 2 Northeast respondents to say that their communities were not good places to grow old. Respondents from District 3 Delta/Hills were most likely to negatively assess their communities as good places to raise children and District 2 Northeast respondents were most likely to positively assess their communities. District 3 Delta/Hills respondents were twice as likely as District 2 Northeast respondents to say their communities were not good places to raise children. 75% of District 2 Northeast respondents believed their communities were child-friendly, while only slightly over half of District 2 Northeast respondents believed this.

Figure 5.8

Is your community a safe place to live? (n = 18, 872)
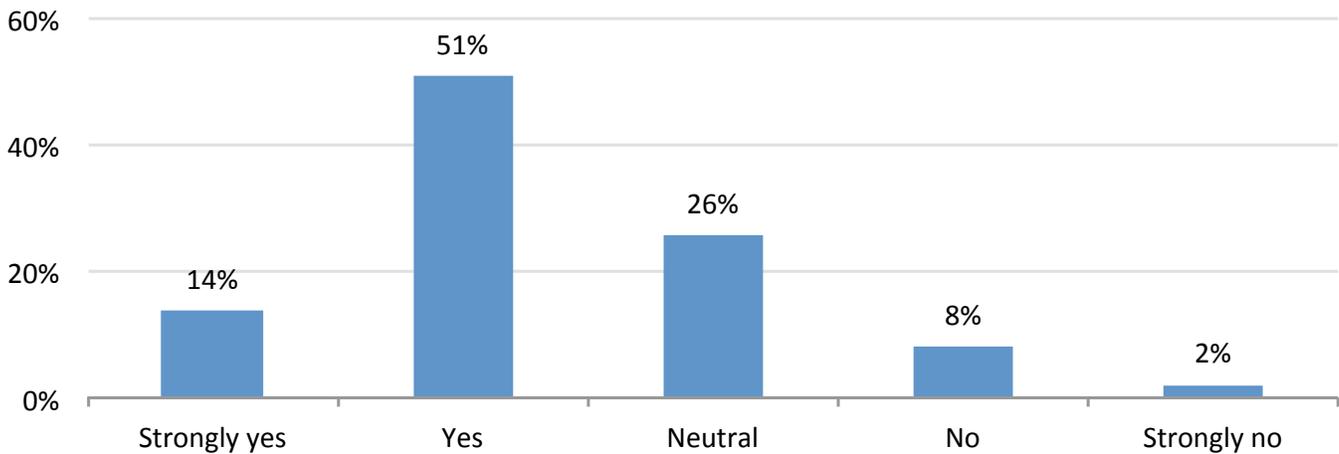
65% of respondents felt their communities were safe places to live. Male respondents were slightly more likely than female respondents to perceive their communities as safe (67% and 63%, respectively).

Figure 5.9

Educational Attainment and Perception of Community Safety

Perception of Community Safety	Graduate or Professional Degree	College Degree	Some College	Vocational Training	High School Diploma or GED	Less than High School
Safe or very safe	77%	68%	63%	62%	63%	61%
Neutral	21%	23%	28%	28%	27%	27%
Unsafe or very unsafe	11%	8%	9%	11%	11%	12%

Respondents with higher educational attainment were more likely to perceive their communities as safe places to live. 77% of respondents with graduate or professional degrees reported that their communities were safe, compared with only 61% of respondents who did not finish high school.

Figure 5.10

Race and Perception of Community Safety

Perception of Community Safety	African American/Black	White
Safe or very safe	61%	69%
Neutral	28%	23%
Unsafe or very unsafe	11%	9%

White respondents were most likely to describe their communities as safe or very safe. While there was a substantially smaller sample size for Native American survey respondents, this group was substantially more likely to describe their communities as unsafe or very unsafe than other racial groups, and twice as likely compared to white respondents to feel unsafe in their communities.

Community Involvement and Civic Participation

Figure 5.11

Do all individuals and groups have opportunity to contribute to and participate in your community's quality of life? (n = 18,863)
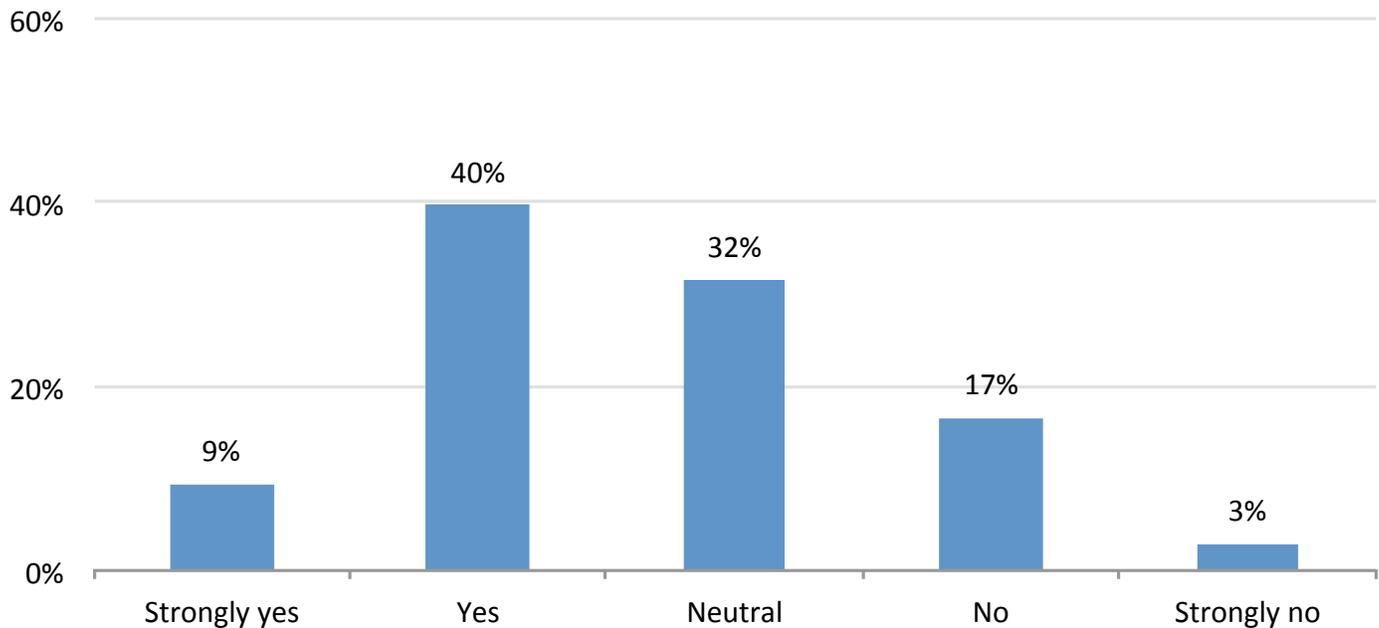
49% of respondents perceived that everyone has the opportunity to participate in their community's quality of life, while 20% did not believe this opportunity is equitably distributed. Male respondents were slightly more likely than female respondents to perceive equitable access to community participation opportunities (50% and 48%, respectively).

Figure 5.12

Race and Equitable Community Participation Opportunities

Perception of equitable community participation opportunities	African American/Black	White
Presence or strong presence of community participation opportunities	45%	52%
Neutral	31%	31%
Absence or strong absence of community participation opportunities	24%	15%

White respondents were more likely to positively assess the presence of equitable opportunities to participate and contribute to community quality of life, with 52% reporting the perception that all individuals and groups in their community had the opportunity to contribute to and participate in quality of life, compared with 45% of African American/ Black survey respondents.

Equitable Community Participation Opportunities across Districts

Just as District 3 Delta/Hills respondents assessed their quality of life lowest, they were also most likely of all districts to perceive unequal access to community participation opportunities, reporting a lack of equitable participation twice as frequently as District 2 Northeast respondents, who had assessed their quality of life highest (29% and 15%, respectively).

Figure 5.13

Do all residents perceive that they - individually and collectively - can make your community a better place to live? (n = 18,406)
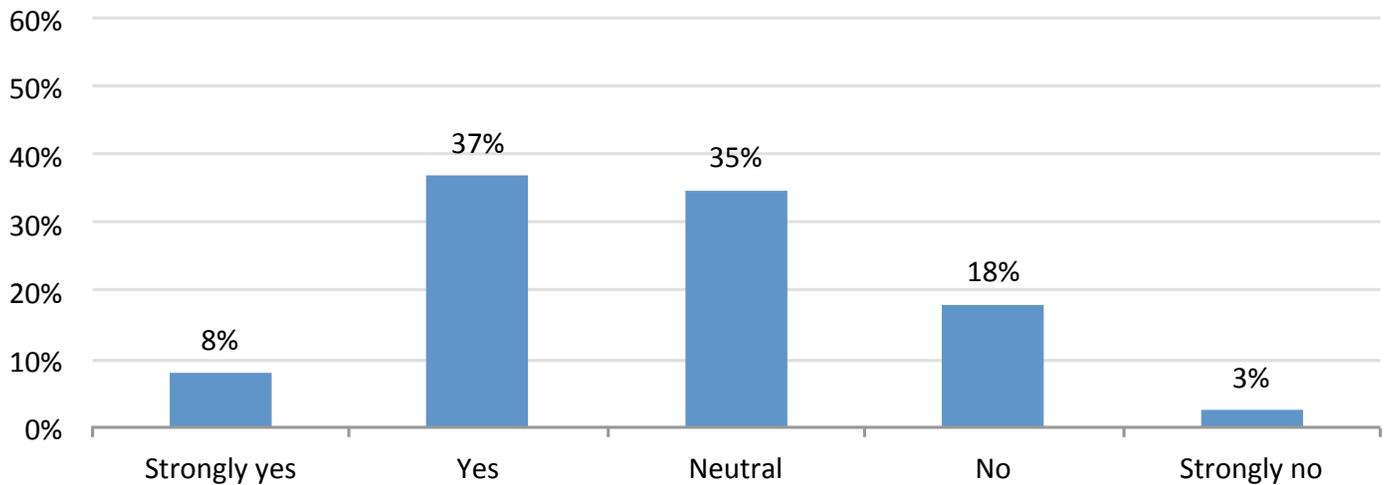
45% of respondents perceived that people in their communities feel that they have the power to improve the community, while 20% did not perceive that all community residents feel this sense of empowerment. Male and female respondents were equally likely to respond with affirmative perceptions of community empowerment.

Figure 5.14

Educational Attainment and Perception of Community Empowerment

Perception of Community Empowerment	Graduate or Professional Degree	College Degree	Some College	Vocational Training	High School Diploma or GED	Less than High School
Empowered or very empowered	47%	46%	40%	44%	45%	44%
Neutral	30%	33%	38%	35%	36%	35%
Not empowered or strongly not empowered	23%	21%	22%	22%	18%	22%

Survey respondents with graduate or professional degrees were more likely than other groups to report believing that all residents perceived an ability to improve their community, while respondents who completed some college were least likely to perceive all of their fellow community members as feeling empowered to make improvements.

Figure 5.15

Race and Perception of Community Empowerment

Perception of Community Empowerment	African American/Black	White
Empowered or very empowered	45%	44%
Neutral	33%	37%
Not empowered or strongly not empowered	22%	19%

While the sample sizes were small for these groups, Native Americans and Latinos were the most likely to report believing that all residents perceive an ability to improve the community individually and collectively (51% and 50%, respectively). African American/Black survey respondents were slightly more likely than White respondents to positively assess their fellow community members' perceptions of personal and community empowerment, though the difference is insignificant.

Figure 5.16

Is your community working together to achieve shared goals? (n = 18,862)
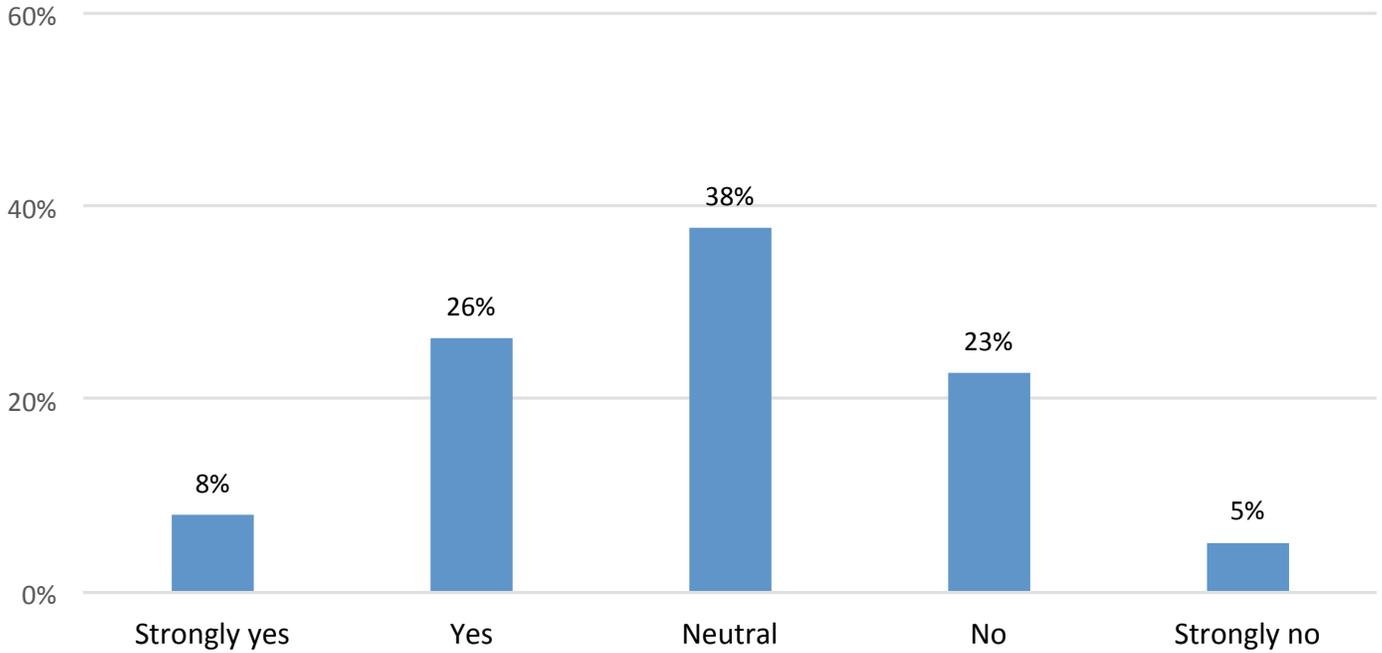
Just over a third (34%) of survey respondents reported that their communities are working to achieve shared goals, while 28% reported that their communities are not. There was no difference in responses from male and female survey respondents.

Figure 5.17

Race and Perception of Community Collaboration on Shared Goals

Perception of Community Collaboration on Shared Goals	African American/Black	White
Working together or strongly working together	33%	35%
Neutral	34%	42%
Not working together or strongly not working together	34%	23%

African American/Black survey respondents more frequently perceived a lack of collective community action toward shared goals than White respondents (34% and 23%, respectively). While the sample size was small, Latino respondents had the highest proportion of affirmative responses regarding community collaboration, with 37% reporting a perception that their community was working toward shared goals.

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Figure 5.18

Educational Attainment and Perception of Community Collaboration on Shared Goals

Perception of Community Collaboration on Shared goals	Graduate or Professional Degree	College Degree	Some College	Vocational Training	High School Diploma or GED	Less than High School
Working together or strongly working together	36%	33%	33%	33%	35%	37%
Neutral	37%	40%	39%	39%	37%	33%
Not working together or strongly not working together	26%	27%	27%	28%	29%	29%

Survey respondents with lower educational attainment generally assessed their perception of collective community action most positively, but were also more likely than respondents with higher educational attainment to say that community members were not working together.

Figure 5.19

Is there an active sense of civic responsibility and engagement, and of civic pride in shared accomplishments? (n = 17,663)
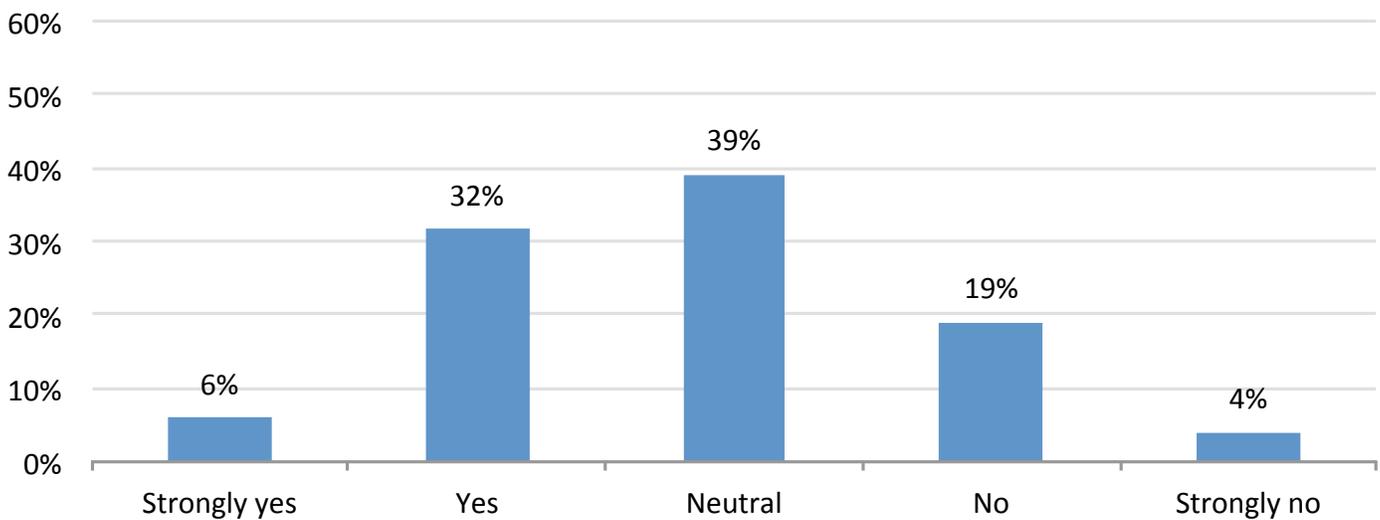
38% of survey respondents reported an active sense of civic pride and responsibility in their communities. District 3 Delta/Hills respondents assessed all aspects of quality of life most negatively, including perception of civic pride and engagement. Twice the percentage of District 3 Delta/Hills respondents reported an absence of strong absence of civic pride and responsibility, compared to District 2 Northeast respondents, who assessed all measures of quality of life most highly (36% and 18%, respectively).

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Economic Opportunity

Figure 5.20

Is there economic opportunity in your community? (n = 18,427)
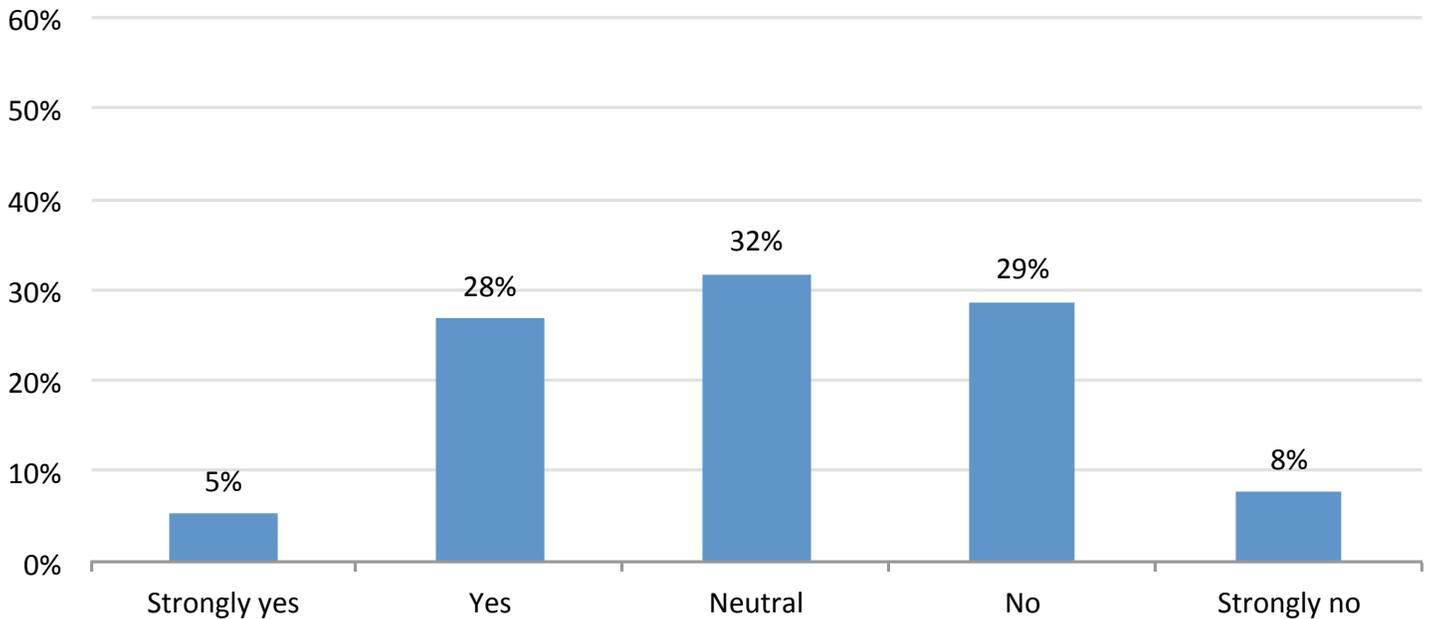
A greater proportion of survey respondents felt that economic opportunities were absent from their communities, with 37% reporting disagreeing or strongly disagreeing that economic opportunity existed, compared to 32% who positively assessed economic opportunities in their community.

District 3 Delta/Hills respondents were by far the most likely to report an absence of economic opportunity, with 57% answering no or strongly no. This proportion was substantially higher than the next most negative district response in District 4 Tombigbee, 38% of whom felt that economic opportunity was absent or strongly absent. District 1 Northwest respondents were substantially more likely than others to respond positively to this question, with 46% either agreeing or strongly agreeing that economic opportunity existed where they lived.

Figure 5.21

Educational Attainment and Perception of Economic Opportunity

Perception of Economic Opportunity	Graduate or Professional Degree	College Degree	Some College	Vocational Training	High School Diploma or GED	Less than High School
Presence or strong presence of economic opportunity	33%	33%	29%	28%	32%	36%
Neutral	26%	30%	33%	31%	33%	34%
Absence or strong absence of economic opportunity	40%	37%	37%	41%	35%	31%

Respondents who had completed vocational training as their highest education level were the most likely to report poor economic opportunity in their communities, with the lowest proportion reporting the presence of economic opportunity and the highest proportion of all groups reporting an absence or strong absence of opportunity. Contrary to what may be expected, respondents with higher educational attainment were more likely to negatively assess economic opportunity than respondents with the lowest levels of educational attainment. 40% of respondents with graduate or professional degrees reported an absence of economic opportunity where they lived, compared with only 31% of respondents with less than a high school degree.

Figure 5.22

Race and Perception of Economic Opportunity

Perception of Economic Opportunity	African American/Black	White
Presence or strong presence of economic opportunity	31%	32%
Neutral	31%	33%
Absence or strong absence of economic opportunity	39%	35%

Similar proportions of African American/Black and White respondents perceived a presence of economic opportunity in their communities, though a higher proportion of African American/Black respondents reported an absence or strong absence of economic opportunity. Though the sample size was small, Latino respondents were most optimistic regarding opportunity, with 42% reporting a presence or strong presence of economic opportunity, and only 25% reporting an absence or strong absence of economic opportunity.

Social Support

Figure 5.23

Are there networks of support for individuals and families during times of stress and need? (n = 18,371)
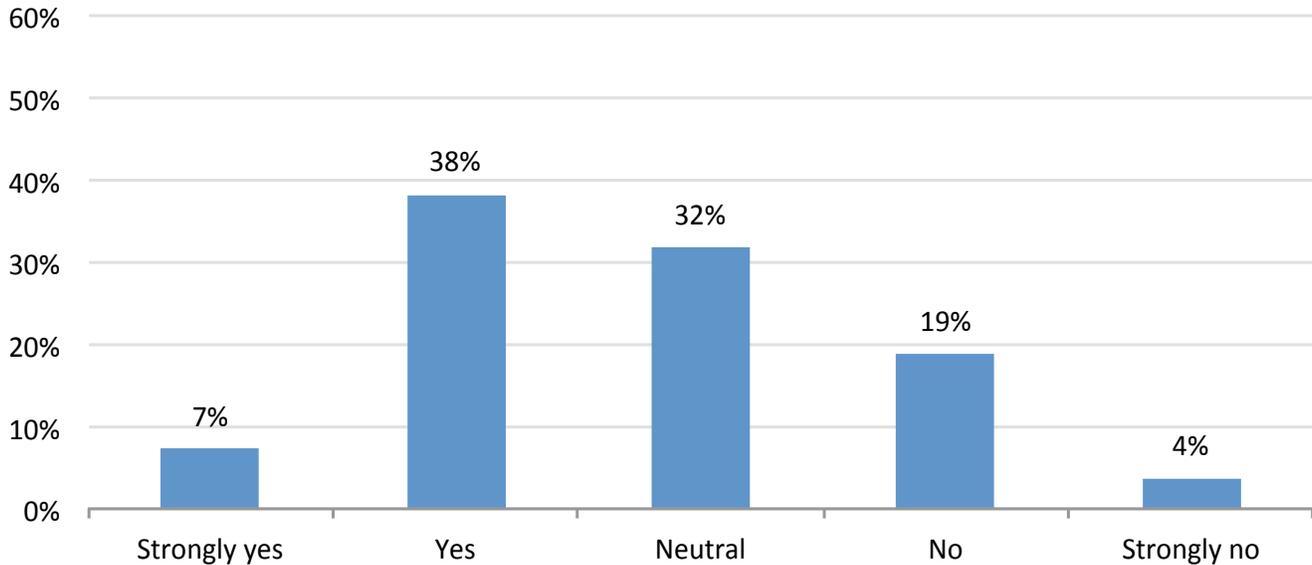
45% of survey respondents reported the presence of support networks for individuals and families during times of stress. Just over half of District 1 Northwest and District 2 Northeast respondents positively assessed the presence of support networks in their communities (52% and 51%, respectively). District 3 Delta/Hills respondents were least likely to report the presence of support networks in times of need (36%).

Figure 5.24

Educational Attainment and Perception of Presence of Support Networks

Perception of Presence of Support Networks	Graduate or Professional Degree	College Degree	Some College	Vocational Training	High School Diploma or GED	Less than High School
Presence or strong presence of support networks	52%	48%	45%	40%	42%	43%
Neutral	28%	31%	32%	33%	34%	31%
Absence or strong absence of support networks	20%	20%	23%	27%	24%	25%

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Higher levels of educational attainment generally correlated with higher perceived presence of support networks, with 52% of respondents with graduate or professional degrees reporting a presence or strong presence of support networks compared with 43% of respondents who had not completed high school. Individuals with vocational training were most negative in their assessment of the availability of support networks for people in times of stress and need.

Figure 5.25

Perception of the Presence of Support Networks by Race

Perception of Presence of Support Networks	African American/Black	White
Presence or strong presence of support networks	40%	51%
Neutral	32%	32%
Absence or strong absence of support networks	29%	16%

Figure 5.26

Perception of the Presence of Support Networks by Race
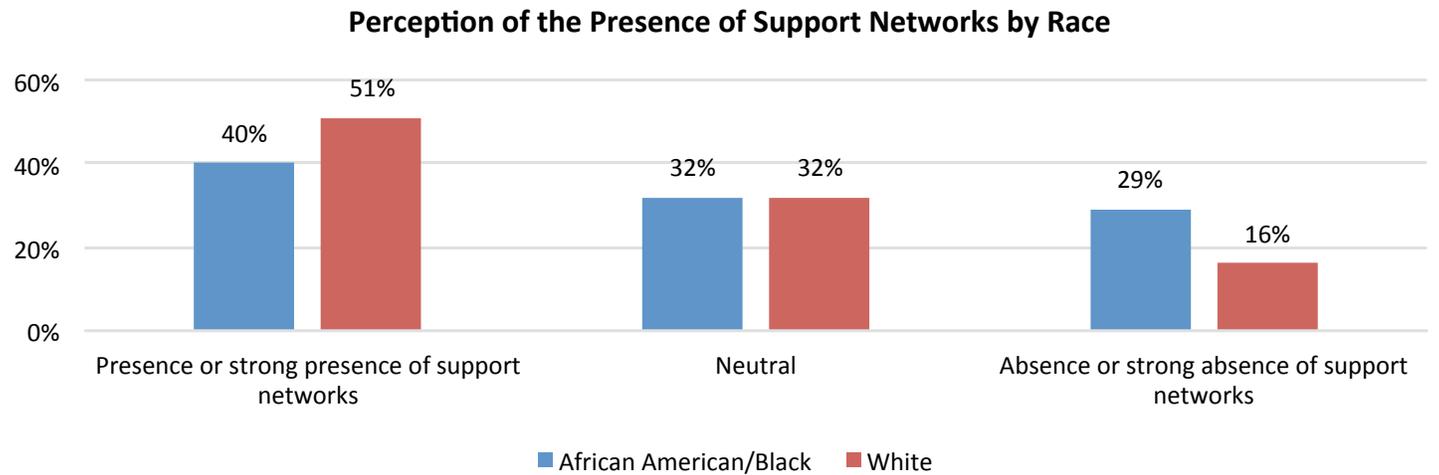
White survey respondents were more likely to perceive the presence of support networks than African American/ Black respondents, who were almost twice as likely to report an absence of support networks, and were more than twice as likely to report a strong absence of support networks available to support individuals and families in times of stress.

6. Conclusion

The administration of this survey to Mississippi residents helped identify patterns of health status across the state. By assessing their communities, respondents shed insight into perceptions of health and social factors personally and for the community. Limitations of the survey included low representations of males, respondents ages 45 and over and respondents for race groups including Hispanic/Latino, Asian/Pacific Islander, Other, Native American and Multi-Racial.

Common trends across all racial groups included rating the top health related problems in their communities as cancer, diabetes, high blood pressure, heart disease and stroke, and obesity. Other similarities included reporting alcohol abuse, drug abuse, and being overweight as the top risky behaviors in their communities. Review by respondent education level demonstrated that those with higher levels of education were more likely to describe their communities as unhealthy and their personal status as healthy.

Analysis of data across districts illustrated a difference in responses in the presence of a variety of health services, satisfaction with quality of life and various social factors. District 1 Northwest reported sufficient health services while District 3 Delta/Hills stated they were insufficient. Quality of life was reported as much higher in District 2 Northeast while District 3 Delta/Hills was disproportionally low. Perceptions of participation in communities and economic opportunity also differed between districts and races.

Since this was preliminary view of health status in the state, it would be beneficial to conduct further health assessments at a local level to gain a more detailed and well-rounded understanding of communities.

Focus Group Summary

Focus Group Methodology

With support from CommonHealth ACTION, the Illinois Public Health Institute, and the Mississippi Public Health Institute, the Mississippi State Department of Health (MSDH) conducted 48 focus groups and community conversations throughout each of the state's nine public health districts. Focus groups and community conversations were facilitated in the following communities:

District 1 Northwest

Hernando, DeSoto County

Clarksdale/Marks, Coahoma/Quitman Counties

Batesville/Sardis, Panola County

Coldwater, Tate County

Grenada, Grenada County

District 2 Northeast

Booneville, Prentiss County

Tupelo, Lee County

Pontotoc, Pontotoc County

Holly Springs, Marshall County

Iuka, Tishomingo County

District 3 Delta/Hills

Duck Hill, Montgomery County

Greenville, Washington County

Cleveland, Bolivar County

Greenwood, Leflore County

Indianola, Sunflower County

District 4 Tombigbee

Starkville, Oktibbeha County (3)

Columbus, Lowndes County

Okolona, Chickasaw County

District 5 West Central

Yazoo City, Yazoo County

Magee, Simpson County

Pearl, Rankin County

Vicksburg, Warren County

Ridgeland, Madison County

District 6 East Central

Meridian, Lauderdale County

Carthage, Leake County

Forest, Scott County

Newton, Newton County

Raleigh, Smith County

District 7 Southwest

McComb, Pike County

Summit, Pike County

Brookhaven, Lincoln County (2)

Woodville, Wilkinson County

District 8 Southeast

Collins, Covington County

Laurel, Jones County

Hattiesburg, Forrest County

Purvis, Lamar County

Leaksville, Greene County

District 9 Coastal/Plains

Wiggins, Stone County

Gulfport, Harrison County

Lucedale, George County (2)

Picayune, Pearl River County

Waveland, Hancock County (2)

Poplarville, Pearl River County

MSDH identified target populations for recruitment of focus group and community conversation participants based on the population response gaps from the community surveys conducted. Recruitment methods varied, but included a combination of convenience and snowball sampling. Focus groups and community conversations were facilitated and documented by two experienced facilitators from either the Mississippi Public Health Institute or CommonHealth Action. Focus groups and community conversations were conducted following a standard facilitator guide with fourteen questions. All participants signed a consent form prior to participation, and were informed that their input would be reported anonymously.

Community Assets

Sense of Community

Focus groups throughout all districts mentioned community members as their primary community asset. Focus groups across all districts described close-knit, friendly communities where people know each other and help one another. A Raleigh resident described her city as a "united and inviting community." One focus group participant in Vicksburg took pride in the strong spirit of generosity in the community, saying, "We believe in helping each other." A Starkville resident expressed pride that "people don't look down on you when you need help." Several focus groups identified community safety as among their most important assets. A Newton County resident said, "I still leave my car unlocked. I'm not worried about my safety or wellbeing."

 Many focus groups throughout the state described their communities as quaint and peaceful, and frequently mentioned valuing the "small town feel" and "slow pace" of their communities. Residents of communities located in close proximity to a larger metropolitan area frequently mentioned the nearby amenities as a strong asset.

Community & Civic Institutions

Community organizations and gathering spaces like churches, schools, and parks were also frequently mentioned as important resources and assets for the community. The Boys and Girls Club was commonly identified as an important community resource for youth. Many focus groups described churches as vital social institutions in their communities, and prominent resources for supporting people in need.

Natural Beauty

Citizens also took pride in the natural beauty of their communities. Participants expressed appreciation for ample green space, abundant trees, and nature trails. Many coastal communities mentioned beaches as a source of pride and beauty.

Community Challenges

Community Divisiveness and Tension

While the sense of community was largely reported as the foremost asset among focus groups across the state, with many people describing their communities as neighborly and close-knit, concern was also voiced in focus groups throughout the state regarding the inclusiveness of this sense of community. Participants frequently used language about the community "not coming together." Expressions of concern regarding racial tension and divisiveness were threaded throughout focus groups, but were particularly strong among residents of the Delta region. For example, African American community members in one Delta region focus group reported a strong sense of invisibility throughout the community, perceiving differential access to resources and services in the community, and a lack of voice in community decision-making. In some cases, participants also alluded to a physical sense of separation and racial segregation in their communities, with African American neighborhoods lacking access to quality housing and grocery stories. An Indianola resident referred to her community as "divided along the tracks," signifying a geographic separation between African American and white people. Other participants in her focus agreed, and reported a perception that there are separate schools for the black and white students in Indianola, noting that most African American students attend public schools in the community while white students attend Indianola Academy. Classism was also perceived as a barrier to community inclusiveness. A Madison County resident observed that problems that are perceived to be related to poverty are not considered important to address, noting that "We have big health issues that people just don't seem to care as much about because there is politics involved that problems only impact the poor." A Magee community resident felt that the voices of low-income people are not heard and valued, and stressed that "people living in poverty should be brought to the table."

Access to Affordable Housing, Healthy Food, and Healthcare

The most commonly cited community challenge was the absence or the cost-prohibitive nature of basic resources to support health, including safe and quality housing, healthy food such as fresh fruits and vegetables, and healthcare providers and insurance coverage. The high cost of these resources limits people's ability to make healthy choices. One citizen in Southeastern Mississippi said, "If people have to make a choice between something that will sit on their shelf and keep for several weeks versus something fresh that will spoil within a week, they will choose the processed food that will keep. And it's the processed foods that are cheaper."

Access to Quality Employment

Another frequently cited community challenge was a lack of good employment opportunities throughout the state. Focus group participants also reported that jobs in their communities are usually low paying. The absence of good job opportunities compromises many Mississippians' access to basic resources like food, shelter, and healthcare. One community member from Northwestern Mississippi stated, "This is the lowest paid state and everything is [priced] high." Starkville residents observed that senior citizens that should be in their retirement years often are compelled to rejoin the workforce to help support their families.

Community Infrastructure

Focus groups frequently reported damaged or lacking community infrastructure as important community challenges, and most commonly discussed this in the context of transportation. Participants frequently described streets and sidewalks as being deficient or in a state of disrepair, which constitutes a particular barrier to active

forms of transportation, and often makes walking an inviable option. Community members also reported a lack of public transit, which limits access to community resources for individuals who cannot drive or do not have access to cars, including youth, seniors, and low-income populations.

Some communities perceived that they received less backing from the state to support community infrastructure than other regions. A Meridian resident said, "East Central Mississippi is a forgotten area of the state."

Access to Recreational Opportunities

Many community members expressed concern regarding the lack of recreational activities available in their communities, particularly for senior citizens and youth. Residents in the Delta region in particular reported an absence of extracurricular and social activities for young people.

Community Safety

While community safety was a chief asset mentioned by some communities throughout the state, others mentioned the lack of community safety as one of the biggest detractors from quality of life in their communities. Community members in Marks, Sardis, and Grenada, all in Northwestern Mississippi, described high rates of crime and violence. Residents of Magee in West Central Mississippi reported that domestic violence is one of their most serious problems. One resident stated, "The sheriff's department will sometime have five deputies dealing with domestic violence. Could be [a result of] drugs or alcohol-related, poverty, stress, low income, lack of sense."

Distrust of Healthcare Providers and Facilities

Many communities throughout the state reported a strong distrust of healthcare providers and facilities, perceiving their area hospitals as providing low quality care. Community members from Sardis, Mississippi said that they referred to the local medical center as "Try your Luck" Hospital. Community members in Picayune referred to their local hospital as "a Band-Aid station." This sentiment was echoed by Pontotoc residents, who described their local hospital as "more of a first-aid station" where people are "patched up" until they can be transported to another facility. A resident of Southeastern Mississippi said, "You can't go to the hospital here. They don't know what's wrong with you. They just give you medicine and send you away. Then when you go to [a hospital in a bigger city] they tell you what's really wrong and you get better."

Several focus groups in small communities reported distrust of their local healthcare providers due to confidentiality concerns. As one Newton County resident explained, "There's a lack of trust of the health system because it's a small town. People talk about you." Confidentiality concerns also discourage some people from taking advantage of services at the health department. A focus group participant in Southeastern Mississippi said, "The health department has a negative stigma...you don't go there because everyone will know your business."

Definition of a Healthy Community

When asked to describe a healthy community, focus group participants across the state described a community that has productive, engaged, and responsible citizens that work together. Healthy food, quality healthcare, and opportunities for physical activity and recreation would be accessible and affordable for all citizens. Community members would also have access to great schools, good jobs, and quality healthcare facilities. Everyone would have access to community resources and amenities, including playgrounds, farmer's markets, walking trails, and libraries. An ideal community environment would have ample green space, clean air and water and would be free of litter, dilapidated buildings, abandoned houses, gang signs, and advertisements for alcohol and tobacco. Community infrastructure like roads, bridges, and sewers would be in good repair. Community leaders would be respectable and responsible, and local businesses would flourish. Citizens would feel safe, content, and socially, emotionally, and physically well, and would help and support each other. Community members from Starkville, Mississippi said that a healthy community would "make people feel full so that they give back." Community members in Newton County said that their ideal community "…[would not be] afraid to help others when they are in need."

Biggest Health Issues

When asked about the biggest health issues in their communities, focus group participants across the state listed many of the same conditions. Chronic diseases, including obesity, diabetes, hypertension, arthritis, and cancer, were the most frequently mentioned health conditions. Mental health, including depression, substance abuse, and stress, were also mentioned in focus groups across the state. STIs were also commonly identified as a concern.

In addition to discussing specific conditions, participants also described causes of poor health in their communities. Community members across the state pointed to the lack of access to affordable healthy food, healthcare, and access to physical activity as among the biggest health issues that contribute to poor health in their communities. Residents in the Delta, on the Coast, and in West Central Mississippi mentioned environmental concerns as some of the biggest health issues. Coastal communities affected by the BP Oil Spill were particularly conscious of environmental factors that contributed to poor health in their area.

Participants also referenced social and economic determinants as the biggest health issues in their communities, identifying poverty, unemployment, lack of job opportunities, and cultural factors, including lack of personal responsibility, as root causes of health problems where they live.

Barriers and Challenges

In discussions about what makes it difficult for people to stay healthy in their communities, participants discussed environmental, economic, social, and cultural determinants of health.

Environmental Barriers to Health

The built environment in our communities shapes the choices that are available to us. The presence of sidewalks, nature trails, and bike paths make it easier to be physically active, and the presence of grocery stores and farmers markets selling fresh, affordable produce make it easier to consume nutritious foods. Mississippians throughout the state described a healthy environment as one that is free of pollution, has ample green space and recreation space, well-maintained community infrastructure, and an absence of abandoned homes and gang signs.

The most commonly cited environmental barrier to good health was a lack of community spaces in which citizens can be physically active, including sidewalks, walking trails, and affordable or free exercise facilities. One Poplarville resident reported," [There is] no place to walk, no sidewalks...you have to walk in the middle of the street, which is bad unless you want to get run over by a car flying down the road." Another environmental barrier to physical activity that came up across many communities is a lack of safety, due to violence and stray or unleashed dogs. An absence of community safety is a particular barrier for children, as parents are reluctant to let their children play outdoors if they perceive their neighborhoods as dangerous. Some community members reported that a lack of safety in their neighborhoods prevents them from being active. One Southeastern Mississippi resident stated, "We have a park, but it's not safe. You have to go to the white neighborhood to go to a safe park. And then you have to drive."

Pollution was another frequently mentioned environmental barrier to health. Focus group participants listed poor water and air quality as some the primary environmental contributors to poor health. This issue was particularly strongly in the Delta region, where participants reported that cotton gins, crop dusting, factories, burning tires, and the manufacture of illegal drugs all compromise air quality, and where, as one Indianola resident said, "There's lead and other toxins in the water but the city can't fix the problems." Coastal community residents also expressed concerns regarding the lingering impact of the BP Oil Spill and other industrial environmental damage, which they feel have negatively affected local water supplies. A Picayune resident stated, "I don't trust the city water. I boil it anyway."

Focus group participants also frequently discussed the unhealthy food environments in their communities, noting the abundance of fast food restaurants and the scarcity of fresh, affordable produce, and explaining that because unhealthy food is so much more accessible and convenient, people are more likely to consume it. The absence of grocery stores in some communities creates a particularly difficult barrier to healthy options, resulting in an overreliance on nearby fast food and corner stores. A McComb resident reported, "Many people cannot get to places that offer healthy things."

Economic Barriers to Health

Economic challenges were the most commonly cited barriers to good health throughout focus groups across the state. References to the high cost of health care, healthy foods, safe housing, and recreation opportunities were threaded throughout focus groups in every district.

The cost of healthcare was a commonly voiced concern among focus groups across the state. Focus group participants reported that uninsured individuals have very few options to access any kind of medical care, but even those who have insurance coverage face barriers due to the cost-prohibitive nature of medical care. As one Starkville resident explained, "Some people don't have insurance and if they do, they have high deductibles. Because of this, they don't go to the doctor because it's too expensive. I'll never reach my deductible and can't afford to go when it costs $200 every time." Another community member echoed this concern, saying, "So why even go to the doctor if you can't afford the medicine he will give you? So people just don't go until they are really sick." A Carthage resident stated, "[paying for] health insurance is keeping me poor."

While some residents across the state expressed concern that community members are overly dependent on public support like food stamps, others felt that these benefits should be extended to help working families that cannot make ends meet but do not qualify for public assistance. One focus group participant said that "working people may be $3 over the guidelines and they can't get help. They need assistance." Another said, "On Medicaid, [the] quality of care may differ, but at least you can see a doctor. A family of four with two providers who earn $10 an hour a piece cannot afford healthcare." Other participants agreed, perceiving that it can be more profitable

not to work so families qualify for assistance. A Starkville resident said that she used to have a full time job with benefits, but when her child was diagnosed with a heart condition, she couldn't pay her medical bills, despite having health insurance. She had to reduce her work hours so her child could qualify for Medicaid.

In addition to the lack of access to affordable basic resources, focus group participants further described that income-stressed families are at risk of poor health because parents working multiple jobs do not have time to cook and therefore must rely on fast food or other unhealthy convenience foods.

Several focus groups also emphasized the role of economic hardship in perpetuating stress and mental health issues. A Newton County resident explained, "Financial hardship affects multiple aspects of life and can be the cause of depression and drug use and abuse."

Cultural Barriers to Health

Many focus groups referenced cultural practices, particularly related to eating, that are detrimental to the health of their fellow community members. Participants frequently referred to southern cuisine as unhealthy and high in fat, and reported that eating plays a central role in social gatherings. One Greenville resident stated, "We socialize around food, it's a part of our society here." A Pontotoc resident echoed this, saying, "All good times revolve around food." In Southeastern Mississippi, a focus group participant noted that while people still eat traditional southern cuisine, they are not as physically active as previous generations used to be, saying, "We still cook everything like our grandmamas did, but we aren't getting the exercise like they did." Focus group participants in Iuka emphasized that cultural changes can only happen if they are supported by access to healthy options, such as affordable, healthy menu options at restaurants.

Several focus groups also reported that they perceive a cultural acceptance or sense of resignation regarding obesity. A Yazoo County resident perceived a pervasive attitude in which people think, "My grandmother died from stroke, heart attack or diabetes, so I will too." A Grenada resident echoed this, saying, " It almost seems to be okay that everyone is obese." Other groups observed a cultural tendency to ignore or dismiss health inequities. One focus group participant in Madison County said, "There are ethnic disparities in the state but people want to put their heads in the sand."

Social Barriers to Good Health

Focus group participants frequently expressed concern regarding the lack of recreational and social opportunities in the communities, particularly for youth. One resident stated, "It didn't used to be this way. There aren't any recreation programs and the schools are getting worse. There is nothing for the kids to do but stay inside and play games." Residents of the Delta region in particular expressed a lack of activities and opportunities for young people.

Another social problem is the lack of inclusiveness that many participants of color reported in their communities. Several focus groups also perceived that they did not have a voice in the community and that elected officials fail to act in the interests of community members.

Social norms and stigmatization of healthy behaviors can also be a barrier to good health. As one resident in Greenville explained, "There is a stigma around walking in Greenville; people either assume you do not have a job, or are up to no good." The increasing emphasis on technology and digital media as forms of entertainment and communication are also detrimental to optimal health, increasing sedentary behavior, particularly among youth. One resident of Coldwater proclaimed, "It used to be just older folks. Now with technology, the kids [are getting sick too]...[There are] kids with diabetes and high blood pressure. Our seniors are our most healthy citizens!"

Behavioral Barriers to Health

Lack of personal responsibility was a concern that continually surfaced in focus groups throughout the state. Many people reported that citizens fail to take ownership over their health and do not feel motivated to make healthy food choices or to exercise. A Booneville community member said, "People aren't motivated and don't show initiative to be healthy." A participant in Starkville explained, "You got to have the determination...It's there but you have to make yourself go exercise no matter what your income is." Another community member emphasized the importance of parents modeling and instilling healthy habits from an early age, saying, "Children see their parents exercising and they learn."

Political Barriers to Health

Focus group participants also identified that policymakers can create barriers to good health by failing to enact laws that protect the health of the public, including Medicaid expansion and proper investment in public institutions like schools. Others expressed concern over the failure of lawmakers to invest in a mental health safety net, which has resulted in overreliance on the correctional system. One Southeastern Mississippi focus group participant said, "If someone is mentally ill and gets picked up by the police, they get sent to jail, not treated."

Conflicts of interest among politicians were identified as a barrier in Yazoo County, where one participant explained, "Leadership owns bars and businesses that promote unhealthy behaviors so they do not pass ordinances to regulate use."

Health Resources and Assets

When asked about community resources that help people stay healthy, focus group participants most frequently identified recreational facilities like the YMCA, gyms, parks, and public swimming pools. They also discussed features of their communities that make healthy food more accessible, including farmer's markets, community gardens, and food pantries. The Mississippi Food Network, a network of church-based food pantries across the state, was mentioned by citizens throughout the state as an important resource for low-income families.

Focus group participants also identified civic and community organizations, like the Lion's Club, the Boys and Girls Club, and local churches as important resources that help community members stay active and engaged, and can serve as good mechanisms for educating community members about health issues by holding health screenings, walk-a-thons, and fitness classes.

Less frequently, focus group participants identified walk-in clinics as important community health resources. Other focus groups, however, emphasized that hospitals and clinics in their communities were either absent or not viewed as assets for healthy living, due to their inaccessibility and low quality care.

A few focus groups also mentioned community services that help to meet the needs of vulnerable residents, such as transportation services for seniors and disabled individuals who cannot drive, and the Silver Sneakers exercise program, which helps aging community members stay physically active.

In several focus groups in the Delta region, participants did not perceive the presence of any health resources in their community.

Trusted Information Sources

When asked about trusted health information sources, the majority of focus groups mentioned the internet as their preferred source of information on health issues. Other preferred information sources included family and friends, as well as community-based organizations, particularly churches. Some focus groups mentioned other media sources, including television and newspapers, as valuable sources of health information.

Though a few groups identified doctors and other medical professionals as valuable sources for health information, others reiterated the strong community distrust of medical facilities, and reported a perception that doctors were more interested in giving medication than in educating patients on how to be healthy. A Southeastern Mississippi focus group participant reported, "Doctors don't tell us where to get help…they just give us more medicine." Cleveland residents echoed this sentiment, and expressed a desire for doctors that "[care] about you and not your money."

A few focus group participants mentioned that their local health department is a trusted and valued source of health information, and several others reported that they do not currently get health information from the health department, but see this as an important opportunity to disseminate credible health messaging and education to the public.

Because the internet was the most commonly cited as the preferred medium for health information, it is important to ensure that community members have computer and internet access. Duck Hill residents in the Delta region expressed the need for a computer center at the library so community members can access health information for free. Libraries can also play an important role in helping community members navigate the internet to find reliable information sources on health issues.

Ideas for Community Health Improvement

Focus group participants generated many ideas about how to strengthen community health where they live.

Make Healthy Food More Accessible and Affordable through Policy and Environmental Change

Because economic challenges were identified as a substantial barrier to health for many Mississippians, focus groups suggested ways to make healthy eating choices less cost-prohibitive. Focus group participants recommended that political leaders work to make healthy foods more affordable. One suggestion proposed by Lucedale community members was to allow SNAP (food stamp) recipients to use their benefits at the farmer's market. Focus group participants also suggested that local leaders work to attract grocery stores into neighborhoods that currently lack them and make farmer's markets more accessible by extending their hours. They also identified the need for schools and churches to develop summer feeding programs to address food insecurity among low-income children.

Increase Healthy Eating through Community Education

Focus group participants reported that health education and health promotion messaging are key components of encouraging healthy behaviors among community members. Participants requested that community organizations offer nutrition classes and that the health department share health information with the public, possibly through educational pamphlets included in citizens' utility bills to ensure a wide audience is reached.

Several focus groups recommended that the health department should increase public communication and outreach. One community resident in Meridian said, "The health department should have a bigger presence in the community, offering health education." Another resident said, "[The] health department should advertise their website and give information in one area."

Foster Economic Development

Economic development to raise the standard of living and earnings of citizens would also support good health among Mississippians. Locally, participants said that community leaders should work to attract businesses that offer decent wages and benefits, and that policymakers should foster the development of strong local businesses. They also called on policymakers to invest in education and vocational training so community members are competitive for better jobs.

Come Together as a Community

References to "coming together" as a community were threaded throughout many community focus groups across the state. Focus group participants used this language to convey that community members need to unite together to work toward solutions to community problems, and work to remove divisiveness and tension that has historically kept community members separated. Focus group participants frequently alluded to the importance of black and white communities coming together, and suggested that churches are a good forum for facilitating relationship building to foster collective, united community action.

Increase Access to Physical Activity and Recreation

Community members called for a greater number of recreational facilities and activities to make it easier for the community to stay physically active. Infrastructure to support active transportation like sidewalks and bike trails were also suggested.

Greater Communication and Fostering of Trust between Policymakers and the Public

Many focus groups reported a need for greater accountability, transparency, and responsiveness among local policymakers to build the community's trust. Many reported that elected officials often fail to follow through on the promises they made when running for office, and frequently make decisions that are contrary to the best interests of the public. Focus group participants reported that policymakers need to engage the public in dialogue to understand what residents need and want, rather than acting on what they assume residents need. Community members wanted the opportunity to express their opinions in public forums, and through additional focus groups and community conversations. Others perceived that lawmakers did engage residents in dialogue, but failed to act on voters' wishes. One resident explained, "They keep asking questions but are not doing anything about it." Focus group participants also said they wanted to see policymakers lead by example in modeling healthy behaviors and promoting community health.

A number of focus groups also talked about the lack of accountability among politicians beyond the local community, and emphasized the importance of holding lawmakers accountable for their failure to ensure that all Mississippians have access to insurance coverage and quality healthcare.

While focus group participants emphasized the need to hold policymakers accountable, others added that community members also have the responsibility to be civically engaged so their voices are heard. Residents of Marks, Mississippi stressed that in order to improve the community, the public needs to attend school board meetings, organize town hall meetings, and vote.

Increase Access to Healthcare Providers and Quality of Healthcare Facilities

Throughout all focus groups across the state, the cost of healthcare and challenges accessing medical care were raised as substantial barriers to staying healthy. Focus groups identified the need for policymakers to make health care more affordable and to assure access to insurance coverage for all Mississippi residents.

Communities also mentioned that the absence of health care providers and facilities like clinics or hospitals presented a substantial barrier that can be addressed through creation of programs that attract hospitals to the area and that incentivize healthcare providers to move to the area. Concern regarding low quality care prompted focus group participants to recommend community investment in upgrades to hospital facilities to ensure they better address the needs of the community. Participants also suggested that the health department and community organizations could offer health screenings and low cost dental and vision care to improve access for low-income and uninsured residents. Others reported that their community used to have a flu shot van that was an important community health resource, and stressed that this service should continue to be funded as many people depend on it. One community suggested that creating a local guidebook of health resources could foster awareness of health services offered in the area.

Increase Public Safety

Several focus groups throughout the state called for a stronger presence of law enforcement in their communities to increase public safety and to eliminate the problems caused by illegal drugs. On the other hand, some community members expressed the need to improve accountability to address corruption of local law enforcement, which they perceived to perpetuate community violence.

Many communities reported that people do not feel safe outside after dark, and suggested that the installation of streetlights could increase community security and encourage people to go outside. One coastal resident reported that the installation of streetlights in her community following Hurricane Katrina was a substantial boost to public safety and quality of life in her community.

Foster Personal Responsibility

At a large number of focus groups throughout the state, participants referred to the importance of personal responsibility and ownership over individual health, and recommended that this be fostered to improve health in their communities. However, focus group participants suggesting this often reported that they could not think of any ideas to propose that could accomplish this. Several groups said that personal responsibility could be fostered through encouraging people to "get back to God."

While many emphasized the importance of personal responsibility, they also acknowledged that healthy choices must be made accessible so it is possible for people to make these choices. A Booneville resident referred to the high cost of recreation and healthy foods as a "lose-lose situation. Low income families can't afford healthy options." A resident in Southeastern Mississippi explained, "People need to take individual responsibility, but they have to have the resources to be able to be healthy. If healthy foods or places to exercise are not easy to get, then people won't use them."

Foster Socialization Opportunities

Residents of many communities expressed the importance of increasing social activities to enhance community engagement, particularly emphasizing the importance of offering social programs for seniors to protect them from isolation and to keep them active and healthy.

Having adequate opportunities for youth was also a concern across communities throughout the state, which community members felt contributed to the lack of engagement of young people. A few focus groups suggested that mentorship programs could develop leadership skills and foster civic responsibility in youth.

Enhance Community Beauty

Community members also called for aesthetic enhancements to their communities, explaining that beautifying their towns would enhance quality of life and foster a sense of community pride. Communities can be beautified by creating more green space, repairing dilapidated buildings and abandoned houses, and by removing litter and pollution from the air and local waterways.

Improve Water Quality

Water quality issues were commonly voiced throughout the state, with many focus group participants expressing concern regarding the safety of their public water supplies. Improving local waterways would improve environmental health and could encourage community residents to drink more water, which is important for staying healthy.

Create a Volunteer Community Mental Health Worker Program

Many communities throughout the state identified the lack of access to mental health care as a substantial barrier to community wellbeing. Mental health care is also frequently cost-prohibitive and is not well covered even for those with good insurance. To address this problem, one community member suggested that the health department could recruit and train community health workers to deliver services such as mental health first aid and crisis resolution. These community health mental health workers could help address the growing and unmet demand for mental health care in a low cost, culturally appropriate manner.

Create a Strategic Plan for Improving the Community's Health

One focus group suggested that the health problems in their community would be best addressed through the creation of a strategic plan for improving the community's health. The strategic plan would prioritize health needs and determine how to leverage and strengthen the community's assets to support health. Participants were told that their focus group feedback will be compiled into a report that will inform the development of a State Health Improvement Plan and a local Community Health Improvement Plan.

Conclusion: Cross-Cutting Themes

Community input from the statewide survey and community focus groups revealed a variety of cross-cutting themes. Survey respondents and focus group participants reported similar perspectives on many aspects of health and quality of life in their communities.

Importance of Social and Environmental Factors in Shaping Community Health

When asked about the most important factors in shaping community health, both survey respondents and focus group participants emphasized the importance of social and environmental determinants of health. Survey respondents and focus group participants both commonly identified safety and access to quality education and good jobs as critical in contributing to community health. Survey and focus group participants also frequently referred to the importance of access to healthcare, and commonly identified lack of healthcare access as significant barrier to health in their communities.

Community Quality of Life

There were mixed perspectives on quality of life across the survey and focus group input. Iin both the survey and focus groups, participating African Americans and residents of the Delta Region were more likely to report dissatisfaction with quality of life. Focus group participants across the state reported that the most important barriers to quality of life across Mississippi include community divisiveness and tension, lack of access to resources including affordable housing, healthy food, and healthcare, lack of access to quality employment, lack of community infrastructure and recreational opportunities to support physical activity and to build social relationships, and distrust of healthcare providers. Commonly cited assets that build and strengthen community health and quality of life include accessible and affordable recreation spaces, civic and community organizations like churches and the Boys and Girls Club.

Community Participation

Just as African American survey and focus group participants were more likely to report dissatisfaction with quality of life, participating African Americans were also more likely to perceive insufficient presence and access to community resources and fewer opportunities to participate in the community. Several focus groups across the state reported perceiving differential access to community resources and civic opportunities for African Americans, and some African American focus group participants reported the perception of lacking a voice in community decision-making while the voices of white residents are heard and respected.

Both survey and focus group participants frequently reported that their communities were not sufficiently civically engaged and many reported the perception that community members were not involved in working together toward shared goals. Focus group participants frequently alluded to the need for members of their community to "come together," to reduce divisiveness and to work collectively on community improvement efforts. Churches were often cited as an ideal mechanism to build community unity and to mobilize people across the community to work toward collective action.

Most Important Health Concerns and Risky Behaviors

Chronic disease and obesity were top health concerns cited among both focus group participants and survey respondents. Participants in both the survey and focus groups identified substance abuse, poor eating habits, and lack of exercise as some of the most important risky behaviors that have a substantial detrimental impact on health in their communities.

Concerns Regarding Healthcare Access and Quality

Survey and focus group participants frequently perceived the need for greater access to health and social services in their community. Community members across the state also frequently expressed dissatisfaction with healthcare providers in their communities, though focus group participants were more likely to report negative perceptions than survey respondents. Forty-seven percent of survey respondents reported being either satisfied or strongly satisfied with the healthcare system in their community, while focus groups frequently reported dissatisfaction with the quality and access of healthcare in their communities, with several focus group participants communicating a strong distrust of healthcare providers in their communities.

The issue of insufficient access to insurance coverage and affordability of healthcare was a theme in both the focus group and survey responses. 19% of survey respondents lacked any insurance coverage. In focus groups across the state, residents emphasized the cost of healthcare as a substantial barrier, reported that high premiums, copays, and deductibles make health care cost prohibitive even for those with private insurance coverage.

Mississippi State Health Assessment: Forces of Change Report

June 2014

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Introduction

In 2014, the Mississippi State Department of Health embarked on a journey to develop a State Health Assessment (SHA) by adapting the Mobilizing for Action through Planning and Partnerships (MAPP) process. MAPP is a community-driven[38] strategic planning framework that assists communities in developing and implementing efforts around the prioritization of public health issues and the identification of resources to address them as defined by the 10 Essential Public Health Services. The MAPP process includes four assessment tools, as shown in the graphic below.

Within the MAPP process, there are four assessment tools. One of these assessment tools is the Forces of Change Assessment (FOCA). The FOCA is aimed at identifying forces – such as trends, factors, or events – that are or will be influencing the health and quality of life of the community and the work of the state public health system.

- **Trends** are patterns over time, such as migration in and out of a community or a growing disillusionment with government.

- **Factors** are discrete elements, such as a community's large ethnic population, an urban setting, or the jurisdiction's proximity to a major waterway.

- **Events** are one-time occurrences, such as a hospital closure, a natural disaster, or the passage of new legislation.

During the FOCA, participants answer the following questions:

- **What is occurring or might occur that affects the health of our state or the Mississippi public health system?**

- **What specific threats or opportunities are generated by these occurrences?**

MAPP Model, Achieving Healthier Communities
MAPP User's Handbook
http://www.naccho.org/topics/infrastructure/
MAPP_Handbook_fnl.pdf

Forces to be considered should include the following categories of influence: (1) Social, (2) Economic, (3) Political, (4) Legal, (5) Environmental, (6) Technological, (7) Scientific, and (8) Ethical. The group may also identify other categories of forces of change specific to the state.
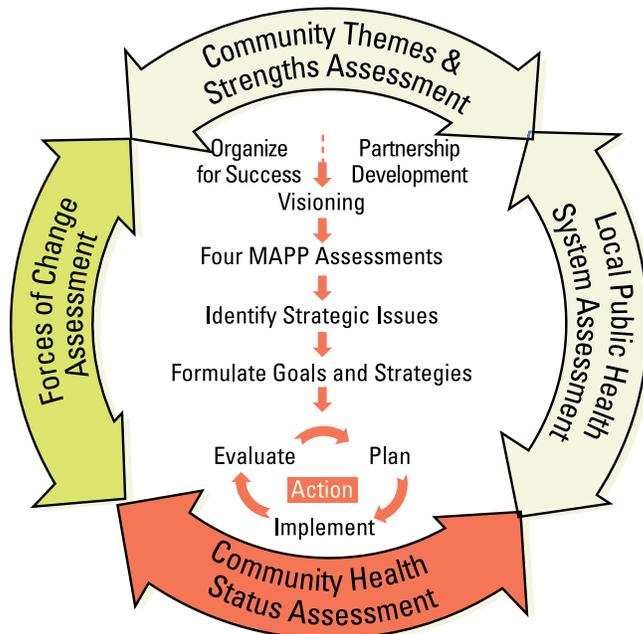
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38 For the purposes of the MAPP process, the Mississippi State Department of Health defines community broadly as the residents of the state of Mississippi and the state's partners through the state's public health system, including state and local government agencies, businesses, non-profits, academia, and other entities that influence the health and well-being of Mississippians.

Assessment Methodology

On June 5, 2014, the Mississippi State Health Assessment and Improvement Committee (MS-SHAIC) convened to participate in the Forces of Change Assessment. A neutral facilitator from the Illinois Public Health Institute guided participants through the following process:

1. The definitions and components of the Forces of Change Assessment were reviewed.

2. Flip charts for each category of influence were placed around the room.

3. The participants divided into small groups around a category of influence. A note-taker was assigned to each category of influence.

4. Each small group brainstormed and listed relevant forces of influence and accompanying threats and opportunities.

5. After a specified period of time, the small groups moved clockwise around the room to the next category of influence flip chart, where they added to the previous group's ideas. Note-takers did not rotate and served as the group historian to brief the new group on the list developed by the previous group and the rationale provided by group members for their selections.

6. This process of review and expansion of notes was repeated two more times to expose participants to multiple categories for the purpose of fully exploring each category.

7. Participants returned to the category of influence chart they started with and reviewed the additions other participants made to their original list. Participants were asked to identify the most important forces of change from their list or those that were thematic from the categories they reviewed.

8. Each small group identified a reporter for their group to share a brief summary with the large group, citing the most important forces for their category of influence and the potential threats and opportunities presented by the force. All small groups shared the summary while participants were encouraged to ask questions or add comments as needed.

Following the report-out from each group, the facilitator asked each individual participant to think about the forces from all categories as well as the themes and identify the top three forces overall. Participants were given post-it notes to record the top three forces (one force per note) and post them on the wall in the back of the room. Selections for the top forces were grouped and counted to identify the top forces based on the participant vote.

Executive Summary: Core Issues Emerging from the Forces of Change Assessment

The Forces of Change identified in this assessment represent important issues affecting Mississippi, and their potential implications on the health and quality of life of Mississippians and on the state's public health system.

The analysis of potential forces from all categories explored by the Mississippi State Health Assessment and Improvement Committee (MS-SHAIC) for the Forces of Change Assessment resulted in the following major cross-cutting themes:

Health Care System Infrastructure and Access to Care

Poverty

Environmental, Structural, and Behavioral Barriers to Health

Health Literacy and Health Education

Lack of Political and Financial Support of Public Health

Cultural Competence

Impact of Chronic Disease

Changing Demographics

Impact of Natural and Human-made Disasters

Urban/Rural Disparities

These cross-cutting themes will be described in detail on the following pages. Keep in mind that the text in this report reflects the general majority opinion of the MS-SHAIC, but may not represent the views of each of its individual members.

Cross-Cutting Forces of Change in Mississippi

Health Care System Infrastructure and Access

Shortcomings in the health care delivery system emerged as a significant issue throughout the dialogue in the FOCA. Participants expressed concern regarding the structure of the health care system, which strongly overemphasizes acute, tertiary, and individually-focused care and underemphasizes preventative, primary, and population-based care, resulting in an unhealthy population and unsustainably high health care costs.

Lack of access to health care is a critical problem for the Mississippi health care system. High rates of uninsured individuals result in limited access to primary care for many, driving up unnecessary usage of Emergency Rooms, where care is uncoordinated and very costly. Mississippi faces provider shortages that particularly impact the state's most vulnerable residents, including Medicaid recipients, the working poor, undocumented immigrants, and rural residents.

The current health care payment model presents a further challenge. Because the health care system's payment model is driven by treatment rather than prevention, wellness is underemphasized.   While primary care plays a critical role with regard to care coordination and medical homes in the health care system, low compensation and low Medicaid reimbursement rates have led to a shortage of primary care providers, which limits access to care for vulnerable Mississippians and drives the exacerbation of health conditions from preventable and easily treatable diseases to complex, chronic diseases that are very debilitating and costly. Another challenge of the health care system payment model is the high level of cost-shifting, which overburdens both hospitals and state taxpayers. Cost-shifting refers to the ways that the system covers the costs of uncompensated care for uninsured and underinsured patients. Costs are covered by programs and grants from federal, state, and local governments; charity care and pro bono work by individual providers; and hospital write-offs. Thus, there are two types of cost-shifting: (1) taxpayers fund programs and grants to cover the costs of uncompensated care, and (2) medical providers and hospitals provide charity care which may result in increased prices for insured patients.[39] Failures in our health care delivery and payment infrastructure also put pressure on the public health system to fill in gaps, which is increasingly challenging in the context of limited funding for public health. Relying on the underfunded public health system to fill these gaps also diverts funding from other important public health efforts to improve population-level health.

Given the inadequacies of the current health care delivery system and high rates of poverty that leave over 20% of Mississippians uninsured, it is particularly troubling to many participants that Mississippi has chosen not to expand its Medicaid program under the Affordable Care Act, which would provide coverage for nearly 300,000 poor Mississippians who currently lack insurance. If the state chose to expand its Medicaid program under the Affordable Care Act, the federal government would cover 100% of costs for newly covered Medicaid recipients through 2016, when states would begin picking up some of the additional costs. Eventually, federal matching will be reduced to 90% in 2020, with states covering the remaining 10% of the cost of expansion. New federal funds flowing to the state would have increased from $426 million in 2014 to $1.2 billion in 2015, providing economic stimulus through increased spending and an estimated 8,860 new jobs by 2025. However, the tax revenue generated by this growth would not offset all of the additional costs to the state budget over time.

39 Coughlin, T. A., Holahan, J., Caswell, K., & McGrath, M. (2014, May 30). *Uncompensated Care for the Uninsured in 2013: A Detailed Examination*. Retrieved August 19, 2014, from http://kff.org/report-section/uncompensated-care-for-the-uninsured-in-2013-a-detailed-examination-cost-shifting-and-remaining-uncompensated-care-costs-8596/

From 2017 onward, projections show that there would be an additional strain on the limited state funds as a result of expansion, eventually reaching an annual net fiscal impact of $96 million in the year 2025.[40] Choosing to expand Medicaid would bring many improvements for the state's residents through expanded coverage and increased jobs and spending. However, because Mississippi's current budgetary needs are greater than its available resources, the state decided not to expand its Medicaid program at this time.

While the Affordable Care Act has introduced some important reforms to the health care system and Medicaid expansion has the potential to provide coverage to many residents and create substantial cost savings for the state, it should be noted that this law still falls very short in solving many of the critical problems presented by our current health care delivery and payment system. Even if Medicaid expansion was adopted in the state, undocumented residents would still be ineligible for coverage, and would continue to rely on ERs for care, burdening state taxpayers and hospitals. Further, the Affordable Care Act does not sufficiently address low reimbursement rates for providers, meaning that many communities would continue to be challenged by a lack of access to care for their low-income and vulnerable residents.

Another issue discussed regarding the Affordable Care Act is lack of clarity regarding the legal and regulatory changes created by the law, which creates challenges for implementation of the law and uncertainty regarding the impact of the changes. Participants identified the need for the state to pursue a clearer interpretation of legal issues presented by the ACA.

Given the severity of the health and economic impacts on the state and the ethical implications of failing to provide quality health care to a substantial proportion of the population, it is clear that the broken health care system is one of the most significant challenges faced by the state. While the scope of this challenge is very broad, extending beyond the reach of the Mississippi State Department of Health, participants identified several key opportunities to limit the negative impact of our health care system's shortcomings. First and foremost, participants identified the need to clearly communicate the impact of these shortcomings to both legislators and to the public to garner support for policy changes to reform the system. Advocacy must occur at the local, state, and federal level for real change to occur. Advocating for adoption of Medicaid expansion is a critical first step to improving Mississippi's health care system. Participants also identified the opportunity to leverage the emergence of telemedicine as a potential strategy to increase access to specialty care and control costs, particularly for rural residents. Participants also stressed that further efforts should be made to improve care coordination at the system-level to reduce health care spending and improve the health status of Mississippians.

40 Center for Mississippi Health Policy Medicaid Expansion Issue Brief, November 2012 (inclusive of other sources)

Poverty

Poverty also emerged as a critical force at play in shaping the health of Mississippi residents. References to the impact of poverty were threaded throughout the dialogue and touch all other forces that emerged in the assessment. With a 22.6% poverty rate, a 32% child poverty rate, and a median household income of $36,919, Mississippi consistently ranks as the poorest state in the nation and fares the worst on many economic, health, and social indicators. Poverty is a driving force for many of the challenges the state faces and has grave implications for the health of Mississippi residents.

There are a myriad of interconnected economic, structural, and social factors that contribute to poverty in the state:

Economic factors:

- depressed economic climate that limits access to jobs with living wages and fails to attract highly skilled workers or lucrative industries to the state

- prevalence of low wage jobs that keep families at or near the poverty line and prevent them from accumulating wealth or assets that could help them achieve upward economic mobility

- high unemployment rate

- low tax revenue resulting in lack of resources to improve community infrastructure

Structural factors:

- low investment in education resulting in low literacy rate

- inadequate investment in community infrastructure and basic services that could enhance community growth

Social factors:

- high incarceration rate

- high crime rate

- inadequate investment in safety net services

- sense of fatalism

- high rate of unplanned pregnancy

These economic, structural, and social factors continue to foster disadvantages that create persistent poverty and drive disparities in income, education, health, and quality of life.

FOCA participants also perceived the role of dependence on public social services as a factor in creating a cycle of poverty, in which families have the resources merely to subsist rather than to rise above poverty. Participants discussed the sense among many in the state that poverty is a reality that cannot be changed.

Participants noted that Mississippi's persistently high poverty rate can be discouraging and that consistently scoring the worst in the nation has had a disempowering effect in itself, creating a sense of fatalism that may in turn play a role in reinforcing the persistence of poverty. In order to reverse the trend, it is important for Mississippi to take conscious action to improve economic and social wellbeing of its residents by investing in education and child development, investing in vocational training and workforce planning and development, attracting new businesses and industries to the state, and improving access to health care and other basic services.

Environmental, Structural, and Behavioral Barriers to Health

Mississippi's ranking as the worst in many of the nation's health indicators is inextricably linked with its ranking as the poorest state in the nation. While poor health is often perceived as largely the result of lifestyle choices and genetics, health is also shaped by a variety of environmental and structural factors as well.

Determinants of Health- Human Impact Partners, 2010

As the image above demonstrates, an individual's genetic predispositions and behaviors are just two factors among many that influence health. Among the spectrum of health determinants, environmental and social factors play a much broader role in determining our health by limiting the number of resources and options available to us. Substantial evidence demonstrates that the communities where we live have a significant impact on health and that people have different levels of access to the things that make us healthy depending on our social and economic standing in society.

Obesity and many chronic diseases, for example, are strongly shaped by the choices available to individuals. Families living in a neighborhood of concentrated poverty as a result of segregation may have limited access to healthy foods as grocery stores are less likely to locate in low-income neighborhoods. These families may need to travel longer distances to access fresh produce. They may also not be able to afford healthy foods, which tend to cost more than less healthy options as a result of federal agricultural policies. At the same time, neighborhoods may lack safe recreation spaces, limiting the families' abilities to play and exercise outside. The stress of living in an unsafe neighborhood can contribute to unhealthy coping behaviors, including overeating or smoking. These factors, compounded by genetic predispositions, can make families more vulnerable to developing obesity and other chronic diseases. The same forces that limit access to healthy foods and recreation can also limit access to medical care to treat these health conditions. In this way, factors at all levels along the spectrum come together to determine our health.

Just as the factors that contribute to poor health can be found all across the spectrum of health determinants, the solutions that contribute to good health can also be found along the spectrum. Continuing with the example of obesity, we can try to improve individual behaviors by educating people about the importance of nutrition and physical activity, but we can also try to shape physical and social environments to facilitate good health by investing in walkable communities, parks, and recreation centers that provide places to be physically active, and by improving access to health care so people can see doctors when they are sick. We can further promote health by creating policies that improve living and working conditions—for example, by creating policies that ensure kids have access to nutritious school lunches and that incentivize the adoption of worksite wellness programs among employers. These examples underscore the importance of policy, systems, and environmental change solutions to

health promotion. While we know that these changes are important, FOCA participants noted that the cultural and political landscape of Mississippi often emphasizes and prioritizes individual choice and liberty over the common good, which presents challenges for creating and implementing policies to improve public health. For this reason, it is important to communicate the value of public health to the public.

Health Literacy and Health Education

Low levels of health literacy throughout the state are another driving force of poor health outcome. Health literacy is defined by the U.S. Department of Health and Human Services' Healthy People as "the degree to which an individual has the capacity to obtain, process, and understand basic health information and services to make appropriate health decisions." Low levels of health literacy affect Mississippians' ability to make choices that support good health for their families, including interpreting nutrition labels at the grocery store to make healthy food purchases; understanding directions for taking prescriptions; understanding how to use health insurance, Medicare, or Medicaid benefits; and knowing where to get reliable health information.

One dimension of advancing health literacy is addressing low educational attainment and literacy rates overall in Mississippi. Another key element entails working to ensure that health information is readily available and presented in accessible and culturally appropriate formats. Easily understandable health information should be available not only in clinical settings, but also in community spaces like schools, community centers, and libraries.

Low levels of health literacy throughout many communities in Mississippi underscore the importance of health education efforts. Building public health workforce skills to communicate health information effectively is a critical step in educating the public about health issues. Creating targeted health messages to different communities and populations throughout the state is also key to successful health education. Participants identified engaging faith-based organizations and focusing on the family unit as two important strategies to address health literacy and health education improvements in Mississippi.

Lack of Political and Financial Support of Public Health

One of the biggest challenges facing the Mississippi public health system is the lack of public and political support for public health, which has translated to severe underfunding and has limited the ability of the Mississippi State Department of Health and its partners to achieve improvements in the state's health status.

Given Mississippi's poor rankings on many health and quality of life outcomes, it should follow that the state should invest heavily in infrastructure and services that help improve these outcomes and work to create policy changes that remove barriers to good health. Unfortunately, there is very little support for these efforts among voters and lawmakers. The cultural and political landscape of the state, which largely emphasizes personal liberty and limited government intervention, limits Mississippi's ability to create positive changes for its citizens, even as the state's poor economic climate makes these changes so necessary.

Because the state's economic climate is so poor, Mississippi's government is challenged by low tax revenue to support state governmental services. While significant efforts are underway to more effectively distribute state funds, needs greatly exceed resources in most if not all areas of government involvement. FOCA participants expressed serious concern about crumbling infrastructure, including roads, bridges, and water systems. The lack of access to essential services and critical community infrastructure like clean water, roads, and safe housing presents serious challenges to the basic health and wellbeing of Mississippians. These challenges are compounded by low wages, lack of access to affordable childcare, quality education, and health care.

Even as the state struggles with high rates of uninsured individuals and struggles to make basic health care accessible for vulnerable populations, Mississippi has failed to adopt Medicaid expansion, despite the economic and health benefits it would generate for the state.

The Mississippi State Department of Health faces challenges to address serious health problems as its budget does not keep up with increasing public health needs. At the same time, the Department is required to meet unfunded mandates that compete for the resources used in the provision of critical health services for Mississippians that could prevent illness and loss of life. In addition to competing for limited resources, the public health community has difficulty achieving its policy goals because of a political climate that favors personal liberties and limited government over evidence-based interventions and programs. These challenges are further exacerbated by federal austerity measures, which have reduced the availability revenue that has traditionally been used to fill the gaps of the state's safety net.

Underfunding and undervaluing public health has had grave consequences for the citizens of Mississippi, and will continue to pose a serious threat to the state. FOCA participants emphasized the need to improve communication with legislators and the public to articulate the critical role and importance of public health.

Cultural Competence

Cultural competence appeared as a theme across several of the categories explored by the groups during the Forces of Change Assessment. Cultural competence, defined as a set of behaviors, attitudes, and policies that come together in a system, agency, or among professionals and enable that system, agency, or those professionals to work effectively in cross-cultural situations[41], is recognized as an essential component for meeting the health care needs of Mississippi's diverse citizenry with a growing population of minorities and immigrants (particularly Hispanics). Among the defined elements that contribute to a system or agency's ability to become more culturally competent are the ability to value diversity and having developed service delivery that reflects an understanding of cultural differences.

The group clearly acknowledged Mississippi's challenges in incorporating these elements into its health care systems. In discussions on health literacy, behavioral barriers to health, changing demographics, health care system infrastructure, and access to care, the need to respect and respond to cultural diversity and its impact on improved health care emerged as important issues. Addressing the many factors that surround the state's changing demographics and the associated views on provision of health care for minorities, including those who are undocumented, requires the practice of cultural sensitivity and respect.

Furthermore, the principal standard of the National Culturally and Linguistically Appropriate Services Standards (CLAS) recommends a provision of effective, equitable, understandable, and respectful quality care and services that are responsive to diverse cultural health beliefs and practices, preferred languages, health literacy, and other communication needs[42]. The groups expressed that consideration of language limitations and adapting the cultural context of health messages become necessary when addressing health literacy in minority populations.

41 Cross, T., Bazron, B., Dennis, K., & Isaacs, M., (1989). *Towards A Culturally Competent System of Care, Volume I.* Washington, DC: Georgetown University Child Development Center, CASSP Technical Assistance Center.

42 info@minorityhealth.hhs.gov

Additionally, improvements in Mississippi's health care require a greater understanding of and attention to the culturally-rooted health practices, attitudes, and beliefs that far too frequently impede adoption of healthy lifestyles that lead to better health outcomes.

Impact of Chronic Disease

Chronic diseases such as diabetes and heart disease are among the most pressing health concerns in Mississippi. High rates of chronic disease across the state are detrimental not only to health and quality of life of Mississippians, but also hurt economic growth by limiting workforce productivity and by increasing state health care spending.

As presented previously, a complex constellation of social, environmental, behavioral, and genetic factors contribute to the prevalence of chronic disease in many communities across the state. In 2011, 69% of Mississippi adults were overweight or obese, 23% were smokers, and over 20% were uninsured[43]. These risk factors can be prevented though public health interventions. Helping Mississippians to eat well, live active lives, and avoid tobacco use and ensuring access to quality preventative care can significantly reduce the burden of chronic disease in the state.

FOCA participants identified several key policy, systems, and environmental change opportunities to address chronic disease in communities throughout the state. Access to healthy foods can be increased by incentivizing healthy food purchases for SNAP (food stamps) users and by addressing food deserts through creating farmers' markets and encouraging the building of grocery stores. Mississippi can support active living across the state by adopting policies that increase access to physical education for school children and by building walkable communities. Tobacco use can also be reduced through statewide legislation and community-level smoking bans.

Changing Demographics

Demographic shifts are another driving force of change in Mississippi. FOCA participants identified several populations that are growing in communities across the state:

Increasing Latino Population:

While Latinos comprise a relatively small percentage of the state's population, the population of Latinos in Mississippi has more than doubled since 2000. While FOCA participants identified the increasing Latino population as a substantial opportunity for economic and workforce growth, they also noted that the relatively rapid increase may pose a threat if communities still lack linguistically and culturally appropriate services for this new growing population.

Increasing Population of Incarcerated Individuals and Parolees:

As a result of high incarceration rates in Mississippi and across the country, incarcerated individuals and parolees now comprise a substantial portion of Mississippi's population. Mississippi has the second highest incarceration rate in the country, with over 22,000 currently in custody and nearly 40,000 currently on parole[44]. Growing incarceration rates present a substantial strain on the state's budget, costing Mississippi over 339 million dollars in

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43 *Mississippi: Burden of Chronic Diseases.* Mississippi State Department of Health, 2011.

44 Mississippi Department of Corrections, 2012

2013. The Mississippi Department of Corrections projects that these costs will continue to increase as the inmate population rises. This poses a substantial threat to the state because the need to finance Mississippi's growing incarcerated population results in diversion of funds from other state needs, including public health spending.

The growing incarceration rate also demonstrates a disconcerting national trend toward using the prison system to house individuals who could be better served by a mental and behavioral health safety net system. In the absence of such a safety net, many individuals are incarcerated rather than receiving treatment or supportive services, which could be more appropriate and cost-effective. Mississippi has an opportunity to shift investment away from the correctional system by funding the public health system to properly address mental and behavioral health issues.

Increasing Undocumented Workers:

There are about 45,000 undocumented workers in Mississippi, according to estimates by the Pew Hispanic Center. This population is difficult to estimate accurately, making it a challenge to appropriately address their health needs. Participants noted that their status as undocumented individuals makes this population very vulnerable because they cannot receive government services. This in turn puts pressure on the health care system, which cannot be reimbursed for providing care to undocumented individuals.

Population Loss and Aging Rural Communities:

Population loss is a concern in some rural Mississippi communities. As the population falls in these communities, the median age is increasing. This is a potential concern if these communities lack the appropriate supportive services for an aging population and lack working-age adults who can drive economic growth in these areas.

Impact of Natural and Human-made Disasters

Natural and human-made disasters have had a substantial health and economic impact on Mississippi in recent years. Hurricane Katrina in 2005 and the BP Oil Spill in 2010 caused significant economic loss and severe environmental damage in addition to grave impact on public health, from which the state is still recovering.

Participants noted that the state's economic climate makes Mississippi particularly vulnerable in disasters because it cannot adequately prevent or repair damages when disasters occur. They also noted that high poverty and unemployment rates result in many Mississippi families being more vulnerable to disaster as well, and less able to protect themselves or recover from the economic and health impact of disasters.

Because natural and human-made disasters certainly pose substantial threats to Mississippi, FOCA participants identified the need to invest in emergency preparedness infrastructure to minimize damage, injury, and loss of lives when disasters occur. They also noted that one opportunity presented by disasters is the chance to build communities back better and stronger. Rebuilding communities after disasters offers the opportunities for the community to think about how to structure the built environment in a manner that promotes good health and fosters economic growth.

An additional threat discussed by participants is the potential impact of climate change, which has contributed to droughts across the country, leading to increasing food prices. Rising food prices make it harder for families to afford healthy food, such as fresh fruits and vegetables. This threat underscores the need to promote sustainable agricultural practices and regulations to protect the environment.

Urban/Rural Disparities

A final theme that surfaced throughout the Forces of Change Assessment was concern related to disparities among urban and rural communities. In the context of diminishing economic resources at the state level, rural communities are at a disadvantage for receiving the funding they need to build and maintain critical infrastructure and services.

Rural areas are also challenged by reduced access to health care. Shortcomings in the health care payment structure, increasing gaps in coverage and inadequate reimbursements are an increasing burden to rural hospitals, threatening closure of needed healthcare facilities. Many rural areas also face physician shortages, particularly among specialists. To address this shortage, FOCA participants suggested increasing recruitment incentives to encourage doctors to practice in rural communities, including scholarships and debt forgiveness. Another potential solution to increasing access to care in the context of provider shortages is the use of telemedicine, though some participants expressed concerns regarding effectiveness and care quality of telemedicine.

Conclusion: Cross-Cutting Themes throughout the Forces of Change Assessment

The forces of change identified by the members of the Mississippi State Health Improvement Committee represent key issues that will have important implications for the state public health system and the health and quality of life of Mississippians.

The core issues that emerged as priorities in this assessment include:

- **Health Care System Infrastructure and Access to Care**
- **Poverty**
- **Environmental, Structural, and Behavioral Barriers to Health**
- **Health Literacy and Health Education**
- **Lack of Political and Financial Support of Public Health**
- **Cultural Competence**
- **Impact of Chronic Disease**
- **Changing Demographics**
- **Impact of Natural and Human-made Disasters**
- **Urban/Rural Disparities**

Throughout the assessment dialogue, several key cross-cutting themes emerged as issues driving the forces of change. Poverty and lack of access to the resources people need to thrive are root causes of many of the challenges Mississippi faces, including the growing prevalence and cost of chronic disease, rising incarceration rates, diminished economic mobility, and low literacy. These issues point to the critical role of the social determinants of health in shaping health and life outcomes.[45] The health challenges Mississippi faces are compounded by a lack of public and political support for public health, depriving the state's public health system of the funding necessary to create improvements to the health status of Mississippians. Gaps in health care system infrastructure further contribute to poor health outcomes, particularly in rural areas, where access to care is exacerbated by provider shortages. The current economic climate and limited government infrastructure make Mississippi particularly vulnerable when natural and human-made disasters occur, as in the case of Hurricane Katrina and the BP Oil Spill.

Ensuring that all Mississippians have access to clean water, nutritious food, health care, and education are critical first steps to improving health and social outcomes for the state. Articulating the critical role of the social determinants of health and the value of public health must be priorities for the Mississippi state public health system moving forward.

45 The Centers for Disease Control and Prevention defines social determinants of health as the circumstances in which people are born, grow up, live, work, and age, as well as the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics.

Appendix 1: FOCA Worksheet

What are Forces of Change?

Forces are trends, factors, or events that are or may be influencing the health and quality of life of the community and the work of the local public health system assessment.

Trends are patterns over time, such as migration in and out of a community or a growing disillusionment with government.

Factors are discrete elements, such as a community's large ethnic population, an urban setting, or a jurisdiction's proximity to a major waterway.

Events are one-time occurrences, such as a hospital closure, a natural disaster, or the passage of new legislation.

How to Identify Forces of Change

1. Use the questions below to help spur ideas of specific factors, trends, or events that are or may likely affect the local public health system or community.

2. What has occurred recently or may occur in the future that will likely affect our public health system or state?

3. Are there any trends occurring that will have an impact? Describe the trends.

4. What forces are occurring locally? Statewide? Regionally? Nationally? Globally?

5. What characteristics of our state may pose an opportunity or threat?

6. What may occur or has occurred that may pose a barrier to achieving the shared vision?

7. During other MAPP activities or discussions, what potential threats or opportunities were discussed that should be considered?

What Kind of Areas or Categories Are Included?

Forces of change typically emerge in the following categories:

• social

• economic

• political

• technological

• environmental

• scientific

• legal

• ethical

Forces of Change Brainstorming Worksheet

Forces of Change (Trend, Events, Factors)	Potential Threats Posed to the PHS or Community (State)	Potential Opportunities Created to the PHS or Community (State)	Questions/More Info Needed
Example: Rapidly growing Latino population in two health districts	Lack of culturally relevant health information; lack of Spanish speaking providers and limited forms in Spanish	Enriching the diversity of our community; partnership with other organizations to update materials	What language services are provided by hospital that may be able to be leveraged?

2014 Mississippi State Public Health System Assessment

Prepared by the Illinois Public Health Institute

Table of Contents

Introduction

In 2014, the Mississippi State Department of Health embarked on a journey to develop a State Health Assessment (SHA) by adapting the Mobilizing for Action through Planning and Partnerships (MAPP) process. MAPP is a community-driven[46] strategic planning framework that assists communities in developing and implementing efforts around the prioritization of public health issues and the identification of resources to address them as defined by the 10 Essential Public Health Services. The MAPP process includes four assessment tools, as shown in the graphic below.

The Mississippi State Public Health System Assessment (SPHSA) was conducted on October 2, 2014, as one of the four assessments in the Mississippi Mobilizing for Action through Planning and Partnerships (MAPP) Collaborative process. The SPHSA included 112 participants from across the state representing many different groups and organizations (see "Appendix A") assessing the system of public health in Mississippi, defined as the collective efforts of public, private and voluntary entities, as well as individuals and informal associations that contribute to the public's health within a state. This Assessment document reflects the comments made by the participants in the group discussions around each of the Essential Services.

The SPHSA, described in detail in the following sections, is used to understand the overall strengths and weaknesses of the public health system based on the 10 Essential Public Health Services. Results from the SPHSA will be analyzed with the reports from the other three assessments in the MAPP process, which include the Community Health Status Assessment (CHSA), Community Themes and Strengths Assessment (CTSA), and the Forces of Change Assessment (FOCA). Strategic analysis of these assessment results will inform the identification of prevailing strategic issues, which will be prioritized. Goals and action plans will be developed for each of these priority issues. These action plans will be implemented and aligned to improve the state public health system and ultimately the health and wellbeing of Mississippi residents.
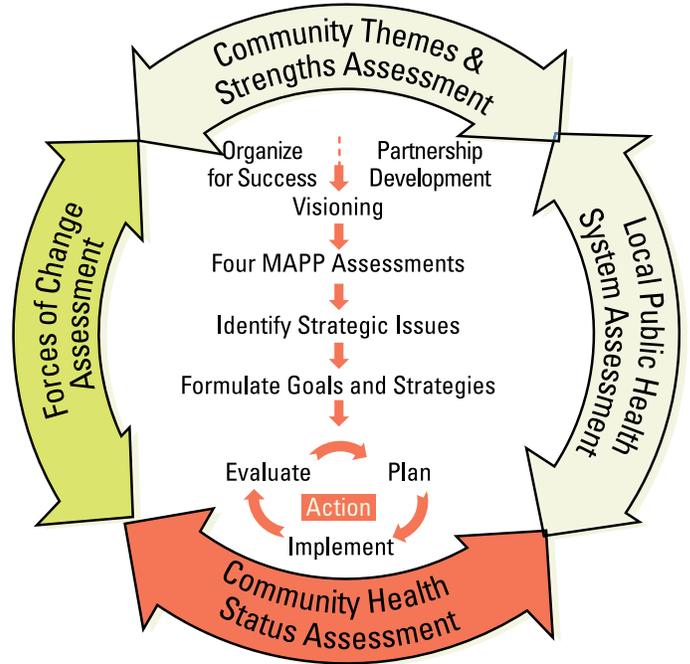
46 For the purposes of the MAPP process, the Mississippi State Department of Health defines community broadly as the residents of the state of Mississippi and the state's partners through the state's public health system, including state and local government agencies, businesses, non-profits, academia, and other entities that influence the health and well-being of Mississippians.

Executive Summary: Cross-Cutting Themes from the Mississippi State Public Health System Assessment

Mississippi's first State Public Health System Assessment revealed a number of cross-cutting themes that arose in dialogue across each breakout group:

Workforce

Participants in every essential service discussion identified workforce capacity as a critical area for improvement. Participants described the current public health workforce as dedicated and highly skilled, and also reported system-wide staffing shortages that impede optimal performance in delivering the 10 Essential Services. Lack of funding is a driving factor in workforce shortages, contributing to the prevalence of unfilled vacancies as well as low salaries and minimal advancement opportunities that make it challenging for the public health system to recruit and retain highly skilled workers. Participants recommended greater investment in workforce development efforts, citing the need for a collective public health workforce plan to address gaps in personnel and skills across the Mississippi public health system. Epidemiology, biostatistics, evaluation, and cultural competency skills were identified as areas to prioritize for training and skill development. Professional licensure and certification was also cited as an area where improvement can be made. Participants referred to the licensure process for nurses as a best practice example to potentially replicate for other health professionals.

Short term opportunities for improving Mississippi's public health workforce include conducting a system-wide workforce assessment based on core public health competencies and increasing training opportunities for the population-based health workforce. Over the long term, participants recommended using workforce assessment data to inform the creation of a collective public health workforce development plan.

School of Public Health

Participants reported that although there are existing public health degree programs in the state, the absence of an accredited school of public health in Mississippi is a significant gap in the state public health system. Participants perceived that a school of public health could serve an important coordinating function within the public health system, leading workforce development efforts and the development of a coordinated public health research agenda for the state. Participants identified the establishment of a school of public health as an important long term goal for the state public health system.

Emergency Preparedness and Response

Emergency preparedness was highlighted throughout essential service discussions as one of the state public health system's greatest strengths. Recent disasters like Hurricane Katrina and the BP Oil Spill have provided the system with substantial experience in planning for and mitigating health emergencies, and the state has received national recognition for its performance in disaster response.

Mississippi excels in crisis response because the system has robust emergency preparedness plans in place and because partners maintain strong relationships that allow them to quickly mobilize resources and manpower. The system has also been effective in assuring resources go to the local level, providing technical assistance to communities to develop their own emergency response plans that align with state-level plans. When a disaster occurs, the state public health system works in concert with the local community to mobilize resources and surge capacity to target areas and vulnerable populations with the highest needs.

Mississippi's emergency response activities are also a leading example of quality improvement for the public health system. Partners regularly convene to review emergency plans and to conduct drills and exercises which inform the allocation of training and other resources to further strengthen the system's planning and response capacity.

One key asset that Mississippi can leverage in the event of a disaster or eminent threat is the state's great culture of generosity and volunteerism. Participants reported that Mississippians are willing to give of their time and money to help community members in times of trouble, which helps communities recover from crises more quickly.

One area of emergency response that can be improved upon is allocating adequate resources to long-term recovery after disasters occur. Participants report that while the system does a good job of helping communities immediately following a disaster, communities affected by disasters also face long-term economic and social impacts, which are more difficult and resource-intensive to address. These communities need access to safe and secure housing and stable jobs to facilitate true recovery. Coastal communities, which have been disproportionally affected by disasters in recent years, are particularly in need of sustained investment to help rebuild the economy and community infrastructure to foster long-term health and wellbeing.

Culture of Health

Across essential service dialogues, participants noted that health messaging and programming in Mississippi have traditionally emphasized management or prevention of specific diseases, rather than promoting good health in general to prevent the onset of disease. However, participants called for a shift in the public health system's approach to health promotion toward building a culture of health that fosters holistic wellness for the whole population.

In the context of limited resources for health promotion and disease prevention, the most effective way to improve the health of the state is to work together as a system to build healthy communities that foster wellbeing for all, and where everyone has the opportunity and resources to make healthy choices. Policy, systems, and environmental change strategies are critical to build healthy communities.

Smoking Cessation

Another area of great strength for Mississippi's public health system is the success of tobacco prevention and control efforts across the state. Participants throughout the essential service discussions referred to the state's tobacco control program as a best practice example for health communication and messaging, use of evidence-based strategies including policy and environmental change, and use of evaluation to measure impact.

One of the great keys to success for tobacco control efforts has been sustained funding over 15 years, which has allowed the public health system to create a lasting impact in reducing tobacco use rates among adolescents and thereby improve health outcomes for Mississippians. Tobacco control efforts are an example of the impact that is possible when public health programs have adequate funding over the long term.

Chronic Disease

A critical area of weakness for Mississippi's public health system is the prevalence and severity of obesity and chronic disease. Participants described that while these conditions have reached a crisis level, constituting a substantial financial burden to the state and having a serious detrimental effect on quality of life and life

expectancy for Mississippi residents, Mississippi has failed to respond in accordance with the level of severity. Participants attributed the lack of action to address chronic disease as partially the result of a culture of complacency, in which Mississippi residents may acknowledge that these health problems are important, but they may not view them as urgent or changeable. An even larger problem beyond cultural attitudes is the lack of funding available to the public health system to appropriately address and prevent chronic disease. Chronic disease is best prevented through changing environments and policies to facilitate good health, including building safe, walkable communities, ensuring access to preventative health care, and ensuring access to affordable healthy food options. These changes cannot be accomplished without substantial financial resources and public support. Participants reported that these methods have proven effective in addressing childhood obesity, an area where improvement is being made in Mississippi. Participants called for continued focus fostering good health among Mississippi youth to prevent chronic diseases before they develop in this population.

Social Determinants of Health

Throughout the assessment, participants referred to the important role of the social determinants of health in shaping health outcomes and quality of life for Mississippians. Educational attainment, housing safety and stability, income, and job security are all critical forces in determining people's health. Mississippians who live in poverty and lack access to good jobs, education, and safe housing are less likely to be healthy. Participants stressed that addressing the social determinants of health is critical to effecting change in the population's health status.

Funding

Participants continually referred to funding shortage as a critical barrier to optimal performance in all of the essential public health services. They reported that system partners are highly reliant on grants to fund their work, but the time-bound and highly specific nature of grant funding streams can be an impediment to building a sustainable, high-performing public health system, encouraging the creation of silos and initiating programs that end before they can make a sustainable long-term impact. Participants acknowledged that while grants have traditionally hindered rather than rewarded collaboration and partnership, funders are increasingly recognizing the importance of partnerships to create sustainable change and are beginning to require that grantees have strong partnerships in place as well as sustainability plans to carry on work after the grant period has ended. Participants reported that sustainability planning should become common practice whenever a new grant is secured, and recommended that the public health system should start treating grant funding as seed money, and look to other forms of funding to sustain work when a grant has ended. Participants suggested that the system should leverage the state's culture of generosity to encourage charitable giving to support community-based health improvement work.

Data Sharing

Participants throughout the assessment noted that while partner organizations individually collect a lot of data, they lack the technological capacity to share this data effectively through information management systems. As a result, many individual organizations and agencies are trending and studying their own data rather than pooling all available data across the system together to get a fuller, more accurate picture of health status. Another issue is that while some organizations do a good job of trying to share their data, the system is not always aware that this data is available. For example, state agencies in Mississippi collect a lot of data that is available through their websites, but participants frequently reported either lack of awareness about the availability of this data or lack of understanding regarding how to access and interpret this data.

Health Literacy and Cultural Competency

Health literacy was frequently referenced throughout the assessment discussions as an area where improvement is needed. Participants perceived low levels of health literacy among Mississippi residents, and expressed concern that health promotion messaging cannot effectively reach people if it is not tailored appropriately. Participants emphasized that health information should not only be presented at an appropriate reading level, but should also be translated for communities with limited understanding of English and modified to be culturally sensitive when necessary.

Beyond fostering an understanding of how to prevent disease and stay healthy, another critical area where health literacy must be increased is in accessing the healthcare system. As many communities are now gaining access to insurance for the first time through the Affordable Care Act, many people may not understand how to properly navigate the health care system, particularly when accessing preventive or urgent care. The public health system must help these newly covered populations to appropriately use their health insurance.

Mental Health

Mental health is an area in need of substantial improvement for both the state and national public health systems. Participants reported that mental health is often siloed and separated from both public health and healthcare rather than being treated as one part of a person's overall wellbeing. Participants attributed this to policies separating mental health care from primary care, and to the separation of mental health and public health at the agency level in Mississippi's state government. This separation prevents proper treatment and continuity of care at the personal healthcare level, and data-sharing and proper alignment at the population health level. Participants called for a broad definition of health encompassing physical, social, and mental wellbeing at the population level, and integrated primary care and mental health services at the personal healthcare level.

Coordination and Alignment

The need for greater coordination and alignment of efforts was a recurring theme throughout the State Public Health System Assessment. While there are a lot of good relationships in place among organizations throughout the public health system, many of these relationships have not been formalized into partnerships. Many silos, gaps, and redundancies exist throughout the system as a result of the targeted nature and limited scope of many funding streams. Participants emphasized the need to come together to increase action as a collective system to maximize impact on advancing health for Mississippians.

The Assessment Instrument

The National Public Health Performance Standards (NPHPS) Assessment measures the performance of the state public health system -- defined as the collective efforts of public, private, and voluntary entities, as well as individuals and informal associations that contribute to the public's health within a state. This may include organizations and entities such as the state health department, other governmental agencies, healthcare providers, human service organizations, schools and universities, faith institutions, youth development organizations, economic and philanthropic organizations, and many others. Any organization or entity that contributes to the health or wellbeing of the state is considered part of the public health system. Ideally, a group that is broadly representative of these public health system partners will participate in the assessment process. By sharing their diverse perspectives, all participants will gain a better understanding of each organization's contributions, the interconnectedness of activities, and how the public health system can be strengthened. The NPHPS does not focus specifically on the capacity or performance of any single agency or organization.

The instrument is framed around the **10 Essential Public Health Services (EPHS)** that are utilized in the field to describe the scope of public health. For each essential service in the state instrument, there are four model standards: Planning and Implementation, State-Local Relationships, Performance Management and Quality Improvement, and Public Health Capacity and Resources. For each model standard, there are a series of questions, or performance standards, to explore and score overall public health system performance in the state.

Performance standards are scored by participants to assess system performance on the following scale:

Optimal Activity (76-100%)	The public health system is doing absolutely everything possible for this activity and there is no room for improvement.
Significant Activity (51-75%)	The public health system participates a great deal in this activity and there is opportunity for minor improvement.
Moderate Activity (26-50%)	The public health system somewhat participates in this activity and there is opportunity for greater improvement.
Minimal Activity (1-25%)	The public health system provides limited activity and there is opportunity for substantial improvement.
No Activity (0%)	The public health system does not participate in this activity at all.

NPHPS results are intended to be used for quality improvement purposes for the public health system and to guide the development of the overall public health infrastructure. Analysis and interpretation of data should also take into account variation in knowledge about the public health system among assessment participants; this variation may introduce a degree of random non-sampling error.

The Assessment Methodology

The assessment retreat was held on October 2 and began with a plenary presentation to welcome participants, provide an overview of the process, introduce the staff, and answer questions. Following the presentation, participants moved to break-out groups for discussion and scoring work for two assigned essential services areas. (Prior to the retreat, participants chose which group they would like to contribute to, or if they did not choose, were assigned to one of five groups based on the diagram below.)

State Public Health System Assessment Breakout Groups	
Group	**Group Responsibilities**
A	EPHS 1 – Monitor health status to identify community health problems EPHS 2 – Diagnose and investigate health problems and health hazards in the community
B	EPHS 3 – Inform, educate, and empower people about health issues EPHS 4 – Mobilize community partnerships to identify and solve health problems
C	EPHS 5 – Develop policies and plans that support individual and community health efforts EPHS 6 – Enforce laws and regulations that protect health and ensure safety
D	EPHS 7 – Link people to needed personal health services and assure the provision of health services EPHS 9 – Evaluate effectiveness, accessibility and quality of personal/population-based health services
E	EPHS 8 – Assure a competent public and personal health care workforce EPHS 10 – Research for new insights and innovative solutions to health problems

Each group was professionally facilitated, recorded, and staffed by note takers. The program ended with a plenary session where highlights were reported by members of each group. Event organizers facilitated the end-of-day dialogue, outlined next steps, and analyzed and reported assessment findings to the Mississippi State Health Assessment and Improvement Committee (SHAIC) and retreat participants.

Assessment Participants

**What is occurring or might occur that affects the health
of our state or the public health system?**

What specific threats or opportunities are generated by these occurrences?

The Mississippi SHAIC developed a list of agencies to be invited to participate in the full day assessment retreat. The event organizers carefully considered how to balance participation across sectors and agencies and how to ensure that diverse perspectives as well as adequate expertise were represented in each breakout group.

The event drew 112 public health system partners that included public, private and voluntary sectors. The composition of attendees reflected a diverse representation of partners that was apportioned as follows:

Constituency Represented	Total Attended
Businesses	2
Coalitions	2
Colleges and Universities	5
Community-Based Organizations	5
Federal Government	1
Hospitals/Health Systems	12
Insurance Providers	1
Local Government	2
Non-profit & Advocacy	40
State Government	11
State Health Department	30
Tribal Government	1

Results of the Mississippi State Public Health System Assessment

The table and graph below together provide an overview of the state public health system's performance in each of the 10 Essential Public Health Services.

Summary of Essential Public Health Service Scores

EPHS	EPHS Description	2014 Score	Overall Ranking
1	Monitor health status to identify community health problems.	50 (Moderate)	4th (tie)
2	Diagnose and investigate health problems and health hazards in the community.	65 (Significant)	2nd
3	Inform, educate, and empower people about health issues.	51 (Significant)	3rd
4	Mobilize community partnerships to identify and solve health problems.	43 (Moderate)	6th
5	Develop policies and plans that support individual and community health efforts.	50 (Moderate)	4th (tie)
6	Enforce laws and regulations that protect health and ensure safety.	66 (Significant)	1st
7	Link people to needed personal health services and assure the provision of health services.	31 (Moderate)	9th
8	Assure a competent public and personal health care workforce.	39 (Moderate)	7th
9	Evaluate effectiveness, accessibility, and quality of personal/population-based health services.	36 (Moderate)	8th
10	Research for new insights and innovative solutions to health problems.	23 (Minimal)	10th

Overall State Public Health System Performance Score ....45 Moderate

The table above provides a quick overview of the system's performance in each of the 10 Essential Public Health Services. Each EPHS score is a composite value determined by the scores given by participants to those activities that contribute to each essential service. The scores range from a minimum value of 0% (no activity is performed pursuant to the standards) to maximum of 100% (all activities associated with the standards are performed at optimal levels).

The chart below provides a graphic representation of Essential Public Health Service scores based on the scoring options:

Optimal Activity (76-100%)	The public health system is doing absolutely everything possible for this activity and there is no room for improvement.
Significant Activity (51-75%)	The public health system participates a great deal in this activity and there is opportunity for minor improvement.
Moderate Activity (26-50%)	The public health system somewhat participates in this activity and there is opportunity for greater improvement.
Minimal Activity (1-25%)	The public health system provides limited activity and there is opportunity for substantial improvement.
No Activity (0%)	The public health system does not participate in this activity at all.

Highest Ranked: Essential Public Health Service 6, Enforce Laws and Regulations that Protect Health and Ensure Safety, received a cumulative score of significant activity (66).

Lowest Ranked: Essential Public Health Service 10, Research for New Insights and Innovative Solutions to Health Problems, received a cumulative score of minimal activity (23).

Overall Performance: The average of all Essential Public Health Service scores resulted in a cumulative score of moderate activity (45).

Scores and Common Themes for each Essential Public Health Service

The following graphs and scores are intended to help the Mississippi State Public Health System gain a better understanding of its collective performance and work toward strengthening areas for improvement. For each Essential Service and Model Standard there is a bar graph depicting each Model Standard average and a cumulative rating score, discussion themes, and a summary of strengths, weaknesses, and opportunities for immediate and long-term improvement.

Essential Service 1:
Monitor Health Status to Identify Community Health Problems

Participant dialogue to assess performance for Essential Public Health Service 1 explored the following key questions:

- **What's going on in our state?**
- **Do we know how healthy we are?**

Monitoring health status to identify community health problems encompasses the following:

- Assessment of statewide health status and its determinants, including the identification of health threats and the determination of health service needs

- Analysis of the health of specific groups that are at higher risk for health threats than the general population

- Identification of community assets and resources that support partner organizations in the state public health system in promoting health and improving quality of life

- Interpretation and communication of health information to diverse audiences in different sectors

- Collaboration in integrating and managing public health related information systems
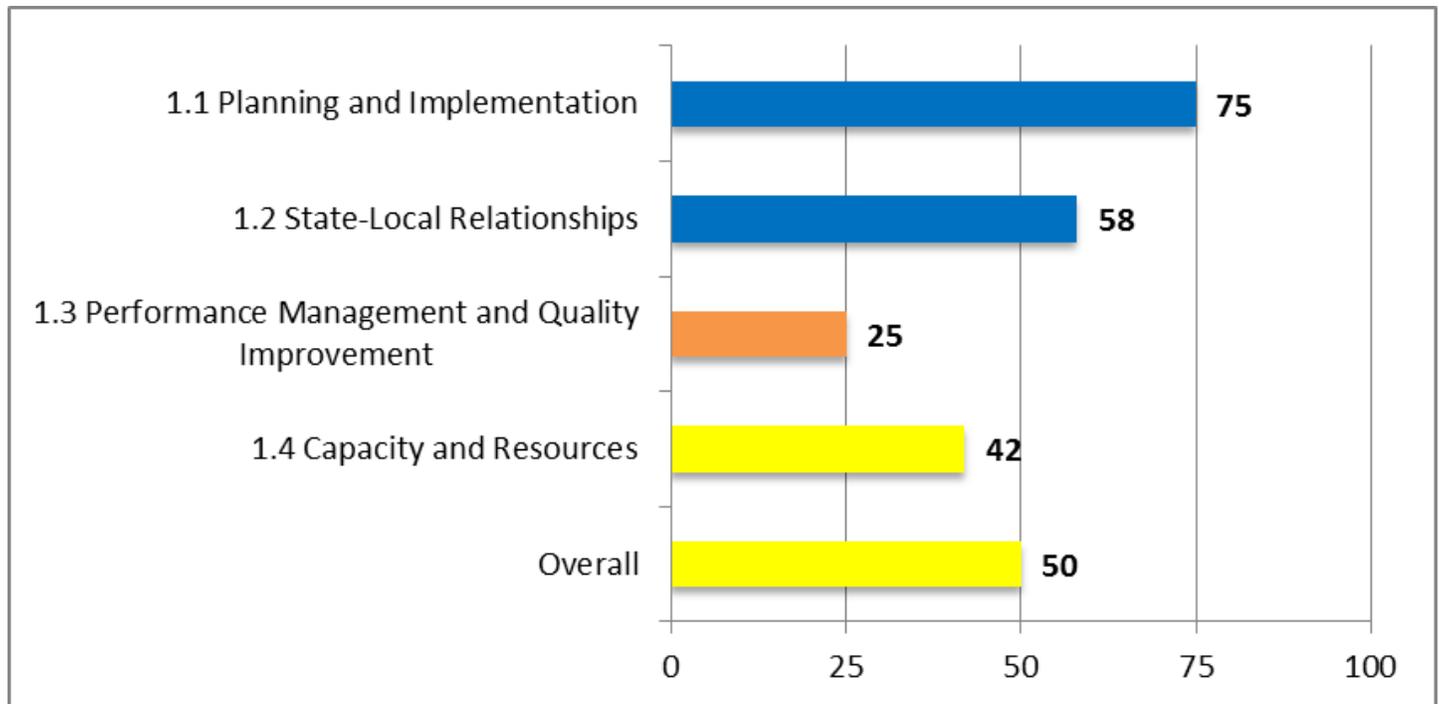
Overall performance for Essential Service 1 was scored as significant. Model Standards 1.1 (Planning and Implementation) and 1.2 (State-Local Relationships) scored in the significant range, Model Standard 1.3 (Performance Management and Quality Improvement) scored as a high minimal, and Model Standard 1.4 (Capacity and Resources) scored in the moderate range. Performance for Essential Service 1 was tied with Essential Service 5 for fourth and fifth out of the 10 Essential Services.

Essential Service 1 Summary

Planning and Implementation

In the dialogue around the public health system's performance in monitoring health status to identify community health problems, participants described a relatively robust data collection system, with good tracking systems in place for vital statistics, infectious diseases, and behavioral risk factors. Participants also reported a recent collaborative effort between the Mississippi Department of Health and the Mississippi Hospital Association to begin collecting inpatient and outpatient hospital discharge data. Participants discussed some limitations of data collection and monitoring in the state, including the lack of mental health, crime, and domestic violence surveillance data, the lag time in data reporting, and challenges with getting accurate ground level data at the local level in rural counties due to small population size. Another concern expressed by participants is the accessibility of the health data that the state collects. While the state makes this data available online, it is rarely actively communicated or disseminated to partners, so partners may not be aware of these data resources. Participants reported that increasing timeliness of data reporting should be a priority moving forward, as the lack of timely data has compromised partners' ability to apply for grants. Other suggestions for improvement included increasing user-friendliness of databases so accurate data is easier to find and navigate for both public health professionals and laypeople, and creating a centralized data repository that different state agencies and partners could contribute to, which would help draw connections to the social determinants of health.

State-Local Relationships

Participants discussed the mechanisms in place for state level partners to assist local public health systems in accessing and interpreting health data. Participants reported a number of state-level partners that do an excellent job of making data accessible and useful for local communities, including medical partners, the American Heart Association, and the state's tobacco prevention project. These partners engage communities on a grassroots level by presenting and translating data to the local context, turning health data into information that can be used to mobilize for community health improvement. Participants reported that after many years of effort in this area, Mississippi's public health system appears to be gaining momentum and reaching a tipping point where grassroots efforts are becoming successful. Participants cited the example of the state's efforts to mobilize community partners across Mississippi to reduce early elective deliveries, which resulted in changes to insurance and Medicaid policies, leading to better birth outcomes and substantial cost savings for the state.

Participants cautioned, however, that there are still many partners missing in this work that fall beyond the traditional scope of health but have data that would be very relevant in helping local partners understand social determinants of health in their communities. As previously mentioned, data sharing among many partners occurs on a passive basis rather than through active and intentional dissemination. Health department partners noted that districts are addressing the challenge of gaps in local data by conducting community health assessments, which will help jurisdictions to drill data down to a more granular level that they can use to inform local public health interventions. Local district representatives reported a cultural shift toward greater emphasis on health assessment and community health improvement, which has expanded their scope of work beyond provision of clinical services. Participants defined important next steps as bringing partners across local public health systems together to facilitate relationship building and alignment of health improvement efforts based on the findings of the community health assessments.

Performance Management and Quality Improvement

Performance management and quality improvement was the lowest scored model standard for Essential Service 1. Participants reported lack of awareness of collective activity among partners to review the effectiveness of efforts to monitor health status, noting that any activity that may occur in this area would likely be siloed and ad hoc, and would not be shared with partners. Some internal quality improvement takes place in this area among the health department and health care organizations, but there is very little sharing of this information and there is no substantive collaborative effort in this area. Participants suggested that a system-wide survey could gather information on which partners collect data in particular areas that could be fed into a system-wide health status database. Doing so would make data more accessible and would facilitate more collaboration, but the major barrier to this is a lack of resources in funding and workforce.

Capacity and Resources

In the dialogue around the public health system's capacity and resources to monitor health status to identify community health problems, participants stated that there are grant opportunities in this area, but lack of financial resources is a barrier to higher performance. The state public health system can maximize collective assets by pooling resources and writing grants together, but participants cautioned that the competitive nature of grants and the scarcity of funding impedes data and resource sharing, because agencies are competing against one another for funding.

An additional challenge related to health status reporting in the area of mental health is that only programs funded by the Department of Mental Health can report data to the state, meaning that private and community-driven programs do not have a mechanism to share information to contribute to the state's overall picture of mental health.

A final challenge participants discussed within this model standard is the need to build workforce capacity in this area. Participants acknowledged that the state public health system has a small number of highly skilled statisticians and epidemiologists. However, overall, there is a lack of staffing and expertise across the system to appropriately monitor health status. This highlights an opportunity to partner with universities to attract and train the future public health workforce to enhance the system's capacity.

Strengths

Data Collection

- The system has a good data collection system in place.

- System partners collect a broad range of health status data.

- The Tobacco Prevention Project provides excellent data to grassroots community organizations.

Communication

- Written procedures are in place for communication from the state's laboratories on reportable public health threats.

- There are good processes for sharing information on emergent threats and hazards with partners and with the public.

- The system has great technical assistance to support establishment of electronic health records.

Weaknesses

Data Accessibility

- Partners lack awareness of how to access data.

- There is a lack of information systems infrastructure to facilitate data sharing.

- Low levels of health literacy and the complexity of data systems result in navigation challenges for the public.

Accuracy and Utility of Data

- It is challenging to get accurate data for small jurisdictions.

- The system has a lack of timely data.

- Sometimes data remains in raw form rather than being translated for application in the field.

- Many organizations release data episodically, making it challenging to track trends over time.

- There are challenges with data extraction and extrapolation from electronic health records.

- Mental health falls outside the domain of the Mississippi State Department of Health, making it more challenging for MSDH to address mental health as a critical public health issue.

Collaboration and Alignment

- There is a lack of alignment in data collection and dissemination efforts across public health system.

- Many agencies across local public health systems do not know each other, preventing partnership and alignment of community health improvement efforts.

- The competitive nature of grants is a barrier to collaboration and data sharing.

- There is a lack of collaborative system-level quality improvement of health status monitoring.

- Bureaucracy and the slow pace of government agencies make it difficult to maintain partnerships in the context of rapidly changing technology.

Workforce

- There is a lack of training available to build public health informatics competencies for organizational leaders.

- The systems lacks of staffing and expertise in statistics, epidemiology, and information management systems to meet level of need.

- Salary rates for state employees can inhibit agencies from being competitive in the hiring process.

Short Term Opportunities for Improvement

Collaboration and Alignment

- Create forums for local public health system partners to convene to build relationships and trust to facilitate aligned collective effort.

- Build partnerships with police departments and FBI to access crime and domestic violence data.

- Convene system partners involved in monitoring health status on a semi-annual basis to share information and engage in system-wide quality improvement in this area.

- Develop and disseminate a survey among public health system partners to determine available data that can contribute to collective monitoring of health status to develop a data resource list so partners know who to contact for specific data topics.

- Create a data reporting mechanism that allows mental health service providers to report data to the Department of Mental Health.

Long Term Opportunities for Improvement

Collaboration and Alignment

- State agencies must become more nimble and faster to stay current with rapidly advancing technology in order to facilitate data sharing with external partners.

- Begin to make a conscious shift toward partnering together on a consistent and sustained basis to function as a collective system.

- Align strategic plans and coordinate technological resources to improve system performance in monitoring health status.

Data Accessibility

- Create a centralized database that all state agencies and partners can contribute to and access.

Accuracy and Utility of Data

- Create a systematic approach to tracking specific health outcomes to allow for use of health data to track health outcomes and health status and determine effectiveness of interventions.

- Use health status data to articulate the cost of not addressing health problems to legislators.

Workforce

- Partner with universities to build epidemiology and biostatistics capacity among the future public health workforce.

System Capacity

- Enhance public health funding and resources statewide and system-wide.

Essential Service 2:
Diagnose and Investigate Health Problems and Health Hazards

Participant dialogue to assess performance for Essential Public Health Service 2 explored the following key questions:

• **What's going on in our state?**

• **Are we prepared for outbreaks?**

Diagnosing and investigating health problems and health hazards in the community encompasses the following:

• Epidemiologic surveillance and investigation of disease outbreaks and patterns of infectious and chronic diseases, injuries, and other adverse health conditions

• Population-based screening, case finding, investigation, and the scientific analysis of health problems

• Rapid screening, high volume testing, and active infectious disease epidemiologic investigations
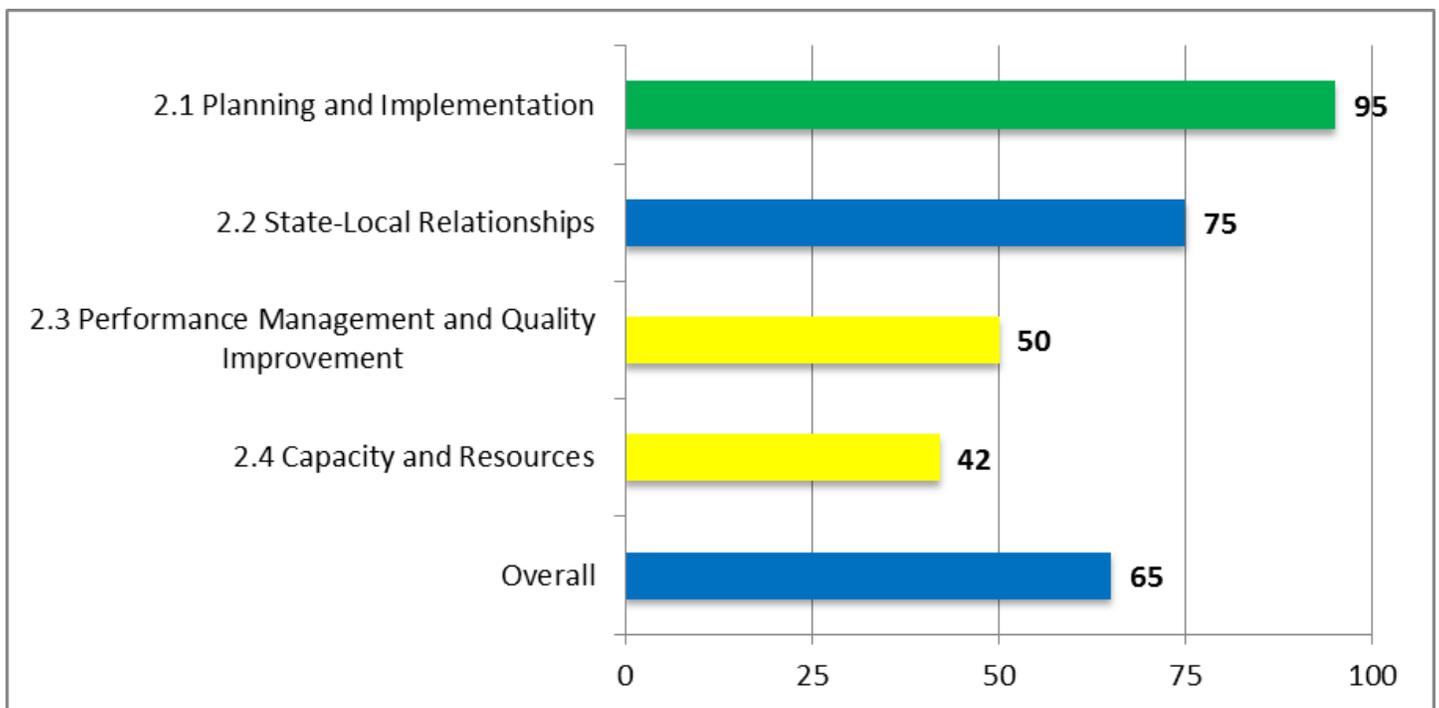
Overall performance for Essential Service 2 was scored as a high moderate. Model Standards 2.1 (Planning and Implementation) were scored in the optimal range, Model Standard 2.2 (State-Local Relationships) scored in the significant range, Model Standard 2.3 (Performance Management and Quality Improvement) scored as high minimal, and Model Standard 2.4 (Capacity and Resources) scored in the moderate range. Performance for Essential Service 2 was ranked second out of the 10 Essential Services.

Essential Service 2 Summary

Planning and Implementation

Performance of the state public health system's surveillance and epidemiology services to identify health problems and threats received an optimal score. Participants reported that the system does an excellent job with surveillance, with many partners across the state engaged in this work. However, participants suggested pooling data collectively into a centralized repository rather than having databases dispersed throughout the system to strengthen performance in this area. Participants noted there is room for improvement with chronic disease data, but emphasized that more important than surveillance of chronic disease is investment in efforts to prevent and treat chronic disease. Participants stressed that chronic disease treatment and control can only be properly addressed if residents have insurance coverage so they can interface with the health care system. Funding prevention and treatment is the only way to move the needle on chronic disease outcomes. In the area of health hazard and threat surveillance, participants reported that the system responds swiftly and effectively. Participants noted the caveat that while the state performs very well in a crisis, the system does not excel in addressing issues proactively before they reach the point of crisis. Also, although conditions like obesity, chronic disease and infant mortality have reached a crisis level in Mississippi, the system has not responded accordingly. Participants attributed this weakness to Mississippi's culture, which seems comfortable with the status quo. Participants perceived that there is a tendency in the state to view conditions like obesity and chronic disease as problems that will always exist, rather than as urgent threats requiring resources and action to address. This highlights the need for a cultural shift in thinking about serious chronic conditions, so the state can apply lessons learned from disaster response where the system excels.

State-Local Relationships

In the dialogue around State-Local Relationships, participants reiterated that excellent mechanisms are in place for effectively communicating about and responding to emergent health hazards and disasters, but further resources need to be allocated to chronic conditions. Participants highlighted the need for a paradigm shift in the medical field away from treating and curing acute conditions quickly toward preventing and managing chronic disease over the lifespan. Accomplishing this requires that medical students are educated in this new paradigm and that doctors are aware of disease management resources and can connect their patients accordingly.

Participants described that response to health problems like chronic disease and mental illness is lacking because the system is designed to respond to emergent, acute threats like infectious diseases, for which there is ready treatment or cure. Because the system incentivized curing illness rather than fostering wellness, participants underscored the importance of transforming and modernizing the public health system to better address current needs.

Performance Management and Quality Improvement

In discussions around the extent to which the system reviews the effectiveness of surveillance, emergency preparedness, investigation and response activities, participants reported that the system does an excellent job reviewing surveillance, investigation, and response plans for emergent issues like infectious disease. Response plans are reviewed to ensure that they meet national standards, and the system periodically reviews its surge capacity and has plans in place to employ staff from partner organizations across the system.

While activity is strong for emergent threats, participants emphasized that review of the effectiveness of surveillance, diagnosis, investigation, and response is very poor for chronic diseases and other complex, long-term crises like infant mortality. Participants attributed this gap to an inadequate funding structure and a lack of regard for the importance of addressing long-term crises. They discussed that the state is strong in emergency response because the federal government responds to these disasters with an infusion of money to create capacity for rapid response. These funding mechanisms are not in place for problems like chronic disease and infant mortality. Addressing these long-term crises requires the allocation of a lot of money sustained over time, and both clinical and social strategies are needed to address the driving forces of poverty and educational inequity. While emergency response yields immediate results, moving the needle on issues like obesity and diabetes is expensive and complex. Participants felt that the lack of response to these long-term crises is also a cultural problem, in which people perceive these problems as important, but not urgent. They called for a culture shift to change the state mindset toward viewing these issues as unacceptable problems meriting rapid response and concentration of resources to address.

Capacity and Resources

Participants reported that while the system has the capacity and resources to do an excellent job in diagnosing and investigating emergent health hazards like infectious disease, capacity for chronic disease and other long-term problems is insufficient. The system lacks adequate funding and staffing levels to appropriately address these problems. Partners try to maximize limited resources through alignment and coordination of efforts. Participants referred to the success of the 39 Week Initiative, noting that this was made possible through collective coordinated effort, driven by alignment of strategic plans between the March of Dimes and the Association of State and Territorial Health Officials (ASTHO). This example can be a model for the system moving forward, but ultimately, the system will require greater allocation of funding and staffing resources to be successful in addressing root causes of these problems.

In addition to the need for greater funding and staffing, participants also identified the need for more staff with specific expertise in statistics, evaluation, and qualitative analysis, emphasizing that statistical analysis of problems, while important, is insufficient to build an understand driving forces of health problems and to determine strategies to address them. Qualitative analysis is critical to successfully addressing complex health problems like obesity and infant mortality.

Strengths

Emergency Response

- The state public health system performs very well in crisis and emergency situations- great emergency plans in place, and system can mobilize quickly to respond to a disaster and deploy resources where they are needed most.

- The state has conducted many disaster response drills to ensure that the system can respond appropriately in a crisis.

- Good mechanisms are in place to ensure communication throughout the system during a disaster.

Laboratory System

- The system maintains a well-functioning laboratory system.

- The state has recently standardized codes for lab testing, facilitating the state lab report extraction process.

Weaknesses

Chronic Disease and Long-Term Crises

- The system does not perform well in recognizing or addressing long term crises (e.g., obesity and diabetes). Few plans are in place, and if there are plans in place, they are not funded and resourced well enough to be effective in making a change.

- There is a lag in chronic disease data reporting.

Coordination and Alignment

- There is no central repository for chronic disease data, so many entities throughout the system are collecting and trending their own data rather than collectively sharing and analyzing it.

Funding

- There are many unfunded or partially funded mandates that cannot be met without adequate resources to support these efforts.

Communication

- There is room for improvement in ensuring that the right person at each agency is contacted when alerting partners throughout the system about possible health threats.

- The public health workforce lacks the capacity to appropriately filter communication about health threats done to non-English speaking communities.

Short Term Opportunities for Improvement

Performance Improvement

- Apply best practices from emergency preparedness throughout the public health system by engaging in after action reporting after responding to a health threat or hazard. Build in time to reflect on what has been done well and what could be done better in the future.

Communication

- Build awareness among physicians about community resources for chronic disease prevention and management so they can appropriately refer and connect patients.

Long Term Opportunities for Improvement

Chronic Disease

- While the system does a good job of chronic disease surveillance, further emphasis must be placed on implementing solutions to address chronic disease.

- Shift toward greater emphasis on prevention and management of chronic disease over the curative medical model that does well in addressing infectious disease but does not do well in addressing chronic conditions.

Coordination and Alignment

- Mississippi's public health system has demonstrated excellence when it rises up with a lot of support from partners to achieve something great. In every case where this has occurred, it was the result of multiple stakeholders joining together and all moving in the same direction with a very clear plan. The state should look to these examples of excellence as models for addressing long-term public health crises facing Mississippi residents.

Funding

- Work to enhance funding and staffing across the public health system.

Essential Service 3:
Inform, Educate, and Empower People about Health Issues

Participant dialogue to assess performance for Essential Public Health Service 3 explored the following key questions:

• **What's going on in our state?**

• **Do we know our health status?**

Informing, educating, and empowering people about health issues encompasses the following:

• Health information, health education, and health promotion activities designed to reduce health risk and promote better health

• Health communication plans and activities such as media advocacy, social marketing, and risk communication

• Accessible health information and educational resources

• Partnerships with schools, faith communities, work sites, personal care providers, and others to implement and reinforce health education and health promotion programs and messages
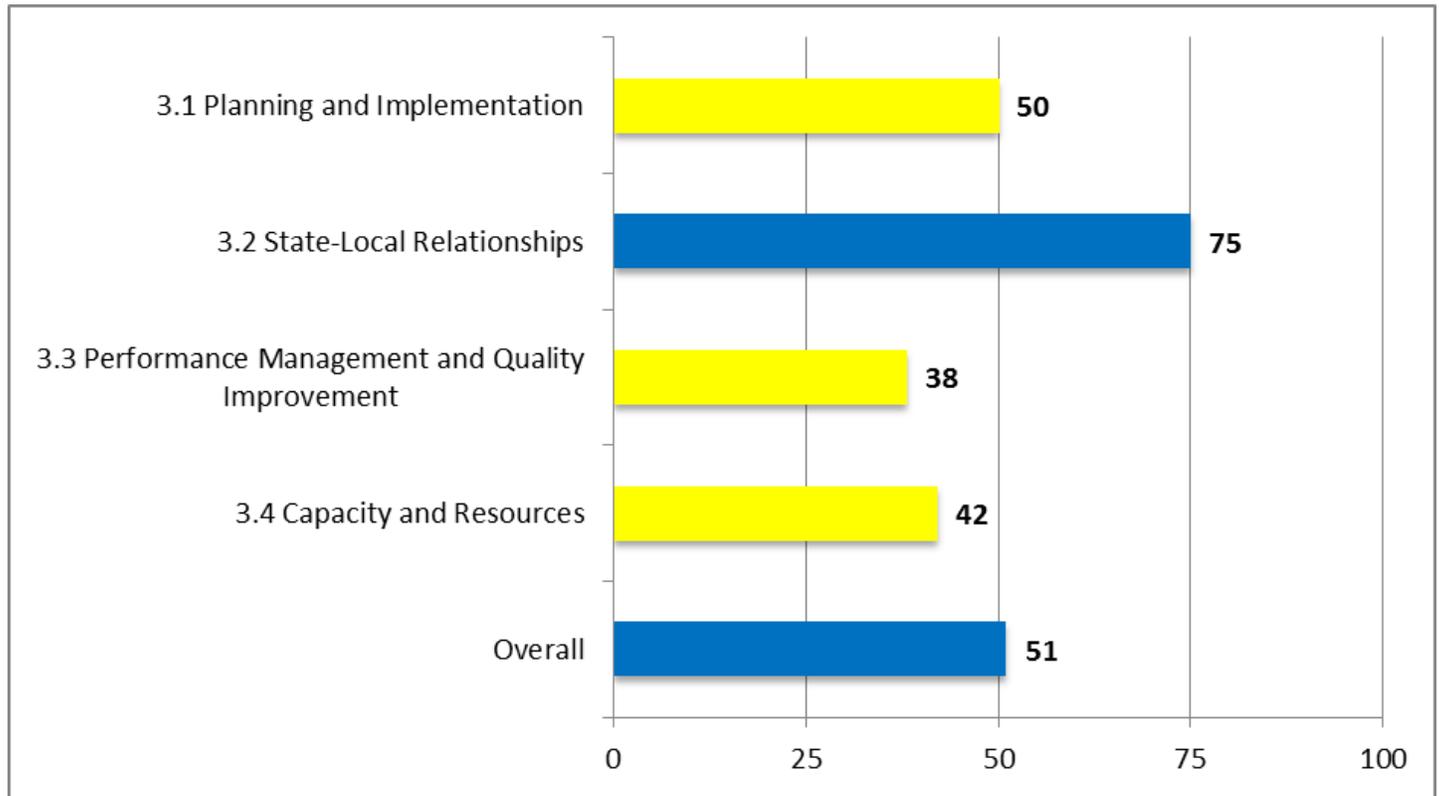
Overall performance for Essential Service 3 was scored in the low significant range. Planning and Implementation, Performance Management and Quality Improvement, and Capacity and Resources received moderate scores and State-Local Relationships scored as a high significant. Performance for Essential Service 3 was ranked third out of the 10 Essential Services.

Essential Service 3 Summary

Planning and Implementation

In describing the system's implementation of public health programs and communication with the public, participants reported that individual organizations throughout the public health system engage in a lot of health education and health promotion work. Participants were concerned that health education and health promotion activities are not well coordinated across the system. While organizations partner together when funding is available to do so, the very specific parameters and time-limited nature of many funding streams hinder the ability to sustain work and function as a coordinated system. Participants cited the example of the system's great success in tobacco cessation education as an exception, which they said was made possible only through the substantial funding sustained over the past 15 years to support this work. If this level of funding were available to more efforts throughout the public health system, a greater level of coordination and effectiveness could be achieved. Another lesson learned from the success of tobacco cessation efforts is the need to ensure that health promotion practices are theory and evidence-based. While many programs throughout the system are grounded in evidence-based practice, this is an area the system must continue to emphasize to ensure that resources are being used as effectively as possible. Participants discussed that the system also needs far more funding to be able to effectively address messaging about health problems like HIV/AIDS and chronic disease, which are growing problems for Mississippi residents.

While much of the health education efforts occurring throughout the system are targeted to residents with chronic diseases and focus on proper disease management, participants also called for the system to disseminate more messaging promoting a culture of health, emphasizing education on how to prevent chronic diseases before they start. A critical component of this strategy would require outreach to youth, which highlights the need for a comprehensive and coordinated school-based primary prevention system. One opportunity that can help to achieve this is the Healthy Students Act, a state law passed in 2007 that mandates a minimum number of hours spent on health education to school children and the establishment of school health councils. The system should leverage this law to coordinate youth health promotion and education efforts throughout the state.

Participants discussed the increased recognition of the importance of the social determinants of health as a sign of progress for Mississippi. This growing recognition will help the public health system to more effectively promote health in Mississippi by encouraging the consideration of social, economic, and environmental factors that drive health status.

One area in need of improvement in the way the system informs and educates Mississippi residents about health issues is appropriate tailoring of messages to increasingly diverse communities. Participants discussed that simply translating messaging to another language is not sufficient because messages also need to be culturally appropriate to be well received and effective. The state public health system's workforce needs to develop and enhance skills in this area and continue to recruit staff across the system that reflect the changing demographics of the state.

State-Local Relationships

Participants described a strong presence of technical assistance from state public health system partner organizations to local public health systems to develop skills and strategies to conduct health education, communication, and promotion. The Mississippi State Department of Health has a lot of technical assistance resources, which are drilled down to the local level through the district offices. The American Heart Association

is also among the biggest technical assistance providers in the system, working with health care providers throughout Mississippi to develop statewide systems of care, resulting in Mississippi leading the nation in this area. Other states are looking to Mississippi as a best practice example, providing the opportunity for national impact in this domain.

Crisis communication is an area of great strength for Mississippi's public health system. State partners have strong local relationships in place for emergency planning and disaster response, and have a strong system of support and technical assistance to develop local emergency communications capacity. The public health system has policies and procedures in place to link local and state emergency communications plans, and local public health systems are trained in the use of the state's Health Alert Network.

Performance Management and Quality Improvement

Performance management and quality improvement was the lowest scoring model standard for Essential Service 3. Participants reported that while a lot of partners review and evaluate the effectiveness of their organization's or group's health communication, education, and promotion services and report this information to their funders, evaluation results are not widely shared throughout the system. Participants suggested that partners may be hesitant to share unsatisfactory findings, but stressed that this is necessary to accurately benchmark progress and share lessons learned. Participants discussed that assessment alone is not sufficient for performance management—there must be feedback loops in place to advance progress.

There are several areas where the system excels in gathering health communication evaluation data to inform quality improvement, including tobacco and diabetes education. Participants reported a lot of work going on in these areas, with the Mississippi State Department of Health being the driving force of this work. In addition, the American Heart Association has a robust performance management system in place for its statewide systems of care, which includes regular reporting of data, benchmarking, and ongoing quality improvement activities.

The system's health education and promotion related to mental health was defined as needing increased performance management and quality improvement activity to ensure efforts are data-driven or grounded in best practices. Given the growing prevalence of mental health concerns across the state, it will be particularly important for the public health system to improve this work.

A final concern raised was the need to examine the way the system assesses effectiveness in reaching diverse and vulnerable populations. Participants expressed concern that the people who could answer questions about whether messages are effectively targeted to diverse and vulnerable populations rarely have a seat at the table. This lack of representation is a substantial gap for the public health system. Further, participants cautioned that the people who are the target audience for policies and programs are not part of the conversation in determining the metrics that can truly assess whether a program is effective. The public health system has a great opportunity to engage service recipients and target audiences in assessment and evaluation activities to drive quality improvement.

Capacity and Resources

In the dialogue around the system's capacity and resources for health education and promotion, participants reported high levels of partnership for grant funded programs, as partnerships are often a grant requirement. Again, participants reiterated that the challenge of sustaining partnerships over the long term is the highly targeted and time-limited nature of grants. The system does well in partnering where funding exists to support

collaboration, but there is very little funding available for this, given the low level of state general funds available, the lack of flexible Federal funds, and general limitations of grant funding.

Participants reported that while the system has some strong communication workforce representatives, more are needed to build capacity to effectively respond to the needs of vulnerable and diverse populations. The workforce has many vacancies, but no ability to fill them due to lack of financial resources. As the public health system moves forward in its efforts to grow the public health workforce across the state, special attention should be placed on recruiting staff that are skilled in culturally and linguistically appropriate communications to serve the changing demographics of the state.

Strengths

Health Education and Promotion

- The system has a strong focus on education and prevention.

- The system has the ability to effectively promote messaging about how to improve health and has many great resources in place to get these messages out to the public.

- Tobacco cessation efforts have been very successful due to adequate and sustained funding, enabling the development of coordinated action across the system.

- The Healthy Students Act is a statewide mandate around health education and physical activity and requires establishment of school health councils, which provides a mechanism to coordinate a statewide health and wellness promotion strategy for Mississippi youth.

Crisis Communication

- Mississippi does a great job handling emergency situations, including keeping the public informed prior to and during emergencies and disasters.

- A strong Health Alert Network exists between the health department and hospitals.

Weaknesses

Coordination and Alignment

- There is a lack of coordination of health education and health promotion activities, with work occurring in silos across the system.

- The time-limited nature and highly specific parameters of grant funding streams are highly restrictive, encouraging creation of silos and hindering collaboration.

Workforce

- The system lacks sufficient staffing to meet the level of need across the state.

Communication and Messaging

- There is a lack of effective strategies to communicate the scope and importance of public health, making it difficult to garner public and legislative support.

- There is not enough health education messaging about chronic disease, and existing messaging is too focused on disease management rather than disease prevention.

- There has been very little public education about HIV/AIDS prevention despite having the fourth highest HIV/AIDS infection rate in the country.

Evaluation

- Statistical evaluation of health promotion activities is often not translated into a format that is accessible and widely understood.

- Individuals affected by policies and programs are not part of the conversation in designing metrics to determine whether these are effective.

Short Term Opportunities for Improvement

Health Promotion Strategies

- Continue to emphasize building a culture of health.

- Health counseling is an area of excellence in some schools, but the next step is to coordinate those efforts across the whole state.

- Increase chronic disease and HIV/AIDS prevention messaging.

- Increase emphasis on primary prevention and habit formation.

- Leverage mandate of school health councils under the Healthy Students Act to effectively promote health among Mississippi youth.

- Increase health messaging through social media like Twitter and Facebook.

- Improve targeting of health messaging to different community groups to increase relevance and effectiveness.

- Increase use of culturally appropriate bilingual and pictorial communication for those with limited English or low literacy.

Evaluation

- Increase engagement of service recipients in development and evaluation of health promotion messages.

Long Term Opportunities for Improvement

Coordination and Alignment

- Improve coordination of efforts and create alignment to affect a greater impact.

- Devote resources to database development and management and think about how we manage and share information to facilitate better alignment of resources and efforts.

- Advocate for the development of a school of public health in Mississippi, which could help to strengthen coordination across public health system partners.

- Shift messaging and health promotion activities toward promotion of a holistic culture of health rather than educating on prevention of specific diseases.

- Leverage Healthy Student Act education requirements to achieve consistency in health promotion messaging to youth across the state.

Funding

- Work to enhance funding and staffing across the public health system.

Public Health Marketing

- Create a public health promotion campaign to increase public awareness and understanding of the importance of public health.

- Improve the way public health is marketed to policymakers to assure funding to sustain and strengthen state public health infrastructure.

Workforce

- Build workforce diversity and workforce capacity in cultural sensitivity.

- Develop workforce capacity in cultural sensitivity and ensure that staff reflects the growing diversity of the state.

Essential Service 4:
Mobilize Partnerships to Identify and Solve Health Problems

Participant dialogue to assess performance for Essential Public Health Service 4 explored the following key questions:

- **What's going on in our state?**

- **Are we engaging all possible partners?**

Mobilizing partnerships to identify and solve health problems encompasses the following:

- The building of a statewide partnership to collaborate in the performance of public health functions and essential services in an effort to utilize the full range of available human and material resources to improve the state's health status

- The leadership and organizational skills to convene statewide partners (including those not typically considered to be health-related) to identify public health priorities and create effective solutions to solve state and local health problems

- Assistance to partners and communities to organize and undertake actions to improve the health of the state's communities
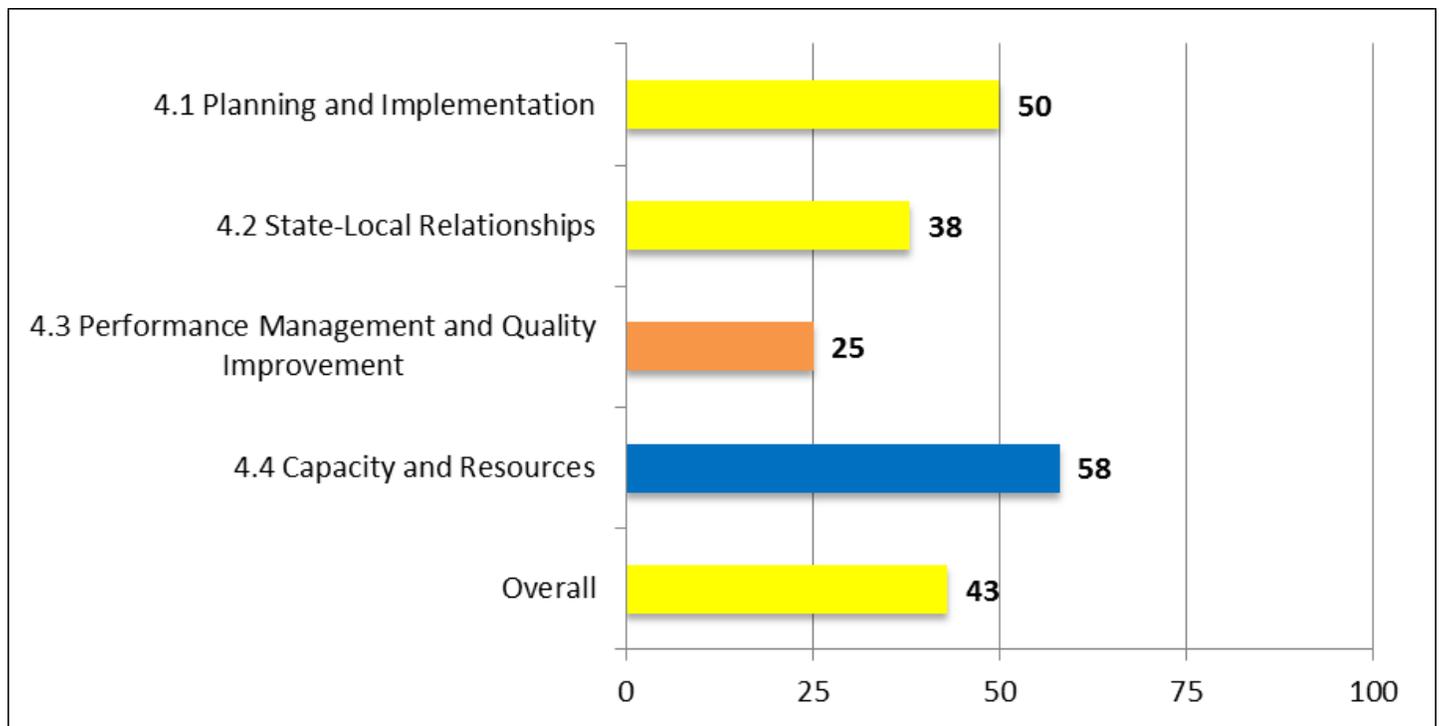
Overall performance for Essential Service 4 was scored as moderate. Planning and Implementation and State-Local Relationships received scores in the moderate range, Performance Management and Quality Improvement scored as a high minimal, and Capacity and Resource was scored in the significant range. Performance for Essential Service 4 was ranked sixth out of the 10 Essential Services.

Essential Service 4 Summary

Planning and Implementation

In dialogue around the extent to which the system organizes, sustains, and mobilizes partnerships to address public health problems, participants reported that coalitions and task forces are present throughout the state, thus the partnerships and structure are in place to mobilize for action. However, while partners frequently convene to discuss health issues and may identify goals and objectives to work toward, groups rarely reach the stage of implementation and collective alignment of strategies to meet goals. This may be due to funding structures and parameters. Nonetheless, greater emphasis must be placed on collaborative implementation and shared accountability.

Another challenge that coalitions face in their work is that they often allocate substantial effort toward advocacy for a particular policy to address a health issue without success Coalitions must continue to build relationships with elected officials and find areas of common interest to effectively communicate the need for strong public health policies.

However, Mississippi does have examples of successful partnerships and advocacy resulting in policy development. Specifically, Mississippi's concussion law required the convening of partners across a range of agencies in order to establish required standards of care for athletes with concussions and resulted in the successful passage of a data-driven law informed by public health experts.

Participants discussed that in the past, partnerships have been very minimal; but there has been tremendous progress in the area of sustaining formal partnerships in recent years, which is continuing to gain momentum. Participants reported that agencies are now beginning to think of themselves as part of a public health system, and stated that the State Public Health System Assessment is a wonderful opportunity to come together as a system to learn about the collective work occurring throughout the state and to strengthen collective understanding of system standards and best practices.

State-Local Relationships

In the dialogue around state-local relationships, participants discussed the need to start thinking broadly about how to build coalitions to empower community members to mobilize for community health improvement at the local level. Empowering community members to take grassroots action will help to address the lack of public health workforce capacity and will also help to foster a culture of health in local communities. One way the system is currently doing this is through working with mayors and community members in small towns to develop health plans to increase access to physical activity and fresh produce, and providing technical assistance to help implement these plans.

Participants identified the need for more collaborative training opportunities to increase capacity in community health improvement initiatives. One example where this has worked well is among employers who have pooled resources to engage in collaborative training on worksite wellness. Participants also called for greater technical assistance for local health departments, who need to increase their capacity in partnership building as they shift away from direct provision of clinical care toward a focus on community health and wellness.

Participants reiterated that the system does not do well with incentivizing broad-based local public health system partnerships, noting again that grants contribute to siloing by placing strict limitations and parameters on partnering. There is also a lack of financial incentives from the state government to form and sustain broad-based partnerships. This highlights the need to restructure the way public health is funded over the long term. In the short term, participants suggested that increasing collaboration with corporate entities could address financial barriers to maintain partnerships.

Performance Management and Quality Improvement

Performance management and quality improvement was the lowest scored model standard of Essential Service 4. Participants explained that because partners have been functioning in silos for so long, there has been very little measurement and evaluation of the system's collective performance. The idea of a public health "system" has recently started to gain momentum, which is promising. The State Public Health System Assessment demonstrates willingness to engage collectively in performance improvement and will provide a good opportunity to build a foundation for this work moving forward.

Capacity and Resources

While participants reported a need for increased funding and workforce to develop capacity in partnership building overall, participants also described many other ways Mississippi residents contribute to community improvement. The state's culture of generosity and volunteerism is a tremendous asset. While financial resources are less available in Mississippi than in many other states, participants emphasized that Mississippi is at the top of the scale in giving of time and talents, and communities are working to engrain this spirit of giving in children early on by building community service requirements into school curriculums. Another opportunity that the system can use to address the lack of grant and state funding is by working to engage nontraditional partners like businesses to increase public health capacity across the state.

Strengths

Coordination and Alignment

- Mississippi's public health system is experiencing the beginning of some very promising partnerships. There is a lot of good work going on and some good partnerships in place that do great things, but the system can expand on this moving forward.

Community Engagement

- Culturally, Mississippi has a strong spirit of giving of time, talents, and treasures.

- Healthy Hometown Initiatives empower community members to drive decision-making at the local level to improve health.

Health Promotion

- There are good resources in place to promote worksite wellness among employers.

Weaknesses

Coordination and Alignment

- The highly specific scope and time limited nature of grants encourages development of silos.

- Partnerships and coalitions convene to discuss health issues, but rarely reach the stage of implementing strategies to address these problems.

- There is a lack of funding mechanisms to support and sustain long term partnerships.

- Shortages in staffing across the system limit organizations' abilities to participate in partnerships.

Advancing Best Practices and Evidence-Based Public Health

- Policies are often advanced without appropriate regard for evidence-based or best practices.

- Quality improvement is lacking. System partners are good at getting work going, but often lack the resources and support to take the next step and evaluate and improve performance based on evaluation data.

Short Term Opportunities for Improvement

Coordination and Alignment

- Improve training for coalitions to build capacity in working toward collaborative action.

- Create collaborative training opportunities, and make them available to staff from hospitals, nonprofits, workplaces, and the health department.

- Increase outreach efforts to nontraditional partners, and work to build understanding of how to engage these partners (e.g., employers may have staff that would like to volunteer time toward community health efforts). Foster relationships with businesses to increase funding and capacity for public health improvement.

Long Term Opportunities for Improvement

Funding

- Shift to a mindset of viewing grants as seed money to start work that can then be supported long term through other types of giving. Think about how to leverage Mississippi's culture of generosity to support sustainability of public health efforts.

- Plan for sustainability of efforts rather than relying on funding from original grant source.

- Increase staffing and funding public health workforce.

Coordination and Alignment

- Create a statewide database of partner resources to increase resource sharing and partnerships across the public health system.

Advancing Best Practices and Evidence-Based Public Health

- Work to ensure that future laws are more data-driven.

Community Engagement

- Empower community members to mobilize grassroots action to improve health at the local level.

Essential Service 5:

Develop Policies and Plans that Support Individual and Statewide Health Efforts

Participant dialogue to assess performance for Essential Public Health Service 5 explored the following key questions:

- **What's going on in our state?**
- **Do we support all health efforts?**

Developing policies and plans that support individual and statewide health efforts encompasses the following:

- Systematic health planning that relies on appropriate data, develops and tracks measurable health objectives, and establishes strategies and actions to guide health improvement at the state and local levels

- Development of legislation, codes, rules, regulations, ordinances, and other policies to enable performance of the EPHS, supporting individual, community, and state health efforts

- The process of dialogue, advocacy, and debate among groups affected by the proposed health plans and policies prior to adoption of such plans or policies
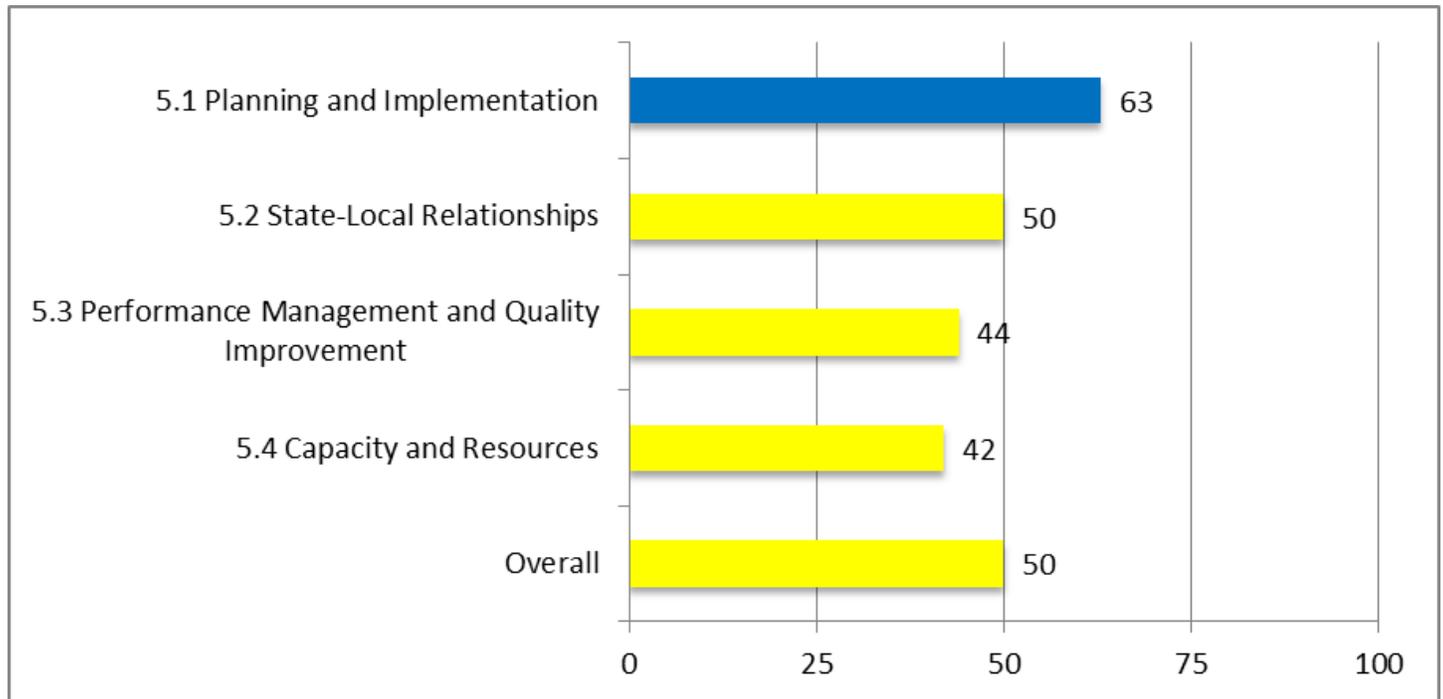
Overall performance for Essential Service 5 was scored as a high moderate. Planning and Implementation scored as significant and State-Local Relationships, Performance Management and Quality Improvement, and Capacity and Resources were each scored in the moderate range. Performance for Essential Service 5 was tied with Essential Service 1 for fourth and fifth place out of the 10 Essential Services.

Essential Service 5 Summary

Planning and Implementation

Participants reported that statewide, public health partner organizations create a number of health improvement plans, but plans are often siloed rather than shared collectively by multiple partners. Public health agencies engage state and community–level leaders in planning efforts, but rarely successfully engage the target populations affected by health improvement efforts. Plans are evidence-based and data-driven when possible, but participants expressed concern that it is very difficult to get good, consistent data because the state lacks the information systems necessary to effectively collect and communicate data. State agencies in Mississippi lack an interoperable network that allows for transfer of data, and there is no system in place for Medicaid, the Mississippi Department of Health, and the Mississippi Department of Mental Health to share data. Agencies have significant challenges sharing data both internally and externally, making health data largely inaccessible. Even when data can be accessed, the lack of funding available for data collection has resulted in serious gaps. This is a substantial barrier to advancing health improvement plans, because the absence of state data means that the system cannot demonstrate the need for policies and programs and cannot use data to demonstrate whether policies and plans are working.

Participants did point to a number of success stories in which the system effectively used evidence-based practices to advance health improvement initiatives, including the creation of the concussion law, which mandated standards of care for athletes with head injuries and the 39 week initiative, which engaged providers and payers in reducing elective deliveries before 39 weeks. In both of these examples, engagement and convening of multiple stakeholders were critical components to ensure their success. The 39 week initiative, which was adopted voluntarily by partners across the health system, was pointed to as a good process model for policy change for Mississippi, because stakeholders from across the system came together and voluntarily committed to changing institutional policies based on the current public health evidence base, rather than having these changes legislated by state lawmakers. This voluntary process allows a mechanism for policy change that is more nimble than the legislative process, as the policy is driven by stakeholders and can be adjusted if best practices or the evidence base changes.

Participants reported that while many health improvement plans are created, implementation of these plans is largely absent, as plans lack measureable objectives and collaborative approaches to accomplish them. Participants discussed the importance of coming together as a system to create the State Health Improvement Plan, which will identify priorities for the state and will create a clear road map toward improving health status in Mississippi.

Participants reported that one area of planning and implementation where Mississippi excels is emergency preparedness and response. Due in part to the state's experience in responding to crises like Hurricane Katrina, Mississippi leads the nation in all-hazards preparedness planning.

State-Local Relationships

In dialogue around state public health organizations' provision of technical assistance and training to local public health systems in developing community health improvement plans, participants reported that this has traditionally been lacking, but it is now increasing as the state is undergoing the State Health Assessment and State Health Improvement Process. In addition to conducting a state level assessment and improvement plan, the Mississippi Department of Health is also providing technical assistance and capacity building to district offices for regional assessment and planning.

Participants reported strong technical assistance to communities across the state in developing local all-hazards preparedness plans for responding to emergency situations.

Performance Management and Quality Improvement

In the area of performance management and quality improvement, participants reported that state public health system partners regularly review the progress of their respective programs, but there is no collective review process, and there is very little formal quality improvement in place. Again, emergency preparedness planning serves as an exception to the relatively low activity within this area. Participants stated that the system regularly conducts formal exercises and drills of the procedures and protocols linked to all-hazards preparedness plans and makes adjustments to plans based on the results of these drills.

Participants also reported that while state public health system organizations may review new policies to determine their public health impacts and to inform policymakers and the public about these impacts, this currently occurs on an ad hoc basis. Improvement can be made by adopting a Health in All Policies Approach and by conducting Health Impact Assessments to determine the public health impact of potential new policies being considered by state legislators. Participants further identified the need to create a system for reviewing existing policies to determine whether they are aligned with the current public health evidence base.

Capacity and Resources

In regard to capacity and resources, participants reported that the great scarcity of funding for public health makes it challenging for partner organizations to share financial resources to support health planning and policy development efforts, though organizations may collaborate when seeking new financial resources like grant funding.

Participants also said that traditionally there has been little alignment and coordination of efforts in implementation of health plans and policy development. Partner organizations have not aligned their strategic plans or coordinated technological resources and do not have information systems in place that allow for the sharing of data that could inform planning and policy development. However, participants expect progress to be made in these areas through Mississippi's State Health Assessment and State Health Improvement Plan processes.

In the dialogue around workforce capacity, participants agreed that while state public health system partner organizations have the professional expertise to conduct planning and policy development activities, the system is not sufficiently staffed to achieve optimal performance in this area.

Strengths

Coordination and Alignment

- Mississippi is in the process of conducting its first State Health Assessment (SHA), which will then inform the development of a State Health Improvement Plan (SHIP) to create shared health priorities for the state public health system to collectively address to improve Mississippi's health status.

Advancing Best Practices and Evidence-Based Public Health

- The public health system is good at working towards evidence-based practice to ensure that partners are devoting resources to efforts that will work.

- Mississippi has a law that data used for performance improvement by the Mississippi State Department of Health is kept confidential from lawyers, which enables the health department to privately reach out to hospitals that aren't performing well to help them improve their outcomes.

Weaknesses

Coordination and Alignment

- Mississippi has never conducted a State Health Improvement Plan (SHIP) process, so there has been a lack of strategic coordinated alignment in health improvement activities for the state.

- Past community health improvement planning efforts have been siloed and rarely have reached the implementation and evaluation stages.

Policy Development

- Public health does not appear to be a priority of the state legislature, making policy change difficult.

Data

- Health data is often collected inconsistently.

- There is no interoperability or formal data transferring mechanisms in place among state agencies, making data sharing very challenging from agency to agency.

- The public health system has had limited success in engaging community members in community health improvement planning.

Short Term Opportunities for Improvement

Partnership Development

- Develop strategies to attract and maintain new partners.

Policy Development

- Ensure there is an evidence base for future regulation and policy proposals.

- Improve health planning efforts by reaching out to populations affected by proposed programs and policies for their input and support.

- Use best practice example from the 39 Week Initiative to convene system partners to collectively design and adopt voluntary policy and institutional changes when legislative change is slow or unlikely to be successful.

Long Term Opportunities for Improvement

Coordination and Alignment

- Develop a clearinghouse of data so it is easy for all partners to contribute and share information.

- Work to break down siloed and territorial state agencies.

Policy Development

- Shift policy priorities to emphasize prevention and health promotion, and specifically toward promoting a holistic culture of health rather than addressing specific health issues through legislation.

- Promote policies to create environmental change to foster healthy behaviors.

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Essential Service 6:
Enforce Laws and Regulations that Protect Health and Ensure Safety

Participant dialogue to assess performance for Essential Public Health Service 6 explored the following key questions:

- **What's going on in our state?**

- **Do our laws keep us safe and healthy?**

Enforcing laws and regulations that protect health and ensure safety encompasses the following:

- The review, evaluation, and revision of laws (laws refers to all laws, regulations, statutes, ordinances, and codes) designed to protect health and ensure safety to assure that they reflect current scientific knowledge and best practices for achieving compliance

- Education of persons and entities in the regulated environment to encourage compliance with laws designed to protect health and ensure safety

- Enforcement activities of public health concern, including, but not limited to, enforcement of clean air and potable water standards; regulation of healthcare facilities; safety inspections of workplaces; review of new drug, biological, and medical device applications; enforcement activities occurring during emergency situations; and enforcement of laws governing the sale of alcohol and tobacco to minors, seat belt and child safety seat usage, and childhood immunizations
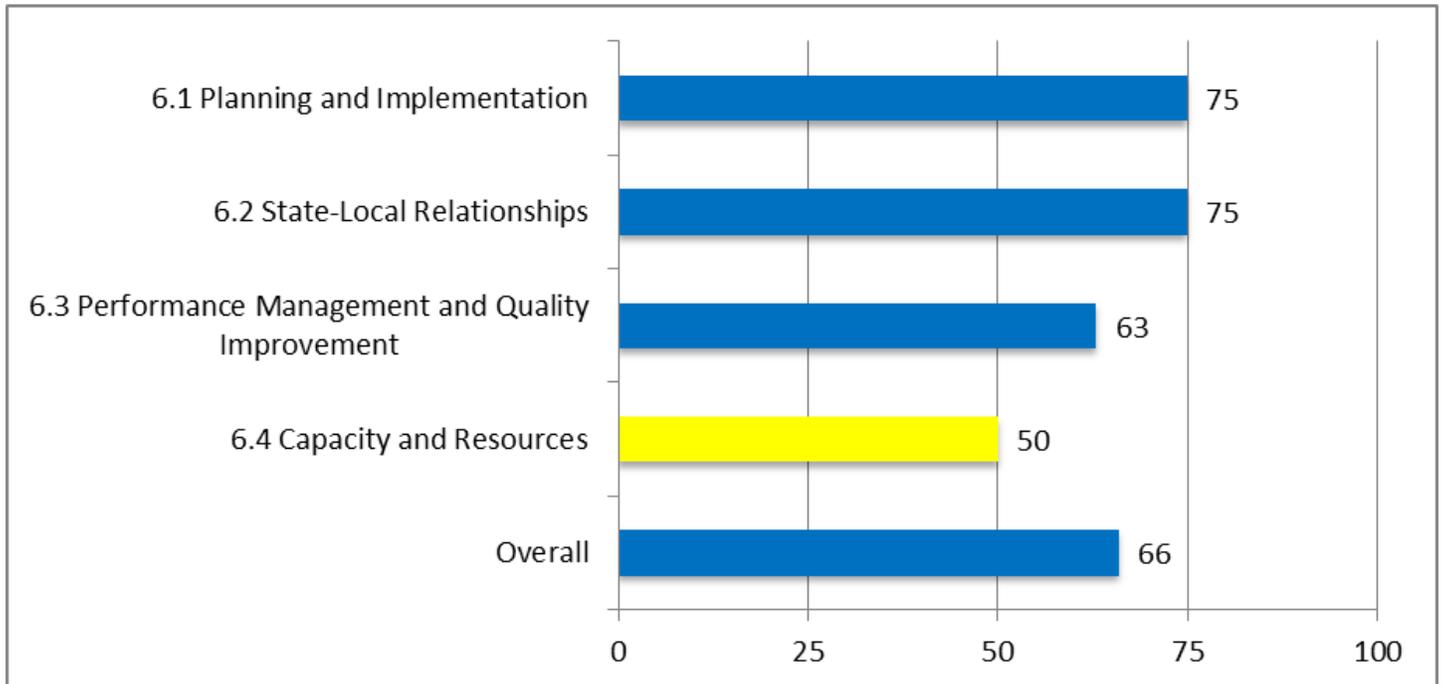
Overall performance for Essential Service 6 was scored as significant. Planning and Implementation, State-Local Relationships, and Performance Management and Quality Improvement received significant scores and Capacity and Resources scored as a high moderate. Performance for Essential Service 6 was ranked first out of the 10 Essential Services.

Essential Service 6 Summary

Planning and Implementation

Participants described a strong system in place for assuring that existing and proposed state laws are designed to protect the public. Participants reported that there are established cooperative relationships between regulatory bodies and regulated entities. For example, a representative from the National Restaurant Association participates on Mississippi State Department of Health's food inspection advisory board, which occurs in very few states. Maintaining good partnerships between the Department of Health and regulated entities is critical to the success of enforcement, encouraging compliance and establishing open lines of communication to foster dialogue about how regulatory activities can be improved to assure that laws are accomplishing their purpose of protecting the public.

Participants identified the need to make administrative processes more customer-centered and user-friendly for certification and licensure. They described cumbersome licensure processes requiring too much paperwork, outdated forms that are difficult to complete, and little assistance from licensure boards in achieving compliance. A notable exception is the licensure process for nurses, which participants described as very user-friendly and efficient. They suggested that an opportunity for improvement is to create one central office of professional licensure modeled after the nursing licensure board. They reported that many states have a single professional licensure board, and noted that this would not only result in better customer service, but would likely also increase compliance and reduce costs.

State-Local Relationships

Mississippi public health system partner organizations work with local public health systems throughout the state to provide training, technical assistance, and other resources to support local enforcement of laws to protect the public's health. In the realm of environmental health, participants reported that the Mississippi State Department of Health has a great mechanism in place to work with local water associations to certify drinking and wastewater. Many courses and trainings are offered throughout the state to filter assistance down to the local level. The Mississippi State Department of Health also works with fire departments and law enforcement across the state to train on child safety restraint laws and how to properly install car seats so the fire department can educate the community and police can ticket individuals when they do not have their children properly restrained in their vehicles. Within the areas of construction and food protection, technical assistance and training on compliance with safety laws and regulations is primarily delivered by private sector entities, but trainings are high quality and available across the state to meet local needs.

Participants emphasized that the state public health system's regulatory strategy lies in providing good technical assistance and support to regulated entities to assure compliance before enforcement and punitive measures are needed.

Performance Management and Quality Improvement

In the dialogue around performance management, participants discussed the process for reviewing the effectiveness of public health and safety laws and compliance and enforcement activities. They stated that this activity is a required component of any activities that receive funding from a federal agency, such as the EPA.

Participants identified the need for better performance management of enforcement activities, and described a lack of quality assurance and inter-rater reliability among inspectors across the state. Participants described

that the central office of the Mississippi State Department of Health has a process in place for standardizing regulatory inspections, in which a representative from the central office accompanies district inspectors on site inspection to try to ensure consistency across the state. However, follow up when problems arise is weak, and representatives from the food safety sector reported that the inspection process is still very inconsistent from district to district.

Capacity and Resources

System capacity and resources was assessed as the lowest performing model standard of Essential Service 6, with lack of funding being the primary driver of this low score. Participants reported that federal agencies like the EPA require that enforcement activities are carried out, but do not supply any funding to support enforcement. Instead, funding is allocated to technical assistance to help regulated entities comply with laws to avoid enforcement. Very little funding is allocated from the state to support enforcement activities, and funding that does exist is not allocated appropriately according to the level of need. For example, participants reported that funding for enforcement of drinking and driving far exceeds most other enforcement activities where need is great, including enforcement of seatbelt use.

A particularly disconcerting trend in enforcement in Mississippi is the rise in unfunded mandates from the state Legislature, making it very difficult for the Mississippi State Department of Health to assure compliance. Participants reported that in some cases charging fees for noncompliance can offset enforcement costs, but these fees are generally too low to generate sufficient funding to support costs, and the state often prohibits regulating entities from raising fees due to lobbying from regulated parties.

Further, participants cited examples of activities that are necessary to protect the health and safety of citizens, but are completely unfunded and cause a loss in revenue. Tuberculosis was one example cited, with participants noting that action from the Mississippi State Department of Health is vital to protecting the health of the public, and there is no other entity in the system to fill this role. In examples like this, the Health Department's role of assuring public health and safety requires the department to take a financial loss in providing these services. Despite the financial challenges the system faces in carrying out this essential service, participants reported that performance is high because good relationships are in place between regulators and regulated entities and because the state has strong mechanisms for technical assistance to assure compliance. Though regulatory activities are significantly understaffed, the workforce the system has is highly skilled in administration of legal and regulatory programs.

Strengths

Support for Regulated Entities

• Mississippi is a model for the nation in driving change through collaboration rather than regulation.

• The Mississippi State Department of Health maintains great relationships with regulated entities.

• There is good technical assistance from both the public and private sector is provided to regulated entities across the state.

Emergency Planning

• Mississippi is nationally recognized for excellence in emergency preparedness planning.

Advancing Best Practices and Evidence-Based Public Health

- Nonprofit organizations like the American Heart Association do a great job of providing evidence-based data to inform the development of laws, regulations, and ordinances.

Weaknesses

Quality and Customer Service

- There is a cumbersome certification and licensure processes for physicians, EMTs, and other health professionals.

- Inspection processes are not consistent across districts.

Funding

- Very little state and federal funding is allocated to enforcement activities.

- Funding for regulatory activity is not allocated according to the level of need.

- The state Legislature is increasingly creating unfunded mandates.

Short Term Opportunities for Improvement

Coordination and Alignment

- Conduct strategic planning to align efforts and strengthen partnerships.

- There are good inter-agency partnerships across the state, but these should be leveraged and expanded to better align efforts statewide.

Advancing Best Practices

- Use nursing board licensure process as a model to make licensure processes more customer-centered and user friendly across the system.

Long Term Opportunities for Improvement

Quality Improvement

- Standardize health inspection process and procedures statewide to create consistency across districts.

- Bring all health professional licensure boards under one umbrella.

Funding

- Analyze budget for regulatory and enforcement activities to determine if restructuring can be done to shift allocation of funds to better align with needs.

Essential Service 7:
Link People to Needed Personal Health Services and Assure the Provision of Healthcare When Otherwise Unavailable

Participant dialogue to assess performance for Essential Public Health Service 7 explored the following key questions:

- **What's going on in our state?**

- **Do the residents of our state have access to the health services they need?**

Linking people to needed personal health services and ensuring the provision of health care when otherwise unavailable encompasses the following:

- Assessment of access to and availability of quality personal health services for the state's population

- Assurances that access is available in a coordinated system of quality care which includes outreach services to link populations to preventive and curative care, medical services, case management, enabling social and mental health services, culturally and linguistically appropriate services, and healthcare quality review programs

- Partnership with public, private, and voluntary sectors to provide populations with a coordinated system of healthcare

- Development of a continuous improvement process to assure the equitable distribution of resources for those in greatest need
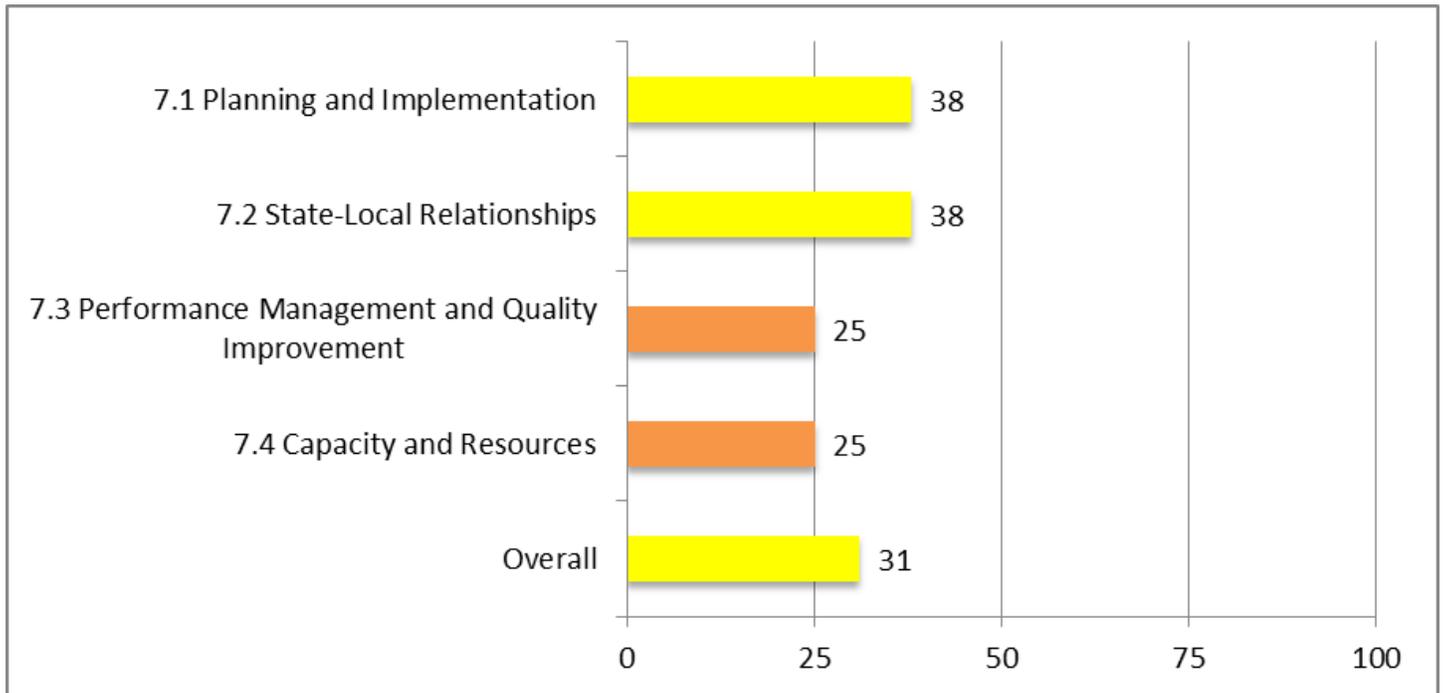
Overall performance for Essential Service 7 was scored as a low moderate. Planning and Implementation and State-Local Relationships scored in the moderate range and Performance Management and Quality Improvement and Capacity and Resources received high minimal scores. Performance for Essential Service 7 was ranked ninth out of the 10 Essential Services.

Essential Service 7 Summary

Planning and Implementation

In dialogue around system performance in linking people to personal health services and assuring provision of healthcare when otherwise unavailable, participants described a good system in place for assessment of availability of and access to services. Federally Qualified Health Centers (FQHCs), Rural Health Clinics, and tribal health centers each do assessments of their communities to determine needs of underserved populations to understand and address barriers to accessing care.

Participants identified several vulnerable populations that experience substantial barriers in accessing health care, including individuals with mental health issues, the LGBT community, racial and ethnic minorities, residents of rural communities, non-English speakers, low-income populations, and seniors.

Participants described a number of efforts to address barriers to care for vulnerable communities. The first clinic in Mississippi specifically designed to address the specific health care needs of LGBT populations recently opened. The clinic is staffed with providers who are culturally competent in meeting the unique needs of this community. Federally Qualified Health Centers offer sliding scale health services according to a patient's ability to pay, and assist individuals in enrolling in insurance when they are eligible.

Participants also described many barriers that the system has not been able to address successfully. For example, Mississippi's health care system is structured in a manner that separates mental health care from primary health care, and services that would meet the true needs of individuals with mental health issues are often not provided because they are not reimbursable. Additionally, many self-employed individuals in the Vietnamese fishing communities in the coastal region are eligible for insurance for the first time through the Affordable Care Act. However, as many individuals in this community are first-time users of health insurance, they do not know how to navigate the healthcare system and lack access to culturally competent health services.

Participants also described root causes that they perceived as driving forces of health inequities in Mississippi. Educational and income inequity contribute to disparate health outcomes among vulnerable communities. Ensuring access to safe housing, quality education, and good jobs is as critical as ensuring access to health care in improving population health outcomes.

One strategy that would address some of the barriers to care that vulnerable Mississippi residents experience is the establishment of a statewide health insurance exchange to assure access to insurance coverage. Participants reported that while the public health system has advocated for the creation of such an exchange, this is a politically sensitive issue that does not have strong support across the state.

In dialogue around collaborative action to reduce health disparities, participants reported that efforts are often very siloed, and described that addressing disparities effectively requires a big picture approach and coordinated mobilization of resources. Participants noted that system partners do collaborate to address health disparities, but these collaborations have focused heavily on educating communities, which they described as low hanging fruit yielding marginal results. They stated that what is truly needed to reduce disparities is mobilization of resources to change the conditions that drive inequity by fostering economic development and creating safe, healthy environments by building sidewalks, parks, and safe housing. They acknowledged, however, that while system partners understand that policy and environmental change strategies are far more effective than education in creating health improvement, substantial political and systemic barriers exist that prevent partners

from successfully advancing these strategies. Participants reported that a task force was recently formed to create a state health disparities plan, which will seek to address these barriers and leverage resources to drive community change to increase health equity.

State-Local Relationships

Participants reported that Mississippi public health system partner organizations are engaged in provision of technical assistance to local public health systems on methods for assessing and meeting the needs of underserved populations, but the barrier to success in many cases is gathering local public health system representatives together to participate in assessment and improvement processes. Participants explained that this is due in part to the shortage in the public health workforce at the local level, making it hard for staff to attend trainings and participate in assessment and improvement processes.

Staffing shortages were also perceived as a key factor in limiting effectiveness of providing technical assistance to providers delivering personal healthcare services to vulnerable and underserved populations. While participants described a wide availability of trainings on many topics, including implementing culturally and linguistically accessible services and understanding the needs of special populations, they reported that many providers may be interested in building their knowledge and capacity in these areas but are unable to attend trainings because doing so would require shutting down clinic services if they are the sole providers at their clinics. One strategy to address this barrier is taking training and technical assistance resources directly to providers through site visits, though participants acknowledged that this is very costly.

Performance Management and Quality Improvement

In the dialogue around performance management, participants identified that the principle barrier to improving the quality of healthcare services is the lack of communication and data sharing among system partners. Individual partners are conducting reviews of healthcare quality by comparing their services against national standards and benchmarks and are assessing barriers to healthcare access, but there is very little coordination or collective effort in this area. Participants identified the need for an entity to lead this activity by bringing system partners together to connect the dots and examine collective performance, and suggested that the Mississippi State Department of Health is well suited to take on this role.

Capacity and Resources

Participants discussed that grant funding is insufficient in addressing barriers to health and access to care, because gaps are only filled on a short-term basis for the duration of the grant. Grants have also traditionally contributed to creation of silos, but participants described that funders are increasingly requiring partnerships between organizations to increase long-term sustainability. Participants suggested that sustainability planning should become a standard practice across the system whenever a new grant is received. Planning for sustainability up front can help foster long-term partnerships and ensure continuity of services when grant funding has expired.

In assessing how well partner organizations align and coordinate their efforts across the system, participants reiterated that there is a lack of communication among partners, so organizations are not well-informed about services that exist throughout the system, preventing proper alignment of activities. Participants stated that system partners must do a better job of marketing their services, and suggested that a statewide database summarizing services throughout the system may be needed.

A final capacity issue identified by participants was the lack of sufficient staffing throughout the public health system to carry out the functions of linking people to health care services. Health department representatives reported that it is difficult for the state to recruit personnel that have the skill set required based on what the state can afford to pay them. While workforce capacity needs to be increased throughout the system, participants highlighted a particular need for additional IT expertise to carry out healthcare monitoring and analysis activities as well as linguistic and cultural expertise to carry out service delivery effectively.

Strengths

Quality Health Care

- There is a strong desire among health care providers to provide the best care they can to the public.

- FQHCs do a great job of outreach to vulnerable populations and linking them to care.

- The first clinic in Mississippi specially designed to meet the special healthcare needs of the LGBT community recently opened.

Weaknesses

Coordination and Alignment

- Siloing of mental health and primary health care in the state results in disjointed and inadequate care for individuals with mental illnesses.

Vulnerable Populations

- Outreach and access to appropriate services for vulnerable populations is very low, particularly for individuals with mental illnesses, LGBT, and non-English speaking populations.

- Unmet demand for language interpreters and culturally sensitive health care

- While technical assistance services are being offered to providers on how to adequately serve vulnerable populations, providers face barriers in accessing these services because they cannot leave their clinics to attend training.

- Because the state has experienced so many disasters, communities exist in a disaster mindset, in which people have to focus efforts on immediate needs rather than investing in long-term improvements.

- Vulnerable residents living in rural communities are particularly underserved by a lack of services and providers.

- There has been a lack of action to address the social determinants of health.

Funding

- The system is not adequately funded to properly provide health care services to meet the level of need in the state.

- The system is too reliant on grant funding, so the system does a great job providing services for two or three years during a grant period, but cannot create sustainable services due to the short-term nature of grant funding.

- There are severe gaps in mental health care, and funding streams are incapable of meeting the rising level of need.

- State agencies lack adequate funding to be competitive in attracting and retaining staff with appropriate expertise.

- There is a high rate of uninsured individuals (about 25% of non-elderly adults are uninsured) in the state, decreasing access to care, (especially ongoing chronic disease care).

State Health Insurance Exchange

- Political barriers have prevented the development of a state individual health insurance exchange.

Short Term Opportunities for Improvement

Community Engagement

- Increase outreach and engagement to vulnerable populations to involve them in planning and program development efforts to ensure that these efforts are effective.

- Improve community participation in local community health assessments.

Healthcare Quality

- Ensure that we give providers opportunities to leave work to get the training they need to provide the best health care possible.

Health Literacy

- Begin healthcare literacy efforts among high school age youth.

- Increase education efforts to newly covered populations on how to use their insurance.

- Increase usage of peer to peer learning models to provide health education and support navigation of the health care system among vulnerable populations.

Sustainability Planning

- When new grants are secured, convene partners to engage in sustainability planning to ensure that work is carried on after funding ends.

Coordination and Alignment

- Create a resource database to document services throughout the state.

Long Term Opportunities for Improvement

Barriers to Care

- Develop capacity in telehealth services to increase access to care for rural populations.

- Share assessment data to inform strategies to address barriers to care.

Coordination and Alignment

- Break down silos and share resources to collectively improve performance across the system.

- Integrate mental health services into primary care to meet the needs of Mississippi residents.

Health Inequities

- Address health disparities through policy, systems, and environmental change strategies to tackle the root causes of poor health.

Workforce

- Ensure that providers have the training and tools to appropriately provide care for people living in poverty.

- Develop a network of community health workers that can help address gaps in underserved communities.

- Invest in workforce capacity to help vulnerable populations navigate the health care system so they can access services.

- Invest in growing IT expertise among the public health workforce.

- Build system capacity to provide culturally and linguistically appropriate care to diverse and vulnerable populations.

Advancing Best Practices

- Use best practice models to address the needs of vulnerable populations and standardize performance system-wide.

Essential Service 8: Assure a Competent Public Health and Personal Healthcare Workforce

Participant dialogue to assess performance for Essential Public Health Service 8 explored the following key questions:

- **What's going on in our state?**
- **Is our workforce informed and up to date?**

Ensuring a competent public and personal health care workforce encompasses the following:

- Education, training, development, and assessment of health professionals—including partners, volunteers, and community health workers—to meet statewide needs for public and personal health services

- Efficient processes for credentialing technical and professional health personnel

- Adoption of continuous quality improvement and life-long learning programs

- Partnerships among professional workforce development programs to assure relevant learning experiences for all participants

- Continuing education in management, cultural competence, and leadership development programs
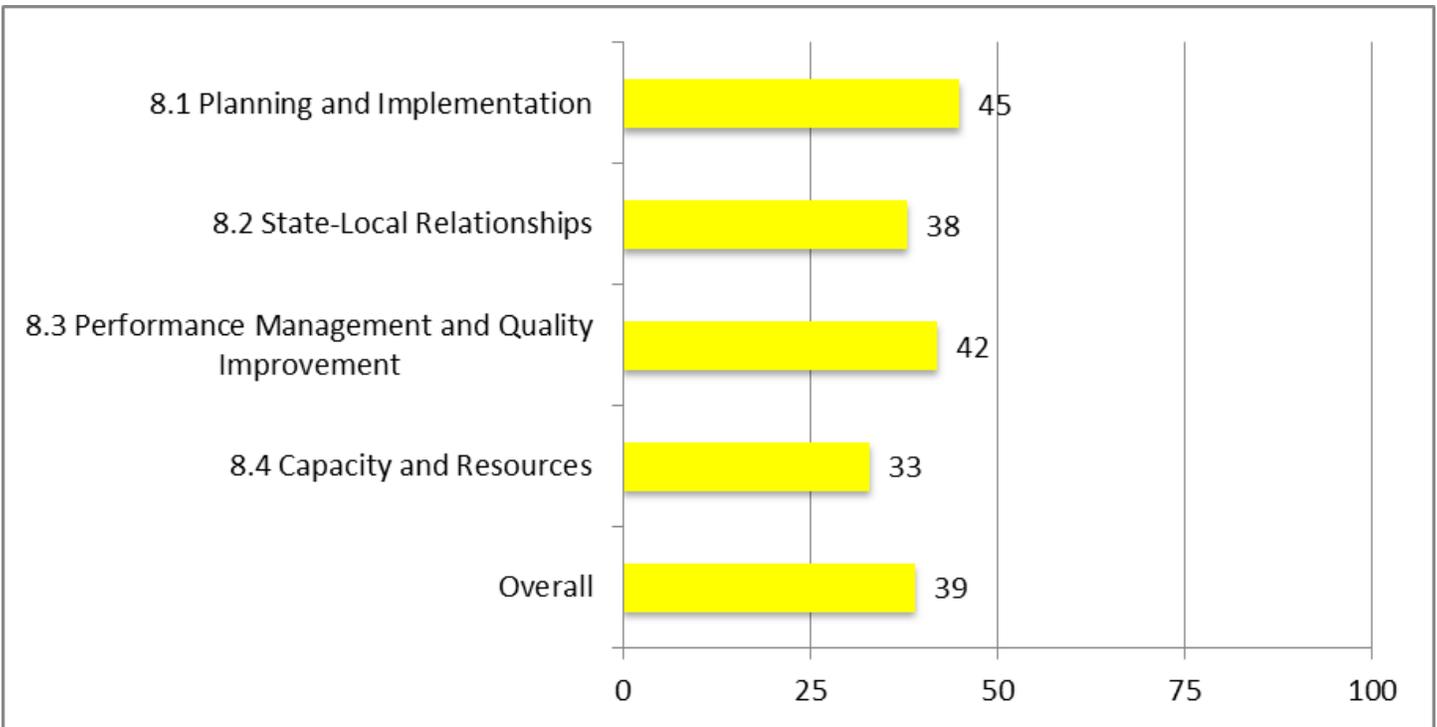
Overall performance for Essential Service 8 was scored as moderate, and all model standards scored in the moderate range. Performance for Essential Service 8 was ranked seventh out of the 10 Essential Services.

Essential Service 8 Summary

Planning and Implementation

In dialogue around the extent to which the public health system has developed a statewide workforce plan establishing strategies and actions to train, recruit, and maintain a competent public health workforce, participants noted that while some individual organizations are conducting workforce assessments to identify gaps and to determine future training priorities, there is no centralized collective plan to develop and sustain the public health workforce in Mississippi. Representatives of organizations advancing the personal healthcare workforce, such as the Mississippi Hospital Association and the Office of Nursing Workforce, described good assessment processes in place that drive their sector-specific workforce development strategies, but participants reported very little corresponding activity for the population-based health workforce.

Participants were aware of a few isolated efforts to develop the population-based workforce, but perceived that activity has been very disconnected due to disjointed funding and competing priorities. Participants noted that university partners often play a central role in driving workforce development planning, and the lack of an accredited school of public health in the state contributes to the lack of workforce planning for population-based public health. In the absence of an accredited school of public health, participants suggested that the Mississippi State Department of Health would be well-suited to coordinate the development of a workforce development plan, though they cautioned that the many silos across the health department would create barriers to coordinating efforts for an integrative plan.

Participants agreed that both the population-based and personal healthcare workforce would benefit from a formalized statewide workforce development plan to coordinate resources and efforts across the system to strategically address gaps and needs in the public health workforce. The public health system can benefit from the progress and lessons learned from the personal healthcare sectors' workforce development efforts to inform the creation of a system-wide workforce plan.

One component that will be critical to include in the development of a system-wide public health workforce plan beyond assuring adequate recruitment and appropriate technical and professional competencies is the inclusion of strategies to ensure retention of a highly skilled workforce. Participants reported that funding shortages, particularly among state agencies, make it difficult to attract and retain qualified workers because salaries are low and there is a lack of career advancement opportunities.

State-Local Relationships

In dialogue around the system's provision of support and technical assistance for local public health system workforce assessment and development, participants reported minimal support for local workforce assessment and development, as there are few resources at the state level to dedicate to building local capacity. Participants reported that the system is doing a better job of providing training to build and maintain public health workforce capacity and skills, and identified several partners that offer training opportunities across the state, including the Mississippi Hospital Association, the Mississippi State Department of Health, and universities. They cautioned, however, that training opportunities are less and less frequent due to increasing budget shortages. Other barriers preventing staff from taking advantage of the training opportunities that do still exist include inadequate marketing to inform staff and insufficient staffing levels that make it hard for an employee to miss work to attend training.

Performance Management and Quality Improvement

Discussions around system performance in reviewing and evaluating workforce development activity indicated that this activity takes place on an informal basis, but there is no collective systematic review of performance in this area. This underscores the need for the development of a formal system-level workforce development plan, which could include an evaluation component to ensure that this activity takes place. Participants reported that discussions have taken place among partners across the system regarding inadequate numbers of students graduating in public health, nursing, and medicine to meet the needs of the state, which again emphasizes the importance of convening partners together to create a shared plan to address these gaps.

One example where review of workforce development activities informed a subsequent change in the public health workforce development strategy is in the area of nursing. A representative from the nursing workforce reported that reviews of workforce development strategies revealed that nursing schools were overemphasizing acute care and were not adequately preparing students to deliver population-based health, so curriculum changes were made to address this gap in training.

Capacity and Resources

Participants also discussed allocation of resources and coordination of efforts, alignment of plans, and investment in resources to make sure the workforce is competent and up to date. The greatest gap is insufficient and diminishing financial resources, which makes it challenging to support workforce development efforts. Each agency allocates what it can, but resources are substantially lower than the level of need, and budget cuts across the system continue to decrease capacity to address workforce development, even as the need increases.

Participants reported very little alignment and coordination of efforts to conduct workforce development activities, stating that collaboration was more frequent when resources were greater. While pooling collective resources and efforts to develop a system-level workforce development plan is more efficient than siloed activity, participants cautioned that many organizations are too financially strained to send staff to meetings that would bring system partners together to create a shared plan. Improving capacity to address the growing need for systematic, coordinated action to develop the public health workforce will require additional allocation of financial resources to be successful.

There is no school of public health in the state.

Strengths

Workforce Development

- Many individual partner agencies have workforce development plans, particularly in the personal healthcare sector.

- There are good training opportunities for the licensed personal health care workforce.

Weaknesses

Coordination and Alignment

- While individual agencies have workforce development plans, there is a lack of coordinated effort across the system.

Investment in the Public Health Workforce

- The state lacks training for population-based health workforce, and there is no school of public health in Mississippi.

- There is a lack of funding for salaries and career advancement makes it hard to attract and retain public health professionals with appropriate expertise, particularly in state agencies.

- As need for workforce development activities rises, budgets to fund this work are diminishing.

- Many public health partner organizations lack career ladders, making it difficult to retain employees.

Short Term Opportunities for Improvement

Workforce Assessment and Training

- Use the new core public health competencies developed by the Council on Linkages to assess what is needed to develop Mississippi's public health workforce, and develop a training curriculum based on these competencies. Reference core competencies when advertising training opportunities.

- Create a crosswalk between public health core competencies and core competencies for other professionals to identify and leverage training opportunities in other sectors.

- Conduct a population-based health workforce assessment to inform the creation of a workforce development plan.

- Increase training opportunities for the population-based health workforce.

- Create a certification and training process for community health workers.

Long Term Opportunities for Improvement

Workforce Development

- Work with partners to develop a plan for the creation of a school of public health.

- Create a statewide public health workforce development plan.

- Prepare the workforce to better serve vulnerable populations, including individuals with disabilities and foster children.

- Establish an accredited school of public health in Mississippi to drive and coordinate public health workforce development.

- Work with the community college system to develop a training program on water system management.

Essential Service 9:
Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-Based Health Services

Participant dialogue to assess performance for Essential Public Health Service 9 explored the following key questions:

- **What's going on in our state?**

- **How are our services performing?**

Evaluating effectiveness, accessibility, and quality of personal and population-based health services encompasses the following:

- Evaluation and critical review of health programs, services, and systems to determine program effectiveness and to provide information necessary for allocating resources and reshaping programs for improved efficiency, effectiveness, and quality

- Assessment of and quality improvement in the state public health system's performance and capacity
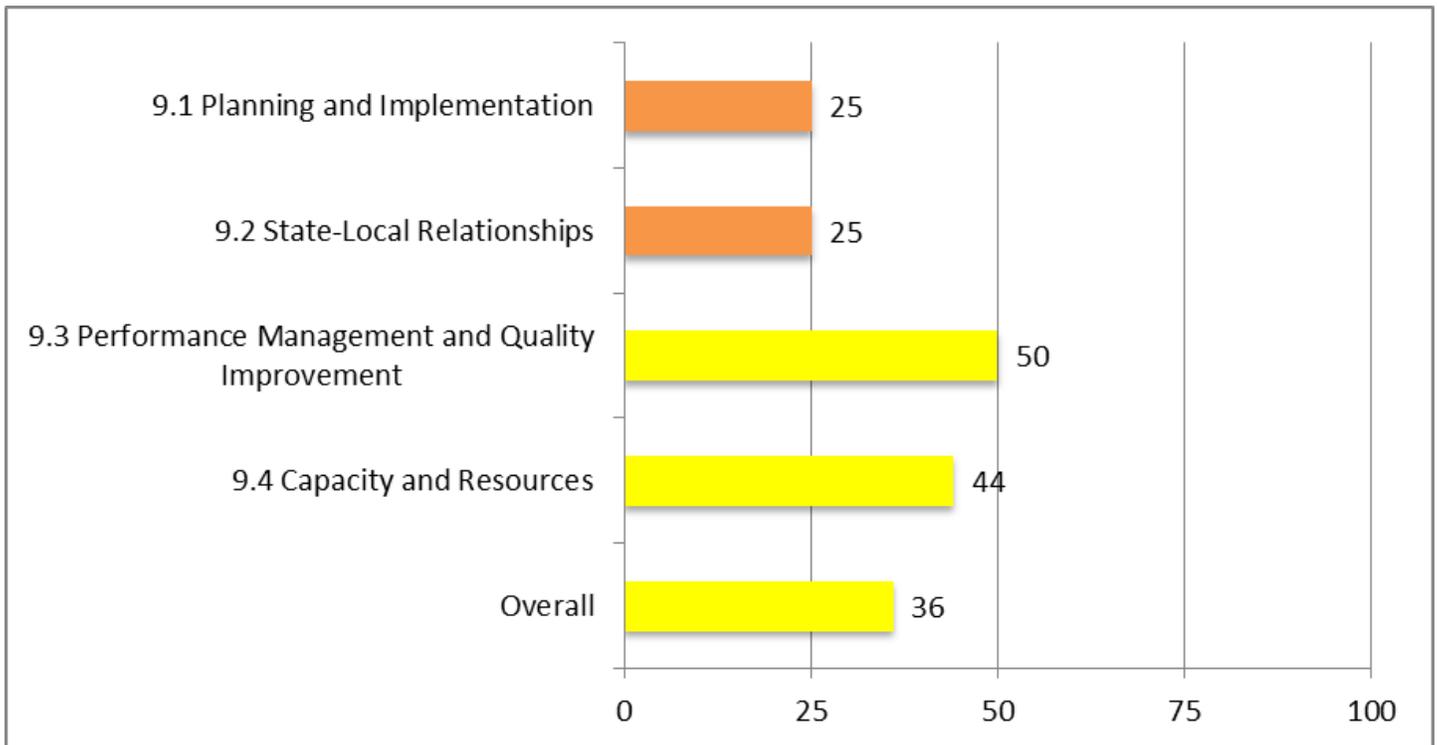
Overall performance for Essential Service 9 was scored as moderate. Planning and Implementation and State-Local Relationships received high minimal scores and Performance Management and Quality Improvement and Capacity and Resources received high moderate scores. Performance for Essential Service 9 was ranked eighth out of the 10 Essential Services.

Essential Service 9 Summary

Planning and Implementation

In dialogue around system performance in evaluation of public health services, participants reported that individual organizations throughout the public health system are beginning to evaluate effectiveness of their services more and more, noting that funders are increasingly requiring grantees to evaluate their programs to demonstrate the impact of their activities.

Evaluation is frequently done within the realm of personal health care services, but more resources must be allocated to evaluation of population-based health services. Participants identified tobacco cessation efforts as the only example they could think of doing a great job of evaluating a population-based service because they are sufficiently funded to be able to carry out evaluations to demonstrate their impact.

While many individual organizations are evaluating their services, partners are not aware of what other organizations are doing, highlighting the need for greater communication and sharing of evaluation results to improve collective system performance improvement. Participants acknowledged that there is an understandable reluctance among organizations to share unflattering evaluation results with partners. They called for a culture shift toward increasing system-wide transparency, in which partners across the system can collectively commit to sharing evaluation results for joint learning. This also requires a shift in our mindset toward treating areas of weakness as opportunities for growth instead of perceiving them as failures. Participants acknowledged that there are barriers to achieving this shift toward transparency, noting that it may be politically risky to share information about areas where we are performing poorly. Again, this underscores the need for a system-wide culture shift grounded in the goal of improving our performance as a collective public health system.

One area where work is in its very beginning stages is evaluation of the performance and collective capacity of the state public health system. Participants reported that the State Public Health System Assessment is one of the first attempts they are aware of to bring state partners together to discuss performance as a public health system. The first step to increasing activity in this area is for partners to break out of organizational silos and start thinking of themselves as players within a larger system that is collectively working toward the common goal of improving the health of the public.

One strength highlighted within this essential service is that organizations across the state public health system do well in seeking and securing certification, accreditation, licensure, and other designations of high-performing organizations. Participants cited many examples of entities that routinely engage in this activity to assure that high quality standards are maintained.

State-Local Relationships

Participants identified that an area where growth is needed is in increasing evaluation competencies as a system. Greater resources should be allocated to provision of technical assistance to local public health systems in their evaluation activities. Many organizations currently lack evaluation expertise, which they will need to develop to stay competitive for grants as funders are increasingly requiring reporting of evaluation data to demonstrate program impact.

Discussions also revealed that while staff from the Mississippi State Department of Health collect a great deal of evaluation data from partners across the system, these partners lack understanding of what this data is used

for and how to access it. Health Department staff in charge of collecting and managing this data were not aware of the challenges partners face in accessing data, and discussed the need for improved dissemination of the information and training on how to navigate the Health Department's website and data systems. Building system capacity to navigate this data will inform system performance and will allow organizations to be more data-driven in program planning.

Performance Management and Quality Improvement

Dialogue around system performance management and quality improvement revealed that while individual organizations evaluate and measure their progress and implement plans to address areas where they are falling short, these activities are very siloed. Partners were not aware of each other's evaluation activities, and as previously discussed, results of these evaluations are not shared to inform collective improvement.

Participants highlighted several good examples where system partners are using shared measures to evaluate collective performance to advance system improvement, including the state's Community Health Centers and Systems of Care. The public health system is currently working toward the development of statewide priorities and shared measures to monitor collective progress in addressing these priorities through the State Health Improvement Plan (SHIP) process.

Capacity and Resources

In discussions of the system's capacity and resources for evaluating public health services, participants reported that there are very few financial resources available for evaluation, which limits activity in this area. However, as funders are building evaluation requirements into grants, partner organizations must increase their capacity to measure and assess the impact of their funding and to create quality improvement plans when measures fall short. State organizations can increase local public health system capacity through provision of training and technical assistance, but participants cautioned that few individuals in the public health workforce are skilled in both analysis of evaluation data and translation of this data to individuals without this expertise.

Strengths

Best Practice Examples

- The state's tobacco prevention programs have robust evaluation processes.

- Systems of Care and Community Health Centers offer best practice examples for creating shared evaluation measures.

Weaknesses

Coordination and Alignment

- Partners individually collect a lot of evaluation data, but do not disseminate and share data to leverage for collective, system-wide quality improvement.

Technical Assistance

- The public health system is in need of additional technical assistance to build capacity in evaluation and quality improvement.

Funding

- There is very little funding available for evaluation activities.

Short Term Opportunities for Improvement

Health Literacy

- The system should work toward disseminating data in simple, lay terms so the average Mississippi citizen can read, analyze, and understand it.

Coordination and Alignment

- Develop shared measures to monitor success across the health system through the State Health Improvement Plan (SHIP) process.

Vulnerable Populations

- When designing evaluation plans, ensure special consideration is being paid to programmatic impact on vulnerable populations like seniors and children.

Long Term Opportunities for Improvement

Coordination and Alignment

- Enhance collaboration and engagement among partners to increase evaluation and quality improvement efforts system-wide.

- Create a statewide evaluation tool that all public health system partners can measure themselves against.

- Because funders are increasingly requiring programs to demonstrate their impact, build system-wide evaluation capacity so organizations can be competitive for grants.

- Build on momentum created through the State Public Health System Assessment to create a process for evaluation of systems capacity.

- Foster a culture of transparency in sharing evaluation results to drive system-wide quality improvement.

Essential Service 10:
Research for New Insights and Innovative Solutions to Health Problems

Participant dialogue to assess performance for Essential Public Health Service 10 explored the following key questions:

- **What's going on in our state?**

- **Do we participate in research activities?**

Researching for new insights and innovative solutions to health problems encompasses the following:

- A full continuum of research ranging from field-based efforts to foster improvements in public health practice to formal scientific research

- Linkage with research institutions and other institutions of higher learning to identify and apply innovative solutions and cutting-edge research to improve public health performance

- Internal capacity to mount timely epidemiologic and economic analyses and conduct needed health services research
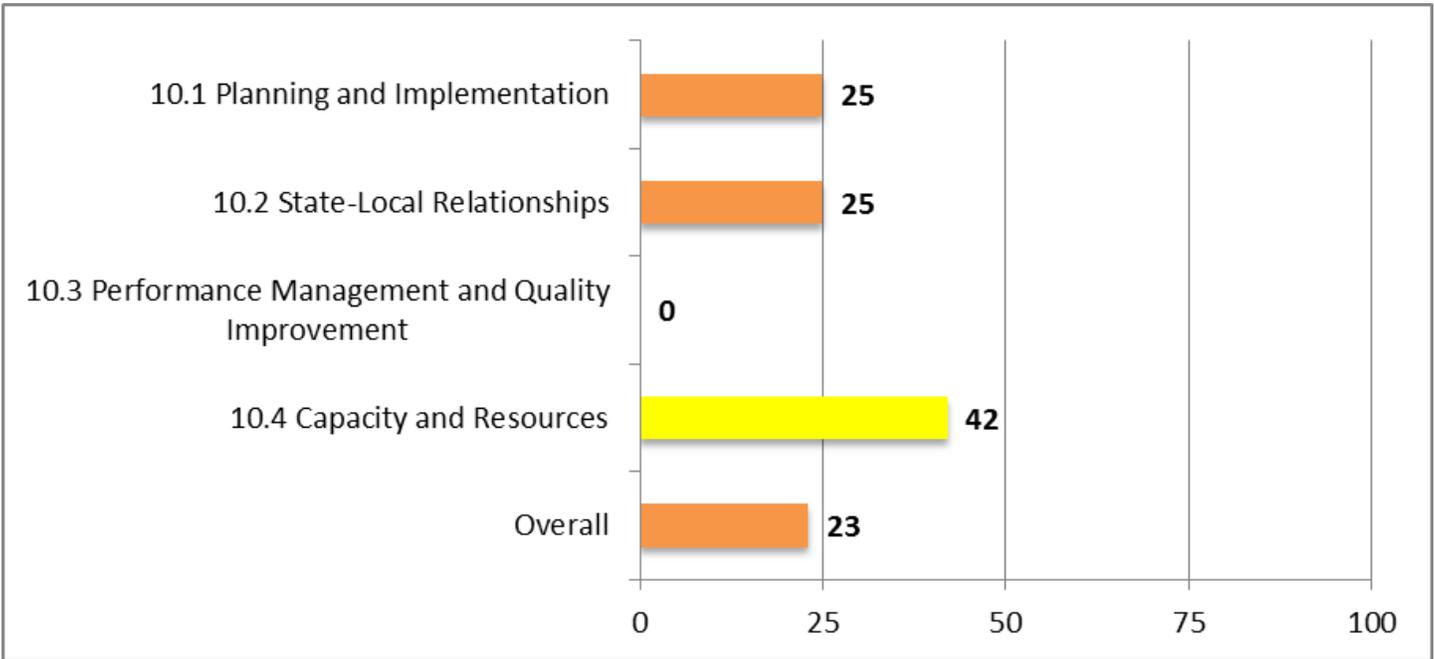
Overall performance for Essential Service 10 was scored as minimal. Planning and Implementation and State-Local Relationships received high minimal scores, and Capacity and Resources scored in the moderate range. Performance Management and Quality Improvement was the only model standard of the assessment to receive a score of no activity. Performance for Essential Service 10 was ranked the lowest out of the 10 Essential Services.

Essential Service 10 Summary

Planning and Implementation

In discussing the extent to which the state public health system engages in research, participants reported that state universities are conducting research to contribute to the health science evidence base, particularly among doctoral students in nursing. They perceived that universities have some experience in publishing research, but the big gap where further activity is needed is in filtering research results down to public health practitioners by translating and disseminating research findings. A university representative stated that academic institutions in the state are increasingly recognizing the importance of shifting from bench research to translational research to increase applicability to the practice field.

Another gap participants identified within this essential service is that the state lacks a coordinated public health research agenda, due in part to the absence of an accredited school of public health that can establish such an agenda. Instead, research activities in the state are driven by availability of funding rather than by the level of priority or applicability to the Mississippi public health system. Participants suggested that partners should come together to collectively prioritize important research topics for the public health system and then seek funding to study them. This would facilitate the expansion of the evidence base for the issues that have the greatest health impact in Mississippi, like chronic diseases and drug abuse. Participants suggested that the establishment of an accredited school of public health in the state is an important opportunity, which they believe would drive the creation of a public health research agenda for Mississippi, as well as disseminate health research findings and help to translate these findings for application in public health practice.

State-Local Relationships

In dialogue around the extent to which the system provides technical assistance to local public health systems to conduct and participate in research, participants perceived that local public health systems are so stretched for resources that they do not have the capacity for research and innovation as they have to concentrate all their efforts on delivering basic public health services.

While local public health systems likely lack the capacity to conduct their own research, participants reported growing interest in community-based participatory research. Traditionally when researchers at academic institutions conduct community-level research, they come into the community to study it without any involvement from community members in the research process. Community-based participatory research is a collaborative methodology that engages community members as equal partners in driving the research process. While participants were not aware of any community based participatory research in the state thus far, they reported that this would be a good opportunity to build local capacity for engaging in research and would give local communities a voice in determining research priorities that matter to them.

Participants reported that system partners assist local public health systems in their use of research findings by helping in the interpretation, dissemination and application of research studies and findings to support the adoption of evidence-based public health practice. However, this only takes place at a minimal level and these efforts should be increased. One way that the Mississippi State Department of Health is working to build local capacity in this area is through offering a course to community based organizations to improve their knowledge of research and evidence based public health so they can integrate research findings and evidence-based practices to their work. This course is currently being offered in Jackson, but MSDH has plans to offer this training across the state if this pilot training is successful.

Performance Management and Quality Improvement

Participants were not aware of any collective activity taking place among state public health system partner organizations to review research activities to continually improve performance to ensure innovation and high quality research. Participants said that this may be happening on a very small scale among individual universities and research institutions, but they were unaware of any examples of partner organizations working together to review research activities in the state. This is an area for growth moving forward.

Capacity and Resources

In dialogue around research capacity and resources throughout the state, participants agreed that minimal financial resources are available to conduct research relevant to health improvement in the state, and reported very little coordinated alignment of efforts to conduct research. However, capacity and resources were assessed as the highest performing component of Essential Service 10 because participants reported that the public health system has the professional expertise to carry out public health research, including skills in public health systems research, epidemiology, biostatistics, applying research findings to practice, and writing research proposals to pursue findings. They noted the caveat that the missing element in the public health research workforce is a sufficient cadre of researchers, particularly epidemiologists and biostatisticians. Essentially, although the existing research workforce is skilled, it's size is too small to reach the desired level of research activity.

Strengths

Advancing Best Practices and Evidence-Based Health

- Universities are conducting research and are publishing findings to contribute to the health science evidence base.

- System partners try to disseminate research findings to the practice field to increase the use of evidence based practices.

Workforce Capacity

- The public health system has staff with the relevant subject matter expertise to conduct public health research.

Weaknesses

Funding

- The state public health system does not have adequate funding to conduct research.

- Grant restrictions reduce the system's capacity to conduct research.

Coordination and Alignment

- Mississippi currently lacks a school of public health and a statewide public health research agenda.

Short Term Opportunities for Improvement

Workforce Capacity

• Work to increase public health workforce in epidemiology and biostatistics.

• Improve capacity to conduct community-based participatory research at the local level.

Long Term Opportunities for Improvement

Coordination and Alignment

• Create a coordinated research agenda for the state.

• Establish an accredited school of public health that could create an infrastructure to connect the dots of siloed research efforts across the state and maintain a research agenda.

Conclusion: Key Findings from the Mississippi State Public Health System Assessment

Mississippi's first State Public Health System Assessment revealed a number of key areas of excellence for the public health system, including robust health hazard surveillance, national recognition for excellence in emergency preparedness, and strong relationships among system partners. Areas for improvement identified include strengthening funding and public support for public health, investing in workforce development, advancing chronic disease prevention and fostering a culture of health across the state, and increasing strategic alignment and coordination of public health efforts throughout the system.

Assessment participants described a strong health surveillance and monitoring system, particularly for emergent health threats like infectious diseases. The system does an excellent job of responding when new threats emerge, and has robust communication systems in place to inform health providers and the public about disease prevention and mitigation. However, while the system excels in surveillance of acute conditions, participants identified the need to strengthen the system's capacity in surveillance and response to long-term problems like chronic disease and infant mortality.

Mississippi leads the nation in emergency preparedness and rapid response expertise. The public health system has robust emergency plans in place at the state and local levels, and can quickly target areas where need is greatest and mobilize to deliver assistance and resources efficiently and effectively. Participants identified that strong partnerships among multiple stakeholders working in alignment with a very clear plan have been key to the system's success in this area. While participants reported that the Mississippi Public Health System excels in acute crises, they cautioned that the system is not as effective in mobilizing and responding to chronic problems that have reached a crisis level, like obesity. Participants recommended that the system should look to its best practice examples in emergency planning and response to inform strategies to address long-term crises, including developing coordinated strategic plans to align health improvement activities.

Chronic disease emerged as a key area of concern for assessment participants. Mississippi has some of the poorest rates of chronic disease risk factors and health outcomes in the country. Participants identified that social determinants of health play an important role in the state's high obesity and chronic disease rates, and reported that while the public health system's response has mostly entailed addressing low-hanging fruit like health education, achieving substantial and sustained improvement will require environmental and policy change strategies. Participants emphasized the importance of fostering a culture of health in Mississippi that focuses on building communities that facilitate good health.

A recurring theme that emerged throughout all the discussions in the assessment was that low funding, lack of public support for public health, and workforce shortages limit the capacity of the public health system in achieving health improvements for the people of Mississippi. Participants reported that the system has many assets in place, including strong partnerships and documented successes in tobacco cessation, emergency preparedness and response, and childhood obesity prevention. However, the public health system will require greater funding and support to function at its highest potential capacity and effectively address the state's most pressing health crises.

Appendices

Appendix 1. List of Participating Organizations

Constituency Represented	Organization
Businesses	Dependable Source Corporation
	Mississippi Restaurant Association
Coalitions	Mississippi Business Group on Health
	Mississippi Coalition for Vietnamese-American Fisher Folks and Families
Colleges and Universities	Jackson State University
	Mississippi Institutes of Higher Learning
	University of Alabama at Birmingham School of Public Health
	University of Southern Mississippi
	William Care University College of Osteopathic Medicine
Community-Based Organizations	Catholic Charities Jackson
	Innovative Behavioral Services, Inc.
	Jackson Roadmap to Health Equity Project
	My Brother's Keeper
	United Way of the Capital Area
Hospitals/Health Systems	Jackson-Hinds Comprehensive Health Center
	Mississippi Hospital Association
	University of Mississippi Medical Center
Insurance Providers	Blue Cross Blue Shield of Mississippi
State Health Department	Mississippi State Department of Health
Federal Government	Housing and Urban Development
State Government	Mississippi Board of Nursing
	Mississippi Department of Agriculture
	Mississippi Department of Environmental Quality
	Mississippi Department of Human Services
	Mississippi Department of Mental Health
	Mississippi Department of Rehabilitation Services
	Mississippi Division of Medicaid

State Government	Mississippi Joint Legislative Committee on Performance Evaluation and Expenditure Review
	Mississippi State Board of Health
Local Government	City of Jackson
	Madison County Citizens Services Agency
Tribal Government	Choctaw Health Center
Non-profit & Advocacy	American Cancer Society Cancer Action Network
	American Heart Association
	American Lung Association
	Arts Klassical, Inc.
	Bower Foundation
	Center for Mississippi Health Policy
	Central Mississippi Area Health Education Center
	Common Health Action
	Eliza Pillars Registered Nurses of Mississippi
	Families as Allies
	Foundation for the Mid South
	I-HELP Inc.
	Information & Quality Healthcare
	March of Dimes
	Mississippi Center for Justice
	Mississippi Farm Bureau Federation
	Mississippi Medical and Surgical Association
	Mississippi Migrant Education Service center
	Mississippi Office of Nursing Workforce
	Mississippi Primary Healthcare Association
	Mississippi Public Health Association
	Mississippi Public Health Institute
	Mississippi Rural Health Association
	Mississippi Rural Water Association
	Mississippi Society for Disabilities
	National Coalition of 100 Black Women-Central Mississippi Chapter
	NMHS Unlimited/The Good Life

Appendix 2: Essential Service Scores

EPHS 1. Monitor Health Status To Identify Community Health Problems

1.1 Planning and Implementation

The partner organizations in the SPHS work collaboratively to measure, analyze, and communicate about the health status of the state's population. The state's health status is monitored through the collection, analysis, reporting, and use of data describing critical indicators of health, illness, and health resources. Data on the health of the state's population includes:

- Vital statistics, including births and deaths.

- Use of personal healthcare services.

- Environmental and socioeconomic conditions that impact health.

- Infectious diseases.

- Chronic diseases.

- Injuries.

- Behavioral risk factors.

- Mental health.

- Substance abuse.

These data are analyzed, disseminated, and widely used by systems partners to better understand health needs, focus program and service activities, and assess progress in achieving desired health outcomes. Monitoring health is a collaborative effort involving many state public health partners and local public health systems, including physicians, hospitals, and other healthcare facilities, state and local governmental public health agencies, and other reporters and managers of health information.

The effective communication of health data and information is a primary goal of all systems partners that participate in this effort to generate new knowledge about health in the state. End-users of health data utilize this knowledge about the state's health results in more effective improvement plans, resource development, and services to meet population health needs.

To accomplish these results, the partner organizations in the SPHS:

- Develop and maintain programs that collect health-related data to measure the state's health status.

- Produce useful data and information products that are accessible to a variety of data users, including a state health need assessment (comprehensive, every few years) and state health profiles (shorter, more focused, more frequent) that routinely report on the prevailing health of the people of the state.

- Operate a data reporting system for receiving and transmitting information regarding reportable diseases and other potential public health threats.

1.1.1 **Maintenance of data collections and monitoring programs**..**75**
1.1.2 **Accessibility of health data**..**50**
1.1.3 **Collective work to maintain a data reporting system**..**100**

1.2 State-Local Relationships

The partner organizations in the SPHS work with local public health systems to provide assistance, capacity building, and resources for local efforts to monitor health status and identify health problems. Many partner organizations within the SPHS support local agencies to carry out their mission locally, including, but not limited to, the state public health agency, the state hospital association, the state mental health and substance abuse agency, the state heart association, the state United Way, and the state Red Cross. Each of these statewide organizations is active in support of its local members or counterparts, who are themselves partners in local public health systems. Results of good state-local relationships are increased cooperation locally to collect and use health data for planning and improved service delivery.

To accomplish these results, the partner organizations in the SPHS:

- Assist in the interpretation, use, and dissemination of local health data.

- Provide a standard set of health-related data to local public health systems and assist them in accessing, interpreting, and applying these data in policy, planning, and program and service development activities.

- Assist in the development of information systems needed to monitor health status at the local level.

1.3 Performance Management and Quality Improvement

The partner organizations in the SPHS review the effectiveness of their performance in monitoring health status. SPHS partner organizations actively use the information from these reviews to continuously improve the quality of monitoring efforts. System-wide collaborative approaches for review, evaluation, and performance management are essential to improve health status monitoring. In their efforts to measure and improve performance, SPHS partner organizations use performance management approaches in their respective organizations and contribute to collective SPHS activities to measure progress in system-wide performance. Active improvement processes based on rigorous reviews of SPHS performance produce more efficient and user-friendly methods of data collection and more effective and relevant data products.

To accomplish these results, the partner organizations in the SPHS:

- Review the effectiveness of their efforts to monitor health status to determine the relevance of existing health data and its effectiveness in meeting user needs.

- Manage the overall performance of health status monitoring activities in the state for the purpose of quality improvement.

1.4 Capacity and Resources

SPHS partner organizations effectively invest in and utilize human, information, technology, organizational, and financial resources to monitor health status and to identify health problems in the state. Coordinated use of system assets is grounded in the alignment of organizational strategic plans around collective efforts in health status monitoring. The state public health agency enhances the capacity of the SPHS by its leadership in this service. The workforce of SPHS partner organizations coordinates collective system-wide activities. These investments by all SPHS partner organizations are essential to support a well-functioning system capable of carrying out and improving health status monitoring activities. To accomplish these results, the partner organizations in the SPHS:

• Commit adequate financial resources to monitoring health status.

• Align organizational relationships to focus statewide assets on monitoring health status.

• Use a workforce skilled in collecting, analyzing, disseminating, and communicating health status data and maintaining data management systems.

EPHS 2. Diagnose and Investigate Health Problems and Health Hazards

2.1 Planning and Implementation

The partner organizations in the SPHS work collaboratively to identify and respond to public health threats, including infectious disease outbreaks, chronic disease prevalence, the incidence of serious injuries, environmental contaminations, the occurrence of natural disasters, the risk of exposure to chemical and biological hazards, and other threats. The collection of data through surveillance, the examination of threats and hazards in a laboratory setting, and the analysis of disease patterns by epidemiologists together form a core diagnostic function in the state public health system. Mounting an appropriate response to disease outbreaks, unacceptable chronic disease prevalence, or a bioterrorism threat requires solid and credible information and analysis to understand the scope and causes of the problem.

Active participation of many SPHS partner organizations is needed for effective diagnosis and investigation of health problems. In addition to the leadership of the state public health agency, the contributions of other entities are essential, including hospitals, physicians, nurses, emergency management agencies, public and private clinical and environmental laboratories, local health departments, first responders, epidemiologists, and experts in chronic diseases, infectious diseases, injuries, and environmental toxicology.

The maintenance of a well-functioning diagnosis and investigation system within the SPHS produces critically important outputs. Credible information gathering and analysis of health problems increases the understanding of the public and the decision makers about appropriate responses. SPHS partner organization responses to health problems can be better targeted to affected populations and designed to address the causes of the problem. The evidence base for collective public health actions begins with a solid diagnosis and investigation function within the SPHS.

To accomplish these results, the partner organizations in the SPHS:

- Operate a broad scope of surveillance and epidemiology services to identify and analyze health problems and threats to the health of the state's population.

- Establish and maintain the capability to initiate enhanced surveillance in the event of an emergency

- Organize public and private laboratories in the state into an effectively functioning laboratory system.

- Use public and private laboratories that have the capacity to analyze clinical and environmental specimens in the event of suspected exposures and disease outbreaks.

- Respond to public health problems and hazards.

2.1.1 Surveillance and epidemiology activities that identify and analyze health problems and threats......**100**
2.1.2 Capability to rapidly initiate enhance surveillance when needed...**100**
2.1.3 Organization of a well-functioning laboratory system...**100**
2.1.4 In-state laboratory capacity to analyze clinical and environmental specimens..**75**
2.1.5 Coordinated response to identified public health threats...**100**

2.2 State-Local Relationships

The partner organizations in the SPHS work with local public health systems to provide assistance, capacity building, and resources for local efforts to identify, analyze, and respond to public health problems and threats. Many organizations within the SPHS support local agencies to carry out their mission locally, including, but not limited to, the state public health agency, the state hospital association, the state mental health and substance abuse agency, the state heart association, the state United Way, and the state Red Cross. Each of these statewide organizations is active in support of its local members or counterparts, who are themselves partners in local public health systems. Results of good state-local relationships are increased cooperation in the collection and use of disease-specific data. Organizations in the local public health system are more prepared to use data and evidence in the design of program interventions to mitigate health problems.

To accomplish these results, the partner organizations in the SPHS:

- Provide information and guidance about possible public health threats and appropriate responses to these threats by local public health systems.

- Assist local public health systems in the interpretation of epidemiologic analyses and laboratory findings.

2.2.1 Assistance to local public health systems in interpretation of epidemiologic and laboratory findings **75**
2.2.2 Guidance to local public health system on public health problems and threats...**75**

2.3 Performance Management and Quality Improvement

The partner organizations in the SPHS review the effectiveness of their performance in diagnosing and investigating health problems. SPHS partner organizations actively use the information from these reviews to continuously improve the quality and responsiveness of their efforts. System-wide collaborative approaches for review, evaluation, and performance management are essential to improve diagnosis and investigation services.

In their efforts to measure and improve performance, SPHS partner organizations use performance management approaches in their respective organizations and contribute to collective SPHS activities to measure progress in system-wide performance. Active improvement processes based on rigorous reviews of SPHS performance produce more efficient, relevant, and timely analytic products. These products, in turn, enable more effective SPHS investigation and responses to improve population health.

To accomplish these results, the partner organizations in the SPHS:

- Review the effectiveness of their state surveillance and investigation procedures, using published guidelines, including CDC's Updated Guidelines for Evaluating Public Health Surveillance Systems and CDC's measures and benchmarks for emergency preparedness.

- Manage the overall performance of diagnosis and investigation activities in the state for the purpose of quality improvement.

2.4 Capacity and Resources

SPHS partner organizations effectively invest in and utilize human, information, technology, organizational, and financial resources to diagnose and investigate health problems and hazards that affect the state's population. Coordinated use of system assets is grounded in the alignment of organizational strategic plans around collective efforts in diagnosing and investigating health problems. The state public health agency enhances the capacity of the SPHS by its leadership in this service. The workforce of SPHS partner organizations coordinates collective system-wide activities. These investments in diagnosis and investigation services by all SPHS partner organizations are essential for a well-functioning system capable of understanding health problems, responding to them quickly and appropriately, and preventing them in the future.

To accomplish these results, the partner organizations in the SPHS:

- Commit adequate financial resources for diagnosing and investigating health problems and hazards.

- Align organizational relationships to focus statewide assets on diagnosis and investigation of health problems.

- Use a workforce skilled in epidemiology and laboratory science to identify and analyze public health problems and hazards and to conduct investigations of adverse public health events.

EPHS 3. Monitor Health Status To Identify Community Health Problems

3.1 Planning and Implementation

The partner organizations in the SPHS actively create, communicate, and deliver health information and preventive health programs and services using customer-centered and science-based strategies to protect and promote the health of diverse populations.

Partner organizations support SPHS health improvement objectives and respond to public health issues with health communication and health education and promotion interventions that are based on the best available evidence of effectiveness in helping people make healthy choices throughout their lives. The National Prevention Strategy is used by partner organizations as a blueprint for a comprehensive approach to prevention within the state. SPHS partner organizations are committed to working collaboratively to prevent chronic disease in the state's population now and, by doing so, reduce the pain, suffering, and costs associated with the treatment of chronic diseases later. SPHS partner organization activities recognize the social determinants of health and use prevention programs to focus on reducing and eliminating health disparities in at-risk populations.

Health education is extensively used to convey information to individuals and groups about steps that they can take to improve their health (e.g., information to motivate smokers to enter smoking cessation programs). Health promotion is conducted by SPHS partner organizations as a concerted effort to influence political, regulatory, educational, and civic processes to create living conditions conducive to better health (e.g., an approach that combines clean air laws, smoke-free workplaces, enforcement of laws prohibiting tobacco sales to minors, smoking cessation programs, etc.).

The state's population understands and uses timely health information to protect and promote their personal health and the health of their families and communities. Health communications are culturally and linguistically appropriate and are delivered through multiple media channels to enhance their effectiveness and reach into high risk populations.

Many partner organizations within the state public health system conduct activities designed to inform and educate people about health issues. To maximize effectiveness of health messages and health promotion, organizational work is coordinated among governmental, private, and voluntary sector organizations, including state and local health departments, state agencies with public health functions, educational organizations, healthcare providers, insurers, foundations, associations working to reduce risks for certain diseases, and consumer groups targeted to receive health messages.

Effective health education, promotion, and communication results in a knowledgeable population that can act to reduce health risks associated with chronic disease, infectious disease, and injuries.

To accomplish these results, the partner organizations in the SPHS:

• Implement health education programs and services to help meet the state's health improvement objectives and promote healthy behaviors.

• Implement health promotion initiatives and programs to help meet the state's health improvement objectives, reduce risks, and promote better health.

• Design and implement health communications to reach wide and diverse audiences with information that enables people to make healthy choices.

• Maintain an effective emergency communications capacity to ensure rapid communications response in the event of a crisis.

3.2 State-Local Relationships

The partner organizations in the SPHS work with local public health systems to provide assistance, capacity building, and resources for local efforts to inform, educate, and empower people about health issues. Many SPHS partner organizations support local agencies to carry out their mission locally, including, but not limited to, the state public health agency, the state hospital association, the state mental health and substance abuse agency, the state heart association, the state United Way, and the state Red Cross. Each of these statewide organizations is active in support of its local members or counterparts, who are themselves partners in local public health systems. Results of good state-local relationships are increased cooperation with local public health systems to plan and implement effective health education, health promotion, and health communication activities.

To accomplish these results, the partner organizations in the SPHS:

- Provide technical assistance to develop skills and strategies for effective local health communication, health education, and health promotion interventions.

- Support and assist local public health systems in developing effective emergency communication capabilities.

3.3 Performance Management and Quality Improvement

The partner organizations in the SPHS review the effectiveness of their performance in informing, educating, and empowering people about health issues. SPHS partner organizations actively use the information from these reviews to continuously improve the quality of their efforts. System-wide collaborative approaches for review, evaluation, and performance management are essential to improve health education, health promotion, and health communications activities. In their efforts to measure and improve performance, SPHS partner organizations use performance management approaches in their respective organizations and contribute to collective SPHS activities to measure progress in system-wide performance. Active improvement processes based on rigorous reviews of SPHS performance produce more effective efforts to create an environment in which people can live healthy lives.

To accomplish these results, the partner organizations in the SPHS:

- Review the effectiveness and appropriateness of their health communication, health education, and health promotion services.

- Manage the overall performance of SPHS activities to inform, educate, and empower people about health issues for the purpose of quality improvement.

3.4 Capacity and Resources

SPHS partner organizations effectively invest in and utilize human, technology, information, organizational, and financial resources to inform, educate, and empower people about health issues. Coordinated use of system assets is grounded in the alignment of organizational strategic plans around collective efforts in health education, promotion, and communication. The state public health agency enhances the capacity of the SPHS by its leadership activities in this service. The workforce of SPHS partner organizations coordinates collective system-wide activities. These investments in informing and educating people by all SPHS partner organizations are essential for a well-functioning system capable of empowering people to gain knowledge and act to reduce their health risks.

To accomplish these results, the partner organizations in the SPHS:

- Commit adequate financial resources to informing, educating, and empowering people about health issues.

- Align organizational relationships to focus statewide assets on health communication and health education and promotion services.

- Use a competent workforce skilled in developing and implementing health communication and health education and promotion interventions.

3.4.1 **Commitment of financial resources to health communication, education, and promotion efforts** **50**
3.4.2 **Alignment and coordination of efforts for health communication, education and promotion** **25**
3.4.3 **Collective professional expertise to carry out health communication, health education, and promotion** **50**

EPHS 4. Mobilize Partnerships to Identify and Solve Health Problems

4.1 Planning and Implementation

The partner organizations in the SPHS conduct a variety of community engagement practices to build and expand statewide partnership alliances. Partnership relationships are built and sustained by mutual interest in improving the health of the state's population and in increasing the effectiveness of collective actions designed to improve health. Leaders in the sponsoring organizations recognize the value in collaborative efforts and carry out a vision of inclusion of stakeholders from public, private, and voluntary sectors in the state. Collaborative relationships take tangible forms in task forces, problem-specific coalitions, and ongoing sustained partnerships. The active presence of a formal state public health system partnership that identifies and solves health problems is potentially the most far-reaching of these practices.

A wide variety of SPHS partner organizations are actively engaged in task forces, coalitions, and partnerships, including state governmental agencies, local governmental agencies, private sector organizations, and not-for profit organizations. All of these multi-sector groups come together around issues of importance to their organizations and the well-being of the state's population.

Mobilizing effective multi-sector partnerships can produce a number of important results. Greater awareness and understanding of health and public health system problems can help to build a constituency for public health and shared ownership of statewide solutions to those problems. Collective action by many organizations is often necessary to solve difficult problems, and partnership activities can be a powerful driving force for joint assessment, planning, advocacy, and implementation.

To accomplish these results, the partner organizations in the SPHS:

- Engage and convene organizations into task forces and coalitions to address health problems in the state and build statewide support for solutions.

- Organize partnerships for public health to foster the development of state health needs assessments and improvement plans, the sharing of resources and responsibilities, collaborative decision-making, and accountability for delivering EPHS at the state and local levels.

4.1.1 Mobilization of task forces..**50**
4.1.2 Formalization of sustained partnerships **25**

4.2 State-Local Relationships

The partner organizations in the SPHS engage in robust partnerships with local public health systems to provide technical assistance, capacity building, and resources for local community partnership development. Many SPHS partner organizations support local agencies to carry out their mission locally, including, but not limited to, the state public health agency, the state hospital association, the state mental health and substance abuse agency, the state heart association, the state United Way, and the state Red Cross. Each of these statewide organizations is active in support of its local members, who are themselves partners in local public health systems. Results of good state-local relationships are increasingly effective local collaborations and partnerships focused on improved community health.

To accomplish these results, the partner organizations in the SPHS:

- Assist local public health systems to build competencies in community development, advocacy, collaborative leadership, and partnership management.

- Provide incentives for local partnership development.

4.2.1 Assistance to local public health systems to build partnerships..**50**
4.2.2 Incentives for local public health system partnerships..**25**

4.3 Performance Management and Quality Improvement

The partner organizations in the SPHS review the effectiveness of their performance in mobilizing partnerships. Members of the SPHS actively use the information from these reviews to continuously improve the quality of their partnership efforts. System-wide collaborative approaches for review, evaluation, and performance management are essential to improve partnership development. In their efforts to measure and improve performance, SPHS partner organizations use performance management approaches in their respective organizations and contribute to collective SPHS activities to measure progress in system-wide performance.

Active improvement processes based on rigorous reviews of SPHS performance produce more active and effective engagement of organizations within the SPHS and a better collective effort to improve health and the public health system.

To accomplish these results, the partner organizations in the SPHS:

- Review the effectiveness of their partnership efforts.

- Manage the overall performance of their partnership activities for the purpose of quality improvement.

4.3.1 Review of partnership development activities **25**
4.3.2 Active management and performance improvement in partnership activities......................**25**

4.4 Capacity and Resources

The partner organizations in the SPHS effectively invest in and utilize human, information, technology, organizational, and financial resources to assure that their partnership mobilization efforts meet the needs of the state's population. Coordinated use of system assets is grounded in the alignment of organizational strategic plans around collective efforts in working within partnerships. The state public health agency enhances the capacity of the SPHS by its leadership in this service. The workforce of SPHS partner organizations coordinates collective system-wide activities. These investments by all SPHS partner organizations in statewide engagement and mobilization efforts are essential for a well-functioning system capable of carrying out and improving collective action to improve health through partnerships.

To accomplish these results, the partner organizations in the SPHS:

• Commit adequate financial resources to sustain partnerships and support their actions.

• Align organizational relationships to focus statewide assets on partnerships.

• Use a workforce skilled in assisting partners to organize and act on behalf of the health of the public.

EPHS 5. Develop Policies and Plans that Support Individual and Statewide Health Efforts

5.1 Planning and Implementation

The partner organizations in the SPHS work collaboratively to conduct comprehensive and strategic health improvement planning and policy development. Planning processes integrate health status information, public input and communication, analysis of policy options, and recommendations for action based on the best evidence. Planning and policy development activities are conducted by collaborative SPHS groups for disease-specific or issue-oriented problems, such as HIV prevention planning, planning for improvement of physical activity levels, and implementation of health reform programs in the state. SPHS partner organizations use the results of these statewide collaborative processes and develop a state health improvement plan that outlines broad overall health and public health system priorities of the SPHS. The state health improvement plan also uses the state health needs assessment and the results of systems assessments (such as this NPHPS assessment) to develop its overall blueprint for collective action to improve health and systems performance at the state level. All-hazards plans for statewide emergency preparedness are developed and implemented using similar collaborations with SPHS partner organizations. Policy development is prompted by issue-oriented collaborative groups or statewide improvement plans; policy development actively involves partner organizations in communication and advocacy for new laws or regulations that will improve population health.

All SPHS partner organizations participate in policy and planning activities in the state. Leadership to convene collaborative groups for planning and policy development is dispersed but coordinated across the system, enabling any SPHS partner organizations to convene planning and policy groups to consider important health system topics. Public, private, and voluntary agencies are included in planning and policy processes and their implementation.

Multi-sector approaches to planning and policy development result in greater acceptability of plans and policy proposals and broader collective responsibility for implementation. Strategic plans developed by SPHS partner organizations recognize and address their role in implementing broad strategies outlined in the state health improvement plan. This alignment of partners' organizational strategic plans and the SPHS state health improvement plan provides a powerful foundation for statewide implementation of policy and plan objectives to improve public health performance and the health of the state's population.

To accomplish these results, the partner organizations in the SPHS:

- Develop statewide health improvement processes that convene partners for collaborative planning and implementation of needed improvements in the public health system.

- Produce a state health improvement plan(s) that outlines strategic directions for statewide improvements in health promotion, disease prevention, and response to emerging public health problems.

- Establish and maintain system-wide emergency response capacity, plans, and protocols for all-hazards, addressing multiagency coordination and readiness.

- Engage in health policy development activities and take necessary actions to communicate and advocate for policies that affect the public's health.

5.1.1   **Implementation of statewide health improvement processes**..**50**
5.1.2   **Development of statewide health improvement plan to guide collective effort**.............................**25**
5.1.3   **All hazards preparedness plan**..**100**
5.1.4   **Policy development activities**...**75**

5.2 State-Local Relationships

SPHS partner organizations work with local public health systems to provide assistance, capacity building, and resources for their efforts to develop local policies and plans that support individual and statewide health efforts. Many SPHS partner organizations support local agencies to carry out their mission locally, including, but not limited to, the state public health agency, the state hospital association, the state mental health and substance abuse agency, the state heart association, the state United Way, and the state Red Cross. Each of these statewide organizations is active in support of its local members, who are themselves partners in local public health systems. Results of good state-local relationships in planning and policy development are increased awareness of local and state health priorities and more coordination of state and local planning processes. This coordination produces more effective plan implementation based in collaborative state and local action.

To accomplish these results, the partner organizations in the SPHS:

- Provide technical assistance and training to local public health systems in the development of community health improvement plans, including assistance in the linking of local plans to the state health improvement plan.

- Provide assistance to local public health systems in the development of local all-hazards preparedness plans.

- Provide technical assistance and support for conducting local health policy development.

5.2.1   **Technical assistance to local public health systems for community health improvement**.........................**25**
5.2.2   **Technical assistance in development of local all-hazards preparedness plans**...**100**
5.2.3   **Technical assistance e in local health policy development**...**25**

5.3 Performance Management and Quality Improvement

The partner organizations in the SPHS review the effectiveness of their performance in policy development and planning. SPHS partner organizations actively use the information from these reviews to continuously improve the quality of policy and planning activities in supporting individual and statewide health efforts. System-wide collaborative approaches for review, evaluation, and performance management are essential to improve planning and policy development. In their efforts to measure and improve performance, SPHS partner organizations use performance management approaches in their respective organizations and contribute to collective SPHS activities to measure progress in system-wide performance. Active improvement processes based on rigorous reviews of SPHS performance produce more informed, relevant, and collaborative plans and policies that are the basis for collective action by SPHS partner organizations.

To accomplish these results, the partner organizations in the SPHS:

- Regularly monitor the state's progress toward accomplishing its health improvement objectives.

- Review new and existing policies to determine their public health impact.

- Conduct exercises and drills to test preparedness response capacity as outlined in the state's all-hazards preparedness plan.

- Manage the overall performance of its policy and planning activities for the purpose of quality improvement.

5.3.1 **Progress review toward accomplishing health improvement** **25**
5.3.2 **Review of new and existing policies to determine their public health impacts** **25**
5.3.3 **Formal exercises of the procedures and protocols linked to its all-hazards preparedness plan** **100**
5.3.4 **Active management and performance improvement in planning and policy development** **25**

5.4 Capacity and Resources

SPHS partner organizations effectively invest in and utilize their human, information, technology, organizational, and financial resources to assure that their health planning and policy practices meet the needs of the state's population. Coordinated use of system assets is grounded in the alignment of organizational strategic plans around collective efforts in developing and implementing the statewide improvement plans. The state public health agency enhances the capacity of the SPHS by its leadership in this service. The workforce of SPHS partner organizations coordinates collective system-wide activities. These investments in effective and collaborative planning and policy development by all SPHS partner organizations are essential in a well-functioning system capable of setting priorities, designing strategies, and making improvements in their public health system collectively.

To accomplish these results, the partner organizations in the SPHS:

- Commit adequate financial resources to develop and implement health policies and plans.

- Align organizational relationships to focus statewide assets on health planning and policy development.

- Use the skills of the SPHS workforce in health improvement planning and in health policy development.

5.4.1 **Commitment of financial resources to health planning and policy development** **25**
5.4.2 **Alignment and coordination of efforts to implement health planning and policy development** **25**
5.4.3 **Collective professional expertise to carry out planning and policy development** **75**

EPHS 6. Enforce Laws and Regulations that Protect Health and Ensure Safety

6.1 Planning and Implementation

The partner organizations in the SPHS assure that laws and enforcement activities are based on current public health science and best practices for achieving compliance. Emergency powers are in place, providing state and local systems the ability to detect, manage, and contain emergency public health threats. SPHS partner organizations solicit input on reviewed laws from stakeholders, including legislators, legal advisors, and the general public, especially persons and entities in the relevant regulated environment. The SPHS partner organizations maintain cooperative relationships between those who enforce laws and those in the regulated environment. Education is provided to all those affected by public health laws to encourage compliance. Regulatory processes that carry out legal mandates are customer-centered and conducted openly and fairly.

Key participants in enforcing laws and regulations are government entities that are mandated to enforce laws that protect the public's health (state and local public health, police, etc.) and the regulated entities that must comply with laws. Regulated entities include many organizations within the SPHS, such as hospitals, businesses, food establishments, schools, and members of the public. All have a responsibility to comply with public health and safety laws.

Laws based on current scientific knowledge about the best ways to protect the health of the population form a strong legal basis for both routine and emergency public health activities carried out within the SPHS. Universal compliance with and effective enforcement of public health laws and regulations will result in a safer, healthier environment in the state and a healthier population.

To accomplish these results, the partner organizations in the SPHS:

- Review and update existing and proposed state laws to assure laws have a sound basis in science and best practice.

- Review and update laws to assure appropriate emergency powers are in place.

- Foster cooperation among persons and entities in the regulated environment and persons and entities that enforce laws for the purpose of supporting compliance and ensuring that laws and regulations accomplish their health and safety purposes.

- Ensure that administrative processes, such as those for permits and licenses, are customer-centered for convenience, cost, and quality of service and are administered according to written guidelines.

6.1.1 Assure existing and proposed laws are designed to protect public health **100**
6.1.2 Assure laws give authorities ability to prevent, detect, and manage emergency health threats **100**
6.1.3 Cooperative relationships between regulatory bodies and entities in the regulated environment **75**
6.1.4 Ensure administrative processes are customer-centered **25**

6.2 State-Local Relationships

SPHS partner organizations work with local public health systems to provide assistance, capacity building, and resources for local efforts to enforce laws that protect health and safety. Many SPHS partner organizations support local agencies to carry out their mission locally, including, but not limited to, the state public health agency, the state hospital association, the state mental health and substance abuse agency, the state heart association, the state United Way, and the state Red Cross. Each of these statewide organizations is active in support of its local members, who are themselves partners in local public health systems.

Results of good state-local relationships are increased compliance with laws and better coordination of regulatory and enforcement efforts.

To accomplish these results, the partner organizations in the SPHS:

• Offer technical assistance to local public health systems based on current scientific knowledge and best practices for achieving compliance in both routine and complex enforcement operations.

• Assist local governing bodies to develop local laws that incorporate current scientific knowledge and best practices for achieving compliance.

6.3 Performance Management and Quality Improvement

The partner organizations in the SPHS review the effectiveness of their performance in complying with and enforcing laws that protect health and safety. SPHS partner organizations actively use the information from these reviews to continuously improve the quality of both compliance and enforcement efforts. System-wide collaborative approaches for review, evaluation, and performance management are essential to improve the legal basis for public health action and all the activities needed to assure compliance with laws and regulations. In their efforts to measure and improve system performance, SPHS partner organizations use performance management approaches in their respective organizations and contribute to collective SPHS activities to measure progress in system-wide performance. Active improvement processes based on rigorous reviews of SPHS performance produce more effective and efficient compliance and enforcement efforts and a healthier, safer population.
To accomplish these results, the partner organizations in the SPHS:

• Review the effectiveness of its laws and its compliance and enforcement activities, using resources such as the Model State Public Health Act and Model State Emergency Powers Act.

• Manage the overall performance of its compliance and enforcement activities for the purpose of quality improvement.

6.4 Capacity and Resources

SPHS partner organizations effectively invest in and utilize their human, information, technology, organizational, and financial resources to assure a sound legal basis for public health action and to enforce laws that protect health and safety in the state. Coordinated use of system assets is grounded in the alignment of organizational strategic plans around collective efforts in compliance and enforcement of laws. The state public health agency enhances the capacity of the SPHS by its leadership in this service. The workforce of SPHS partner organizations coordinates collective system-wide activities. These investments by all SPHS partner organizations are essential to support a well-functioning system capable of carrying out and improving the development of, enforcement of, and compliance with laws designed to protect public health and safety.

• To accomplish these results, the partner organizations in the SPHS:

- Commit adequate financial resources for the enforcement of laws that protect health and ensure safety.

- Align organizational relationships to focus statewide assets on enforcement activities.

- Use workforce expertise to effectively carry out the review, development, and implementation of public health laws.

EPHS 7. Link People to Needed Personal Health Services and Assure the Provision of Healthcare When Otherwise Unavailable

7.1 Planning and Implementation

The partner organizations in the SPHS assess the availability of personal health services for the state's population and work collaboratively among state and local partners to assure that the entire state population has access to high quality personal healthcare. SPHS partner organizations work together to assure that all residents of the state have access to the healthcare services they need, ranging from primary prevention to rehabilitative care. Barriers to personal healthcare, the needs of underserved populations, and health disparities are continuously assessed so that appropriate action can be taken by SPHS partner organizations to improve health service access. SPHS partner organizations are active in responding to policy changes in the health insurance environment and other emerging issues that potentially alter the availability of and access to healthcare.
Coordination of SPHS partner organization activities to improve healthcare delivery reduces fragmentation of effort across the system and provides a clear and unified voice on issues of access, availability, and effectiveness of personal healthcare in the state. SPHS partner organizations maintain an active partnership in linking people to needed health services. Key players are state agencies (public health, insurance, and Medicaid), hospitals, physicians, dentists, and other health professionals, local health departments and other members of local public health systems, insurers, community organizations representing underserved populations, and organizations providing case management, outreach services, and coordination of care.

A robust SPHS partnership engaged in assessment and active policy and program initiatives improves healthcare delivery in the state. The state's population health improves over time as a result of the efforts of SPHS partner organizations. As healthcare and prevention become increasingly accessible to the population, health disparities are reduced.

To accomplish these results, the partner organizations in the SPHS:

• Assess the availability of and access to personal health services for all persons living in the state, including underserved populations.

7.2 State-Local Relationships

The partner organizations in the SPHS work with local public health systems to provide assistance, capacity building, and resources for local efforts to identify underserved populations and develop innovative approaches for meeting their personal healthcare needs. Many SPHS partner organizations support local agencies to carry out their mission locally, including, but not limited to, the state public health agency, the state hospital association, the state mental health and substance abuse agency, the state heart association, the state United Way, and the state Red Cross. Each of these statewide organizations is active in support of its local members, who are themselves partners in local public health systems. Results of good state-local relationships are increased effectiveness at the local level in assessing health disparities, in meeting the needs of underserved populations, and improved personal healthcare service delivery.

To accomplish these results, the partner organizations in the SPHS:

- Provide technical assistance in methods for identifying and meeting personal healthcare needs of underserved populations.

- Provide technical assistance to local personal healthcare providers serving underserved populations to improve personal healthcare service delivery.

7.3 Performance Management and Quality Improvement

The partner organizations in the SPHS review the effectiveness of their performance in the provision of personal healthcare to the state's population. SPHS partner organizations actively use the information from these reviews to continuously improve the quality of their efforts to link people to needed personal health services. System-wide collaborative approaches for review, evaluation, and performance management are essential to improve the process of linking people to needed services. In their efforts to measure and improve performance, SPHS partner organizations use performance management approaches in their respective organizations and contribute to collective SPHS activities to measure progress in system-wide performance. Active improvement processes based on rigorous reviews of SPHS performance produce better quality of personal healthcare and more effective approaches to meeting the needs of underserved populations and reducing health disparities.

To accomplish these results, the partner organizations in the SPHS:

- Review healthcare quality (using such resources as Health Plan Employer Data and Information Set [HEDIS], the National Strategy for Quality Improvement in Health Care, and CDC's Guide to Clinical Preventive Services.

- Review changes in barriers to personal healthcare, focusing on the effects of SPHS actions to improve access to care.

- Manage the overall performance of its activities to link people to needed health services for the purpose of quality improvement.

7.4 Capacity and Resources

The partner organizations in the SPHS effectively invest in and utilize their human, information, technology, organizational, and financial resources to assure the provision of personal healthcare to meet the needs of the state's population. Coordinated use of system assets is grounded in the alignment of organizational strategic plans around collective efforts to link people to the services they need. The state public health agency enhances the capacity of the SPHS by its leadership in this service. The workforce of SPHS partner organizations coordinates collective system-wide activities. These investments by all SPHS partner organizations are essential to support a well-functioning system capable of carrying out and improving personal healthcare service delivery to better meet the needs of the entire population.

To accomplish these results, the partner organizations in the SPHS:

- Commit adequate financial resources for the provision of needed personal healthcare.

- Align organizational relationships to focus statewide assets on linking people to needed personal healthcare and ensuring the provision of healthcare.

- Use a workforce skilled in the evaluation, analysis, delivery, and management of personal health services.

EPHS 8. Assure a Competent Public and Personal Healthcare Workforce

8.1 Planning and Implementation

The partner organizations in the SPHS identify the public health workforce needs of the state and implement recruitment and retention policies to fill those needs. The public health workforce is defined broadly as the array of personnel providing population-based and personal (clinical) health services in public and private settings across the state, all working to improve the public's health through community and clinical prevention services. More specifically, the population-based workforce is made up of public health professionals involved in the provision of population-based health programs and services designed to prevent disease or injury and promote health among groups of persons. The personal healthcare workforce is made up of medical, nursing, and allied health professionals who are engaged in the delivery of clinic or hospital based primary, secondary, or tertiary services designed to protect or remediate the health of individuals. SPHS partner organizations provide a dynamic workforce development environment, featuring training to improve competencies, continuing education, and lifelong learning opportunities to assure that the workforce effectively delivers the Essential Public Health Services.

All SPHS partner organizations conduct workforce assessment, planning, and development activities. Key partners in these endeavors are educational programs at all levels that prepare the workforce, partner organizations that employ and develop the workforce, and key professional groups that have unique perspectives on workforce needs. Academic-practice collaborations are an important vehicle for SPHS partner organizations to meet their workforce needs.

A competent population-based and personal healthcare workforce works at the highest levels of proficiency in meeting the health needs of the state's population. The workforce is knowledgeable and committed to solving problems and achieving overall SPHS health improvement priorities.

To accomplish these results, the partner organizations in the SPHS:

- Based on assessments of workforce needs, develop a statewide workforce plan(s) that establishes strategies and actions needed to recruit, maintain, and sustain a competent and diverse personal healthcare workforce.

- Provide human resource development programs focused on enhancing the skills and competencies of the workforce.

- Assure that the state's population-based and personal healthcare workforce attain the highest level of knowledge and functioning in the practice of their professions.

- Support continuous professional development through programs focused on lifelong learning.

8.2 State-Local Relationships

The partner organizations in the SPHS work with local public health systems to provide assistance, capacity building, and resources for local efforts to assure a competent population-based and personal healthcare workforce. Many SPHS partner organizations support local agencies to carry out their mission locally, including, but not limited to, the state public health agency, the state hospital association, the state mental health and substance abuse agency, the state heart association, the state United Way, and the state Red Cross. Each of these statewide organizations is active in support of its local members, who are themselves partners in local public health systems. Results of good state-local relationships are increased workforce competency and knowledge and a sufficiently-staffed public health system better able to meet the health needs of the state's population.

To accomplish these results, the partner organizations in the SPHS:

- Assist local public health systems in planning for the future needs for population-based and personal healthcare workforces, based on workforce assessments.

- Provide assistance to local public health systems in recruitment, retention, and performance improvement strategies to improve the availability and competency of the local public health system workforce.

8.3 Performance Management and Quality Improvement

The partner organizations in the SPHS review the effectiveness of their performance in ensuring a competent population-based and personal healthcare workforce. SPHS partner organizations actively use the information from these reviews to continuously improve the quality of workforce development efforts. System-wide collaborative approaches for review, evaluation, and performance management are essential to improve workforce development. In their efforts to measure and improve performance, SPHS partner organizations use performance management approaches in their respective organizations and contribute to collective SPHS activities to measure progress in system-wide performance. Active improvement processes based on rigorous reviews of SPHS performance produce a better-prepared, more knowledgeable workforce.

To accomplish these results, the partner organizations in the SPHS:

- Review the implementation of their workforce development activities to determine their effectiveness in improving the availability and competency of the workforce.

- Through academic-practice collaborations, evaluate the preparation of personnel entering the workforce.

- Manage the overall performance of their workforce development activities for the purpose of quality improvement.

8.4 Capacity and Resources

The partner organizations in the SPHS effectively invest in and utilize their human, information, technology, organizational, and financial resources to assure a competent population-based and personal healthcare workforce. Coordinated use of system assets is grounded in the alignment of organizational strategic plans around collective efforts in workforce development. The state public health agency enhances the capacity of the SPHS by its leadership in this service. The workforce of SPHS partner organizations coordinates collective system-wide activities. These investments by all SPHS partner organizations are essential to support a well-functioning system capable of improving workforce competency and effectiveness.

To accomplish these results, the partner organizations in the SPHS:

- Commit adequate financial resources to support workforce development.

- Align organizational relationships to focus statewide assets on workforce development.

- Use the skills of the SPHS workforce in the management of human resources and workforce development programs supporting the delivery of high quality personal healthcare and population-based services throughout the state.

EPHS 9. Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-Based Health Services

9.1 Planning and Implementation

The partner organizations in the SPHS conduct evaluations to improve the effectiveness of population-based services and personal healthcare services within the state. Evaluation is considered a core activity of the public health system and is essential to understand how to improve the quality of services for the state's population. Whether focused on the entire population or on individual patients, evaluations use relevant, nationally-recognized standards of best practice and program effectiveness as benchmarks for current performance. Evaluation designs incorporate state, local, and consumer perspectives into reviews of services and systems. Credentials of the population-based and personal healthcare workforce are monitored and up to date with current standards. In addition to performance, the effectiveness of services in improving the health of the population is also evaluated.

Routine evaluations identify strengths and weaknesses in programs, services, and the public health system overall, and these findings are actively used in quality and performance improvement.

All SPHS partner organizations conduct evaluation activities within their own organizations and contribute to a coordinated approach, evidenced by collaborative evaluations of the state's public health system and its effectiveness in meeting the health needs of the state's population. All SPHS partner organizations participate in implementing performance improvement activities, both in their own organizations and together to address public health system performance.

The conduct and active use of evaluations to improve the quality of health services and the public health system produces a dynamic environment of performance assessment, evaluation, and improvement. The state's population benefits from a public health system whose partner organizations strive to attain the highest level of effectiveness.

To accomplish these results, the partner organizations in the SPHS:

- Evaluate population-based health services within the state (e.g., injury prevention, promotion of physical activity, tobacco control and prevention, immunizations), using resources such as the Guide to Community Preventive Services.

- Evaluate the effectiveness of personal healthcare services within the state using resources such as the Guide to Clinical Preventive Services.

- Evaluate the performance of the state public health system in delivering Essential Public Health Services to the state's population.

- Seek third-party evaluation of organizational effectiveness, through certification, accreditation, licensing, or other means of striving for the highest levels of performance.

9.1.1 Routine evaluation of population-based health services **50**
9.1.2 Evaluation of effectiveness of personal health services **50**
9.1.3 Evaluation of performance of state public health system...**25**
9.1.4 Seek appropriate certification, accreditation, licensure, and other third-party evaluation......................**50**

9.2 State-Local Relationships

The partner organizations in the SPHS work with local public health systems to provide assistance, capacity building, and resources for local efforts to evaluate the performance and effectiveness of population-based programs, personal healthcare services, and local public health systems. Many SPHS partner organizations support local agencies to carry out their mission locally, including, but not limited to, the state public health agency, the state hospital association, the state mental health and substance abuse agency, the state heart association, the state United Way, and the state Red Cross. Each of these statewide organizations is active in support of its local members, who are themselves partners in local public health systems. Good state-local relationships in evaluation activities result in improved understanding of program effects to inform service delivery decisions. The effectiveness of local service delivery and the performance of the local public health system improve in a dynamic environment of evaluation information and improvement.

To accomplish these results, the partner organizations in the SPHS:

- Provide technical assistance to local public health systems in their evaluation activities, encompassing population-based programs, personal healthcare services, and overall local public health systems performance, using performance resources, such as the Baldrige National Quality Program and the National Public Health Performance Standards.

- Share results of state-level performance evaluations with local public health systems for use in local health improvement and strategic planning processes.

- Assist local organizations in achieving third-party evaluations of their organizational performance, through certification, accreditation, licensing, or other designations of high performance (e.g., the state public health agency assists local public health agencies in accreditation; the state Red Cross evaluates local Red Cross chapters; the state hospital association assists local member hospitals in maintaining licensure and accreditation).

9.3 Performance Management and Quality Improvement

The partner organizations in the SPHS review the effectiveness of their performance in evaluating the effectiveness, accessibility, and quality of population-based programs, personal healthcare services, and public health systems. SPHS partner organizations actively use the information from these reviews to continuously improve the quality of evaluation efforts. System-wide collaborative approaches for review and performance management are essential to improve evaluation. In their efforts to measure and improve performance, SPHS partner organizations use performance management approaches in their respective organizations and contribute to collective SPHS activities to measure progress in system-wide performance. Active improvement processes based on rigorous reviews of SPHS evaluation performance produce more meaningful and useful evaluations that are relevant to programs, services, and systems improvement activities. The culture of quality improvement that is present throughout the state public health system results in more effective programs and services to meet the health needs of the population.

To accomplish these results, the partner organizations in the SPHS:

- Review the effectiveness of their evaluation activities to assure there is a broad scope of evaluation activities and use of appropriate evaluation methods, using nationally recognized resources, such as CDC's Framework for Program Evaluation in Public Health.

- Manage the overall performance of its evaluation activities for the purpose of quality improvement.

- Promote systematic quality improvement processes throughout the state public health system.

9.4 Capacity and Resources

The partner organizations in the SPHS effectively invest in and utilize their human, information, technology, organizational, and financial resources to evaluate the effectiveness, accessibility, and quality of population-based and personal healthcare services. Evaluations are appropriately resourced so they can be routinely conducted. Coordinated use of system assets is grounded in the alignment of organizational strategic plans around collective efforts in evaluation.

The state public health agency enhances the capacity of the SPHS by its leadership in this service. The workforce of SPHS partner organizations coordinates collective system-wide activities. These investments by all SPHS partner organizations are essential to support a well-functioning system capable of carrying out and improving evaluation activities.

To accomplish these results, the partner organizations in the SPHS:

- Commit adequate financial resources for evaluation activities.

- Align organizational relationships to focus statewide assets on evaluating population-based and personal healthcare services.

- Use a workforce skilled in monitoring and analyzing the performance and capacity of the state public health system and its programs and services.

EPHS 10. Research for New Insights and Innovative Solutions Health Problems

10.1 Planning and Implementation

The partner organizations in the SPHS contribute to public health science (both population-based and personal healthcare) by identifying and participating in research activities. These research activities address new insights into the most effective approaches to implement the Essential Public Health Services. SPHS partner organizations foster innovation by continuously using new information and the best scientific knowledge about effective practice in their work to improve the health of the state's population. Academic-practice collaborations are in place in medical, nursing, public health, and other disciplines within the SPHS. These collaborations bridge the interests of the research community and the needs of the practice community, by identifying practice-relevant research agendas, promoting practice-based research, and disseminating practice-relevant research findings. Practice-based research studies the effectiveness, efficiency, and equity of public health strategies and medical care innovations in real-world practice settings.

SPHS partner organizations most involved in research and innovations are university-based health sciences schools and other university-based disciplines that are health-related, such as urban planning, social work, and community development. On the practice side, physician, nursing, and other clinical professional groups, state and local public health departments, and hospital associations are key SPHS partner organizations in practice-based research.

Active interest in relevant research and new knowledge by SPHS partner organizations enables them to stay current and use the most modern methods of practice to improve both evidence-based decision-making and effectiveness in delivering population-based and personal healthcare services.

To accomplish these results, the partner organizations in the SPHS:

- Foster innovations by developing public health research agendas and disseminating and applying research findings and new knowledge to improve service delivery, through the work of statewide academic-practice collaborations.

- Conduct and participate in practice-based research to maximize learning about more effective methods of improving the health of the state's population.

10.2 State-Local Relationships

The partner organizations in the SPHS work with local public health systems to provide assistance, capacity building, and resources for local efforts to carry out research for new insights and innovative solutions to health problems. Many SPHS partner organizations support local agencies to carry out their mission locally, including, but not limited to, the state public health agency, the state hospital association, the state mental health and substance abuse agency, the state heart association, the state United Way, and the state Red Cross. Each of these statewide organizations is active in support of its local members, who are themselves partners in local public health systems. Results of good state-local relationships in research and innovations are increased capability of local organizations to use new evidence and knowledge to improve their delivery of services.

To accomplish these results, the partner organizations in the SPHS:

- Assist local public health systems in their research activities, including promoting community-based participatory research.

- Assist local public health systems in the use of research findings to improve public health practice at the local level.

10.3 Performance Management and Quality Improvement

The partner organizations in the SPHS review the effectiveness of their performance in conducting and using research for new insights and innovative solutions to health problems. SPHS partner organizations actively use the information from these reviews to continuously improve the quality of research efforts. System-wide collaborative approaches for review, evaluation, and performance management are essential to improve health research and the use of new evidence in practice. In their efforts to measure and improve performance, SPHS partner organizations use performance management approaches in their respective organizations and contribute to collective SPHS activities to measure progress in system-wide performance. Active improvement processes based on rigorous reviews of SPHS performance support the introduction of relevant innovations into practice (both population-based and personal healthcare services). The health of the population improves when the most current scientific knowledge is used to inform service delivery decisions.

To accomplish these results, the partner organizations in the SPHS:

- Regularly monitor their research activities for relevance to current issues in practice and for appropriateness in scope and methodology.

- Manage the overall performance of research activities for the purpose of quality improvement.

10.3.1 Review of public health research activities **0**

10.3.2 Active management and performance improvement in research and innovation **0**

10.4 Capacity and Resources

The partner organizations in the SPHS effectively invest, manage, and utilize their human, information, technology, organizational, and financial resources for the conduct of research to find more innovative and effective service delivery processes. Coordinated use of system assets is grounded in the alignment of organizational strategic plans around collective efforts in research and dissemination of new evidence and innovations. The state public health agency enhances the capacity of the SPHS by its leadership in this service. The workforce of SPHS partner organizations coordinates collective system-wide activities. These investments by all SPHS partner organizations are essential to support a well-functioning system capable of carrying out research activities and improving practice by introducing evidence-based innovations into service delivery.

To accomplish these results, the partner organizations in the SPHS:

- Commit adequate financial resources for research to foster innovations in public health practice.

- Align organizational relationships to focus statewide assets on research and applying new evidence to practice.

- Use a workforce skilled in conducting and applying research relevant to the practice of the Essential Public Health Services.

10.4.1 Commitment of financial resources to research relevant health improvement **25**

10.4.2 Alignment and coordination of effort to conduct research **25**

10.4.3 Collective professional expertise to carry out research activities **75**

WORK PLANS

Appendix L – Increase Educational Attainment

The U.S. Census Bureau collects educational attainment information annually through the American Community Survey and Current Population Survey. Educational attainment is defined as the highest level of formal education completed (i.e., high school diploma or equivalent, bachelor's degree, graduate/professional degree). An educated workforce is an important factor for economic development. Completion of formal education is associated with higher paying jobs and access to resources that impact health such as: food, housing, transportation, health insurance, recreation, and other basic necessities for physical and mental wellbeing. In Mississippi, 81.5% of adults age 25 and older have at least a high school diploma, this is lower than the national average (86.0%).

Source: US Census Bureau American Community Survey, Rev May 28, 2015.

APPENDIX L :   Mississippi State Community Scorecard – 2016
PRIORITY AREA #1: Increase Educational Attainment

Goal 1.0 Increase high school graduation rates

Strategic Objective 1.0 Decrease pregnancy rate in women aged 15-19

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Rate of teen pregnancy among women aged 15-19 *Data Source: MSDH Office of Public Health Statistics*	2013: 49.1/1000	December 31, 2020: 44.2/1000	a. Develop health education campaign (PSA's, social media, etc.) on contraceptive availability and usage b. Provide evidence-based skills training on LARC insertions and evidence-based skills training on contraceptive option counseling to providers. c. Support implementation of high quality sexuality education curricula in middle and high schools in accordance with state law d. Support sexuality education teacher trainings and professional development	

Organization/ Lead Person: Danielle Lampton, Comprehensive Reproductive Health and Adolescent Health Program, MSDH; Kenyatta Parker, PREP, MSDH

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Contraceptive Use Percentage of female Title X clients aged 15-19 years using LARC *Data Source: CDC and DHHS Office of Population Affairs (MMWR 4/10/15)*	2013: 0.7%	December 31, 2020: 1.5%	a. Develop health education campaign (PSA's, social media, etc.) on contraceptive availability and usage, targeting Title X clinic sites b. Provide evidence-based training and comprehensive clinical training on LARC insertions and contraceptive option counseling to Title X Clinic providers and staff	

Organization/ Lead Person: Danielle Lampton, Comprehensive Reproductive Health and Adolescent Health Program, MSDH

APPENDIX L : Mississippi State Community Scorecard – 2016
PRIORITY AREA #1: Increase Educational Attainment

Goal 1.0 Increase high school graduation rates

Strategic Objective 2.0 Reduce Sexually Transmitted Infections in individuals aged 15-19

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Rate of chlamydia infections in individuals aged 15-19 Rate of gonorrhea infections in individuals aged 15-19 Rate of new HIV infections in individuals aged 15-19	Data Development Agenda		a. Support implementation of high quality sexuality education curricula in middle and high schools in accordance with state law b. Support sexuality education teacher trainings and professional development c. Develop and implement community-based initiatives related to safe sex and correct condom usage	

Organization/ Lead Person: a. Kenyatta Parker, PREP, MSDH; b. Estelle Watts, Office of Healthy Schools, MDE; c. Danielle Lampton, Adolescent Health Program, MSDH d. MSDH STI/HIV Office

Strategic Objective 3.0 Increase support services for pregnant and parenting teens

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Implementation of curriculum in targeted schools	Data Development Agenda		a. Assess state school districts to develop tiered priority site list based on number of pregnant and parenting teens b. Develop an implementation plan to include: a curriculum, regular process evaluations and outcome evaluations at set intervals c. Connect with top priority schools to build collaboration for programs d. Network with existing local resources for linkages and referrals e. Train staff for program implementation f. Pilot implementation plan at 3 schools g. Launch full program according to priority listing h. Conduct process and outcome evaluations	

Organization/ Lead Person: Women's Health-Danielle Seale; Office of Healthy Schools; Adolescent Health-Danielle Lampton; PHRM

APPENDIX L :   Mississippi State Community Scorecard – 2016
PRIORITY AREA #1: Increase Educational Attainment

Goal 1.0 Increase high school graduation rates

Strategic Objective 4.0 Increase linkages between existing school based health clinics (SBHC), school nurses, and local and state mental health providers and supports

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percentage of SBHC utilizing the Adolescent Mental Wellness Assessment Percentage of SBHC who report a referral process is in place with local MH providers	Data Development Agenda		Promote linkages and referrals as a positive outcome for SBHCs Facilitate networking between SBHC staffs and mental health providers in their areas Provide utilization trainings for SBHC medical doctors, nurses, and social workers on the Adolescent Mental Wellness Assessments Develop and pilot a referral process for SBHCs to refer directly to mental health providers, possibly to include onsite service provision, and to certainly include follow-up by SBHC staff Implement referral process at select SBHC sites Evaluate effectiveness of referral process for SBHCs, patients at SBHCs, and mental health providers who receive referrals Adjust according to evaluation findings	

Organization/ Lead Person: Office of Healthy Schools; Danielle Lampton, Adolescent Health Program, MSDH; Center for the Advancement of Youth

Status will be reviewed using a stoplight approach as follows:

Red: Not On Target	Yellow: Falling Behind	Green: On Target

COORDINATING CO-CHAIRS: Danielle Lampton, MSDH and Kenyatta Parker, MSDH; ESTELLE WATTS, MDE

PARTNERS AND STAKEHOLDERS: Rozelia Harris, MSDH; Tarcha Howard, MSDH; Diane Hargrove, MSDH; Janette McCrory, IHL; Shawn Rossi, MS Hospital Association; Lonnie Edgar, PEER; Josh McCawley, Mississippi First; Tia Sides, MSDH; Michael Jordan, DMH; Christine Philley, MDE; Tanya Funchess, MSDH

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Appendix M – Improve Infant Health

Infant death is a measure of the health and well-being of children and the overall health of a community. It reflects the status of maternal health, the accessibility and quality of primary health care, and the availability of supportive services in the community. Infants with low birth weight or preterm delivery have a higher risk of death. The use of alcohol, tobacco, and illegal substances during pregnancy is a major risk factor for low birth weight, infant mortality, and other poor outcomes. Infant mortality rates vary substantially among racial and ethnic groups; the rate continues to be higher for African American infants than for white infants.

During the past 10 years, Mississippi's infant mortality rate has fluctuated, with a decline below 9.0 per 1,000 for the first time in 2012. Mississippi has had a consistently higher infant mortality rate than the United States for the past decade.

Breast milk contains antibodies that can help protect infants from a variety of illnesses. Among breastfed babies, conditions such as ear infections, obesity, asthma, and diarrhea are less common. Mothers who have breastfed have a lower risk of developing breast and ovarian cancer, type 2 diabetes, and postpartum depression. The American Academy of Pediatrics (AAP) recommends that infants are breastfed for at least 12 months. If 90 percent of mothers breastfed exclusively for six months, over 900 deaths among infants could be prevented yearly.

APPENDIX M : Mississippi State Community Scorecard – 2016
PRIORITY AREA #2: Improve Infant Health
Goal 2.0 Improve the care of infants in Mississippi

Strategic Objective 2.0 Increase the number of mothers who are breastfeeding

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percentage of infants who were ever breastfed *Data Source: CDC Breastfeeding Report Card 2013*	2013: 50.5%	2018 Births: 60.5%	a. Increase public awareness of Baby Friendly, and what that means by January 2018 b. Provide incentives to hospitals as they make efforts towards Baby Friendly by September 2016	a. Green b. Yellow

Organization/ Lead Person: a. Blue Cross/Blue Shield, Dr. Sara Broom, Sara Hedley; b. Lydia West, MSPHI

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percentage of infants breastfed at 6 months *Data Source: CDC Breastfeeding Report Card 2013*	2013: 19.7%	2018 Births: 29.7%	c. Determine WIC breast feeding number per county by February 2016 d. Identify applicable evidence-based tools and trainings for use in Mississippi by September 2016 e. Determine necessary community partners by September 2016 f. Determine who will provide education by September 2016	c. Green d. Green e. Green f. Green g. Green

APPENDIX M :   Mississippi State Community Scorecard – 2016
PRIORITY AREA #2: Improve Infant Health

Goal 2.0 Improve the care of infants in Mississippi

Strategic Objective 2.0 Increase the number of mothers who are breastfeeding

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percentage of infants breastfed at 6 months *Data Source: CDC Breastfeeding Report Card 2013*	2013: 19.7%	2018 Births: 29.7%	g. Determine cost and find necessary funding by September 2016 h. Increase community awareness on benefits of breast feeding by August 2016 i. Follow-up with breastfeeding awareness month in August by August 2016	g. Green h. Green i. Green

Organization/ Lead Person: c. WIC, Jameshyia Thompson; d. Office of Preventive Health, Tiffany Grant; MSPHI, Lydia West; WIC, Jameshyia Thompson; e. Office of Preventive Health, Tiffany Grant; MSPHI, Lydia West; WIC, Jameshyia Thompson; f. Office of Preventive Health, Tiffany Grant; MSPHI, Lydia West; WIC, Jameshyia Thompson; g. Office of Preventive Health, Tiffany Grant; MSPHI, Lydia West; WIC, Jameshyia Thompson; h. Office of Preventive Health, Tiffany Grant; MSPHI, Lydia West; WIC, Jameshyia Thompson; i. Office of Preventive Health, Tiffany Grant; MSPHI, Lydia West; WIC, Jameshyia

Status will be reviewed using a stoplight approach as follows:

Red: Not On Target	Yellow: Falling Behind	Green: On Target

COORDINATING CO-CHAIRS: KATHY BURK, MSDH; Signe Dignan, Center for Mississippi Health Policy

PARTNERS AND STAKEHOLDERS:

Non-MSDH: Linda Rigsby, MS Center for Justice; Desta Reff, MSU SSRC; Dina Ray, March of Dimes; David Buys, MSU Extension Service; Becky Abney, MEMA; Suzanne Lewis, MEMA; Lydia West, MSPHI; Dr. Sarah Broom, BCBSMS; Dr. Sid Bondurant, Governor's Office

MSDH: Dr. Alfio Rausa, MSDH; Danielle Seale, MSDH; Kathy Farrington, MSDH; Laura Tucker, MSDH; Marilyn Johnson, MSDH; Jameshyia Thompson, MSDH; Dr. Charlene Collier, MSDH/UMMC

Appendix N – Reduce Rates of Chronic Disease

Mississippi has a public health crisis. In 1996, 19.8% of the adult population was obese. By 2013, the obesity prevalence in our population had increased to 35.2%. If the tide is not changed, the percent of obesity in our population will reach over 50% by 2024. Obesity is a root cause of most chronic illnesses. Therefore, it is the role and obligation of Public Health to inform and educate Mississippians about this threat to their health just as it does when there is a threat of pandemics and epidemics. The consequences of obesity are Type 2 diabetes, heart disease, arthritis, stroke, and dementia. Currently in Mississippi, 1.1 million adults and 126,000 children are obese; many of whom already show signs of chronic illnesses. Unnecessary suffering is being caused by obesity, which is mainly driven by sedentary lifestyles and unhealthy eating habits. According to the CDC, 75% of total health care expenditures are associated with treating chronic diseases. If Mississippians reduce their BMI rates to lower levels and achieve an improved status of health, the state could save over $13 billion annually in unnecessary health care costs.

APPENDIX N : Mississippi State Community Scorecard – 2016
PRIORITY AREA #3: Reduce Rates of Chronic Disease
Goal 3.1 Decrease obesity rates through the promotion of healthy lifestyles

Strategic Objective 3.1.1 Increase the percent of youth ages 17 and under who engage in 60 minutes of daily physical activity

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percentage of students in grades 9-12 who achieve 1 hour or more of moderate-and/or vigorous-intensity physical activity daily *Data Source: YRBS*	2013: 25.9%	2019: 28.5%	Establish and/or enhance school, community, and home environments that support physical activity a. Use data collected by MDE to assess implementation of physical activity requirements for the Healthy Students Act among schools, including capacity by May 2017. b. Identify databases that track and monitor the number of youth ages 2 to 5 that engage in physical activity by December 2016. c. Establish 10 new Mayoral Health Councils who will promote: shared use agreements and complete streets by December 2016.	

Organization/ Lead Person: a. Estelle Watts, Office of Healthy Schools, MDE; b. Dr. Lei Zhang, Office of Health Data and Research, MSDH; c. Dr. Victor Sutton, Office of Preventive Health, MSDH

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percentage of municipalities that offer opportunities for organized physical activity *Data Source: Office of Preventive Health*	2013: 25.9%	January 2020: 28.5%	d. Conduct an environmental scan to determine the number and location of shared use agreements, organized sports, and complete streets by December 2016 e. Create and implement an educational awareness campaign to decrease screen time by December 2016	

APPENDIX N : Mississippi State Community Scorecard – 2016
PRIORITY AREA #3: Reduce Rates of Chronic Disease
Goal 3.1 Decrease obesity rates through the promotion of healthy lifestyles

Strategic Objective 3.1.1 Increase the percent of youth ages 17 and under who engage in 60 minutes of daily physical activity

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percentage of municipalities that offer opportunities for organized physical activity *Data Source: Office of Preventive Health*	2013: 25.9%	January 2020: 28.5%	f. Provide four educational messages on physical activity and nutrition in parents and kids magazines to promote awareness of physical activity and nutrition by May 2017	

Organization/ Lead Person: d. Tiffani Grant, Office of Preventive Health, MSDH; e. Liz Sharlot, Office of Communications, MSDH; f. Liz Sharlot, Office of Communications, MSDH

Strategic Objective 3.1.2 Increase the percent of adults ages 18-64 who engage in at least 150 minutes of weekly moderate intensity physical activity

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percentage of adults ages 18 and older who achieve at least 150 minutes a week moderate-intensity aerobic physical activity or 75 minutes a week of vigorous-intensity aerobic activity (or an equivalent combination) *Data source: BRFSS*	2013: 37.4%	2019: 39.0%	Establish and/or enhance community and worksite environments that support physical activity a. Establish 10 new Mayoral Health Councils who will promote: shared use agreements, complete streets, and built environment supports by December 2016 b. Conduct an environmental scan to determine the number and location of shared agreements, organized sports, and complete streets by December 2016 c. Identify, adapt and disseminate, and promote a Congregational Health Ministry Toolkit for Mississippi churches to promote physical activity by December 2016 d. Share and translate Mississippi obesity research findings by December 2016 e. Engage 25 by 25 physician partnership who seek to: reduce physical inactivity by 10% and maintain the prevalence (no further increase) of diabetes and obesity by December 2016	

Organization/ Lead Person: a. Dr. Victor Sutton, Office of Preventive Health, MSDH; b. Tiffani Grant, Office of Preventive Health, MSDH; c. Cassandra Dove, Office of Preventive Health, MSDH; d. Dr. Dan Jones, UMMC Center for Obesity Research; e. Mary Jane Coleman (interim), Office of Health Promotion and Health Equity, MSDH

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APPENDIX N : Mississippi State Community Scorecard – 2016
PRIORITY AREA #3: Reduce Rates of Chronic Disease
Goal 3.1 Decrease obesity rates through the promotion of healthy lifestyles

Strategic Objective 3.1.3 Decrease the percentage of students in grades 9-12 who consume fruits and vegetables less than 1 time daily

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percentage of students in grades 9-12 who consume fruit less than 1 time daily Percentage of students in grades 9-12 who consume vegetables less than 1 time daily *Data Source: YRBS*	2013: 51.1% 44.8%	2019: 46.0% 40.3%	Establish and/or enhance school, community, and home environments that support access to healthy food options a. Use data collected by MDE to assess implementation of nutrition requirements for the HSA among schools, including capacity by May 2017 b. Identify databases that track and monitor the consumption of nutritious foods and beverages among youth ages 2 to 5 by December 2016 c. Establish 10 new Mayoral Health Councils who will promote: SNAP benefits at established farmers markets and establishing farmers markets by December 2016 d. Provide resources and tools to school health councils on health food options within all school settings and functions (Farm to School, School Gardens, and Health Concession Stand Options) by December 2016	

Organization/ Lead Person: a. Estelle Watts, Office of Healthy Schools and Office of Child Nutrition, MDE; b. Donna Speed, State Nutritionist, MSDH; c. Dr. Victor Sutton, Office of Preventive Health, MSDH; d. Estelle Watts, Office of Healthy Schools, MDE

Strategic Objective 3.1.4 Decrease the percentage of adults ages 18 and older who report consuming fruits and vegetables less than one time daily

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percentage of adults ages 18 and older who report consuming fruit less than one time daily. *Data source: BRFSS*	2013: 49.9%	2019: 44.9%	Establish and/or enhance community and worksite environments that support access to health food options a. Establish 10 new Mayoral Health Councils who will promote: SNAP benefits and established farmers markets and establishing farmers markets by December 2016	

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APPENDIX N : Mississippi State Community Scorecard – 2016
PRIORITY AREA #3: Reduce Rates of Chronic Disease
Goal 3.1 Decrease obesity rates through the promotion of healthy lifestyles

Strategic Objective 3.1.4 Decrease the percentage of adults ages 18 and older who report consuming fruits and vegetables less than one time daily

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percentage of adults ages 18 and older who report consuming vegetables less than one time daily. *Data source: BRFSS*	2013: 30.6%	2019: 27.5%	b. Identify, adapt and disseminate, and promote a Congregational Health Ministry Toolkit for Mississippi churches to promote access to healthy foods by December 2016 c. Conduct healthy food preparation workshops for SNAP and WIC recipients by December 2016	

Organization/ Lead Person: a. Dr. Victor Sutton, Office of Preventive Health, MSDH; b. Cassandra Dove, Office of Preventive Health, MSDH; c. Dr. David Buys, Mississippi State Extension

Status will be reviewed using a stoplight approach as follows:

Red: Not On Target	Yellow: Falling Behind	Green: On Target

COORDINATING CO-CHAIRS: JACQUILYN GERMAN, MSDH;

PARTNERS AND STAKEHOLDERS: Therese Hanna, Center for MS Health Policy; Tameka Walls, MSDH; Dr. Edward Hill, Board of Health; Dr. Alfio Rausa, MSDH; Dr. Craig Escude, MS Dept. of Mental Health; Tim Darnell, MSDH; Heather Wagner, MSDH; Anne Travis, The Bower Foundation; Cassandra Dove, MSDH; Jackie Hawkins, MSDH; Kathy Yadrick, USM College of Health; Caroline Newkirk, MSDH; Dr. David Buys, MSU Extension Service; Jennifer Downey, USM College of Health; Lisa Henick, MS Dept. of Mental Health; Roy Hart, MS Public Health Institute; Dr. Dan Jones, UMMC; DR. JOHN CROSS, UMMC; Estelle Watts, MS Dept. of Education; Dale Dieckman, MS Dept. of Education; Michael Jordan, MS Dept. of Education; Deborah Colby, Nat'l Diabetes and Obesity Research Center at Tradition; Dr. Sylvia Byrd, MSU Extension Service; John Davis, MS Dept. of Human Services; Tiffani Grant, MSDH; Dr. Lei Zhang, MSDH;

Appendix O – Create a Culture of Health

A culture of health starts in communities where healthy choices about what to eat, how much to exercise, or whether to smoke or bicycle or work are easy choices. A culture of health starts where the environments in which we live—our schools, workplaces, and neighborhoods—are health enhancing. All of the outcome measures for goal #1 are centered on private entities and state government entities. One identified gap in the information we have about worksite wellness programs and health promotion activities within Mississippi is city and county governments. Over the next year, the Mississippi Business Group on Health and the Mississippi State Department of Health plan to survey local governments to evaluate their worksite wellness needs. Based on the results of this assessment, we plan to develop actions to expand wellness and health promotion activities into this sector.

APPENDIX O : Mississippi State Community Scorecard – 2016
PRIORITY AREA #4: Create a Culture of Health
Goal 4.1 Improve the culture of health in Mississippi workplaces

Strategic Objective 4.1.1 Increase the number of Mississippi worksites that offer employee wellness programs

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percent of private worksites conducting wellness programs or health promotion activities *Data Source: Mississippi Worksite Survey*	December 31, 2014: 66.6%	December 31, 2019: 82%	a. Promote the Recognized Healthy Workplace Program through multiple channels throughout the state b. Increase the number of applicants to the Healthiest Workplaces Awards by July 2016 c. Share success stories on the MSBGH, MSDH, and MS Business Journal publications and media outlets by August 2016 d. Engage business organizations to promotion and offer learning opportunities on worksite wellness best practices e. Enhance resource kits on the MSDH and MSBGH websites f. Prepare promotional campaign and key messages for media by 9/1/16	

Organization/ Lead Person: a. Murray Harber, MS Business Group on Health; Victor Sutton, MSDH; b. Murray Harber, Victor Sutton; c. Murray Harber, Victor Sutton; d. Murray Harber, Victor Sutton; e. Buddy Daughdrill, MPHA; Murray Harber, MS Business Group on health; f. Victor Sutton, MSDH; Liz Sharlot, MSDH; Murray Harber, MS Business Group on Health; Buddy Daughdrill, MS Public Health Association

APPENDIX O : Mississippi State Community Scorecard – 2016
PRIORITY AREA #4: Create a Culture of Health
Goal 4.1 Improve the culture of health in Mississippi workplaces

Strategic Objective 4.1.1 Increase the number of Mississippi worksites that offer employee wellness programs

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percent of private worksites that provide healthy alternatives in vending machines *Data Source: Mississippi Worksite Survey*	December 31, 2014: 41.7%	December 31, 2019: 56.7%	g. Present package at MEC annual conference and other groups: MEC Spring 2016, SHRM May 2016, MBGH October 2016, MASI September 2016, MAPA September 2016. h. Identify appropriate speakers/champion by July 2016 i. Advocate for two policies that promote worksite wellness	

Organization/ Lead Person: g. Well-respected employer (TBD); h. Rita Wray; Murray Harber, MS Business Group on Health; Victor Sutton, MSDH; i. Kay Henry, MSDH; Victor Sutton, MSDH; Murray Harber, MS Business Group on Health

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percent of private worksites that have formal employee wellness policies *Data Source: Mississippi Worksite Survey*	December 31, 2014: 30.8%	December 31, 2019: 40.8%	j. Work with AHA to promote healthy vending programs to worksite. K. Create sample wellness policies to promote to employers	
Percent of private worksites that offer lactation support for breastfeeding mothers, including time and a private, sanitary space to pump milk at work *Data Source: Mississippi Worksite Survey*	December 31, 2014: 36.6%	December 31, 2019: 46.6%		

APPENDIX O : Mississippi State Community Scorecard – 2016
PRIORITY AREA #4: Create a Culture of Health
Goal 4.1 Improve the culture of health in Mississippi workplaces

Strategic Objective 4.1.1 Increase the number of Mississippi worksites that offer employee wellness programs

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percent of private worksites reporting that more than 50% of employees participate in a health and wellness program in the past 12 months *Data Source: Mississippi Worksite Survey*	December 31, 2014: 55.8%	December 31, 2019: 65.8%	j. Work with AHA to promote healthy vending programs to worksite. K. Create sample wellness policies to promote to employers	

Organization/ Lead Person: j. Katherine Bryant, Victor Sutton; k. Murray Harber

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Number of state agencies and other state entities classified as comprehensive or better using the CDC Health Score Card *Data Source: MSDH Office of Preventive Health*	December 31, 2016: 9	December 31, 2017: 20	a. SEWP in collaboration with SSEHIP provides four trainings per year to improve application of best practices in workplace wellness. b. Share success stories to legislature, state leadership, and state employer units MSBGH and SEWP work with the MML and MAS to promote Recognized Healthy Employer Program	
Number of Cities and Counties that achieve Recognized Healthy Employer status *Data Source: MS Business Group on Health*	December 31, 2016: No Baseline	December 31, 2017: 15		

Organization/ Lead Person: a. Victor Sutton; b. Dr. Mary Currier, Victor Sutton; c. Murray Harber/ Victor Sutton

APPENDIX O : Mississippi State Community Scorecard – 2016
PRIORITY AREA #4: Create a Culture of Health
Goal 4.2 Improve culture of health in Mississippi in academic settings

Strategic Objective 4.2.1 Increase the percent of school health councils in (full compliance) with composition requirements

Measure	Baseline	Target	Critical Actions Intervention Strategies	Status R/Y/G
Percent of health councils that have members that are child nutrition directors, health professionals, and students *Data Source: Center for Mississippi Health Policy*	2011-2012 School Year: 18%	2017 – 2018 School Year: 25%	a. Provide messages to MDE Office of Healthy Schools for school board training by September 2015 b. Provide message to school nurses by September 2016 c. Engage health professional organizations to determine who is interested in serving on school health councils at annual meetings in 2016-2017 d. Map healthcare professionals by December 2016 e. Provide information to parent organizations by August 2016 f. Share information with school administration by August 2016	

Organization/ Lead Person: a. Estelle Watts, MDE OHS; b. Estelle Watts, MDE OHS; c. Buddy Daughdrill, MPHA; Kay Henry, MSDH; d. Larry Smith, MSDH Office of Performance Improvement; e. Christine Philley, MDE OHS; f. Christine Philley, MDE OHS

Status will be reviewed using a stoplight approach as follows:

Red: Not On Target	Yellow: Falling Behind	Green: On Target

COORDINATING CO-CHAIRS: PAIGE WARD, MSDH; RITA WRAY, Wray Enterprises Inc.;

PARTNERS AND STAKEHOLDERS: Joshua Mann, UMMC; Buddy Daughdrill, MPHA; Timothy Plummer, U.S. Dept. of Housing and Urban Development; Purvie Green, MDAC; Kay Henry, MSDH; Chad Bridges, MSDH; Jim Craig, MSDH; Joy Sennett, MSDH; Liz Sharlot, MSDH; Victor Sutton, MSDH; Ellen Jones, MSPHI; Breanne Hancock, MSDH; Ron Davis, MSDH; Thad Waites, Board of Health; Don Eicher, MSDH; Jamie Rasberry, Healthways; Murray Harber, MS Business Group on Health; Matthew Harrell, MSDH; Jana Bailey, MSDH; Ron Davis, MSDH; Ryan Kelly, Mississippi Rural Health Association; Alicia Partee, MSDH; BETTINA BEECH, UMMC