Weighing the Outcomes:
The Obesity Crisis in Mississippi
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The Weighing the Outcomes Coalition is comprised of five individuals who understand and respect the importance of dealing with the obesity crisis in Mississippi:

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Acknowledgements:

We would like to thank Elizabeth Schweitzer for her valuable insight into this policy brief. We would also like to thank Dr. Jacqueline Merrill, PhD, MPH, RN for her Health Policy course that highlighted the need for change in certain parts of America.

Lastly, thank you to the legislative government of the state of Mississippi for reading and considering our request for change, something we find to be imminently necessary.
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EXECUTIVE SUMMARY

America is one of the most overweight countries in the world and Mississippi is one of the most overweight states in America. What does this mean? Why should we care? Does Mississippi, as a state, have a responsibility to rectify this obesity crisis? We, the Weighing the Outcomes Coalition, think that we do have a responsibility.

Currently, Mississippi falls short of the Healthy People 2020 national obesity goal by almost 10%. In fact, 30% of Caucasians and 40% of African Americans are obese in the state of Mississippi. How does Mississippi rank against other states?

- 49th for obesity
- 48th for diabetes
- 45th for high cholesterol
- 48th for high blood pressure

All of these diseases are known to be closely linked to obesity levels and over ⅓ of deaths in the state are due to cardiovascular and obesity related ailments. What is one way to combat this? Exercise! Statistics show that Mississippians lead a sedentary life:

- 32% of adults do not participate in physical activity.
- 77% do not achieve the recommended level of physical activity.

COST OF OBESITY:
The financial impact of obesity in Mississippi is significant. The direct medical costs for treating obesity and obesity-related health problems nationwide in 2008 was $147 billion, a number that is increasing as obesity rates increase. In 2010, there were 46,000 obesity-related cancer cases, and the projected cases for 2030 are 111,000. These numbers are staggering and will have an astronomical financial burden on the state. In addition, the state has approximately 700,000 people covered through Medicaid, so a large portion of these illnesses will need to be paid for with state funding.

OBSTACLES
In 2013 an “Anti-Bloomberg Bill” was passed which halts food and beverage regulations. Cities and counties cannot limit portion sizes, require calorie counts on menus or restrict the sale of food based on how it was grown.

INITIATIVE GOAL
Our goal is to decrease obesity and improve overall health in the Mississippi population through health promotion and education across the lifespan.

OUR PROPOSAL
Investing in health awareness and education in the community will improve nutritional practices and result in an overall decrease in obesity rates. Our proposed interventions will require an estimated $11.2 million in funding from the state government to ensure improved health and decreased medical costs in the future.

- School-Based Nutrition Education: The state government will mandate weekly nutrition education classes in all public schools.
Faith-Based Nutrition Education: The state will provide funding for faith-based health education programs.

PTA and Nutritionist Collaboration: The state will provide grant money to Parent Teacher Associations to fund health events by licensed nutritionists.

Coalition for Obesity Prevention: We will create a state a coalition to unite individuals, government agencies, nonprofits, private businesses, and membership organizations in the fight against obesity.

Presidential Youth Fitness Program: The state will mandate public school participation in the Presidential Youth Fitness Program, aimed at increasing physical activity across the state, focusing on school-aged children.

Farmers’ Market Subsidies: The state will install EBT terminals at farmers markets, which will increase healthy produce purchasing for residents using food stamps.

CONCLUSION

Obesity in Mississippi is a growing epidemic and is associated with many health risks. Nutritional choices are a major contributing factor to obesity. By educating individuals in Mississippi on the importance of a healthy diet and lifestyle, they will have the skills to make smarter, healthier choices.

DESCRIPTION OF THE STATE CONTEXT

Mississippi is located in the deep south of the United States. It is the 32nd largest state in the US and possesses a land area of 46,923 square miles. It is bordered by Tennessee, Alabama, Arkansas, Louisiana, and the Gulf of Mexico. Since Mississippi is in close proximity to the Mississippi River and Gulf of Mexico, it consists primarily of lowland terrain and rich silt soil deposited during periods of flooding. It is located in the humid subtropical climate region, characterized by long hot summers, temperate winters, and evenly distributed rainfall throughout the year. The state is subject to periods of drought and flooding, and also threatened by thunderstorms and tornadoes.

According to the US Census, Mississippi has a population of over 2.96 million residents, ranking 32 largest out of the 50 states. While white individuals make up the majority of the population, Mississippi has the highest proportion of African Americans in the nation. The racial composition of the state is as follows:

- White - 59.1%
- Black - 37.0%
- Asian - 0.9%
- Native - 0.5%
- Other - 1.3%
- Two or more - 1.2%

The economy of Mississippi has taken a hard hit over the past decade; with their top industries faltering and their unemployment rate one of the highest in the nation. Historically, the top grossing industries in Mississippi included agriculture, manufacturing, fishing, and gambling. Approximately 30% of the Mississippi labor force works in farming, with approximately 11 million acres of farmland in a largely rural
state. Recently, many farms have been shut down or have been bought out by larger corporations. These corporations do not always hire local townspeople as workers and, because of this, unemployment numbers continue to increase.

Three of the largest manufacturers in the state are Nissan, Toyota, and General Electric. These companies have non-union status, which has allowed larger corporations to pay a lesser hourly wage. At General Electric, low-level employees get paid $14 per hour, which is 45% lower than the nationwide median wage. However, on the other end of the spectrum are the companies that have moved out of Mississippi due to lack of unions. These companies are looking for a more solidified and stable workforce that comes along with Union employees.

Commercial fishing was historically a large moneymaker for the state, being conveniently located on the Mississippi River and the Gulf of Mexico. However, due to natural and manmade disasters (ex. overfishing, oil spills), commercial fishing has lost a significant amount of revenue. Casinos used to generate large revenue for Mississippi, but they also took a big hit due to the recession and other states legalizing gambling. From 2007 to 2013, there was a 33% drop in casino revenue in Mississippi.

According to Business Insider, Mississippi’s economy ranks last of the 50 states. It ranks last in the country for unemployment (rates at 8%), annual wages (average annual wage at $36,451), and gross domestic product per capita ($32,421). According to the 2008 US Census, 21% of Mississippians live in poverty, which is the highest population by state percentage in the country. Currently, 246,000 children are living in poverty in Mississippi. Many families live in rural areas of the state, all of which were hit hard by the economic collapse of 2008. These areas have not been given an opportunity to thrive again, and, as a result of this, caregivers are out of work and education systems are faltering.

Mississippi is ranked the most religious state in the nation, with 82% of its residents being Christians and 14% reporting as unaffiliated or non-religious. Public opinion polls show that 75% of residents report that religion is very important in their life. In addition to being a religious state, Mississippians tend to be conservative in their thinking. When surveyed about controversial topics, 59% of the population said abortion should be illegal, 54% reported that homosexuality should be discouraged, and 69% of the population opposed same-sex marriage.

Mississippian culture is strongly tied to food, with county fairs and food festivals being highly prevalent throughout the state. In the spring of 2013, an “Anti-Bloomberg Bill” was passed as a direct reaction to New York City Mayor Bloomberg’s attempt to cap portion sizes and mandate calorie counts. The Anti-Bloomberg Bill put a halt on food and beverage regulations. Cities and counties in Mississippi cannot limit portion sizes, require calorie counts on menus, or restrict the sale of food based on how it was grown.
Mississippi’s landscape is dotted with Food Deserts. These are rural areas that lack affordable grocery stores. In order to be labeled a Food Desert, the area must:

- Urban areas: Residents live greater than 1 mile from a grocery store.
- Rural areas: Residents live greater than 10 miles from a grocery store.
- Increased number of convenience stores and fast food stations.
- 20% or more of an area’s residents live at or below the federal poverty line.

There are two Mississippi groups that are affected by food deserts: the low-income families and rural residents. For the former, 70% of households throughout the state are eligible for food stamps, but have to travel over 30 miles to reach a supermarket. The rural counties average one supermarket per 190.5 square miles.

The Mississippi food deserts fuel obesity. In order to grocery shop, one must travel over 30 miles to the closest grocery store where groceries are highly priced. Consequently, people resort to gas stations, convenience stores, and fast food restaurants, which only provide cheap, high calorie, and low nutrient options. A direct correlation between geographic location and rates of obesity has been found in Mississippi.

Medicaid is the fourth largest expenditure in the state of Mississippi, which implies that this is a lower income population who is unable to cover the cost of healthcare. In addition, Mississippi is an unhealthy state, which may require individuals to seek Medicaid assistance. In the past few years, the public assistance budget increased from 0.2% to 5.9%. This resulted in subsequent decreases in other funding allocations and signifies a movement towards a slightly less conservative view on state support and a higher demand for assistance.

“It’s really hard, because, you know, when I was coming up, we had greens and gardens and all that. But now you have to buy produce. So, it’s real hard for the kids. I mean, and the majority of them, they eat like pizzas. And that’s obesity.”

Jennifer Hoskins
Lambert, Mississippi
Mississippi received $2.37 billion in federal stimulus funding between 2009 and 2013, making it the state to receive the most federal funding as a percent of general revenue. In an effort to qualify for over $98 million in federal education funding, Mississippi re-wrote its’ state budget in 2010 and has maintained that general budget structure. They have done this by moving $50 million to education spending from public safety and health. This channeling of funds effectively highlights the main issue handicapping Mississippi: an overall lack of adequate funds for the entire state. In order to have enough funding for public schools, money needs to be pulled from other programs, and then those programs suffer.

**DESCRIPTION OF PROBLEM**

Mississippi ranks as the 49th state in America’s Health Ranking Report. According to the Mississippi State Department of Health, Mississippi has the highest cardiovascular disease death rate in the nation and is second in the US for obesity and diabetes prevalence among adults. Over 30% of Caucasians and over 40% of African Americans in the state are classified as obese. In regards to disease prevalence, Mississippi ranks extremely poorly, coming in 48th for diabetes, 45th for high cholesterol, and 48th for high blood pressure. All of these diseases are known to be closely linked to obesity levels and over 1/3 of deaths in the state are due to cardiovascular and obesity related ailments.
Mississippi is ranked as the most physically inactive state in the nation. Self-reported data shows that 32% of the adult population does not participate in physical activity and only 23% of the population achieves the recommended level of activity per week. In the State of Obesity Report, it states that sedentary adults pay $1,500 more per year in health care costs than physically active adults.

The financial impact of obesity in Mississippi is significant. In 2008, the medical costs for treating obesity and obesity-related health problems nationwide was $147 billion, a number that is increasing as obesity rates rise. In 2010, there were 46,000 obesity-related cancer cases, and the projected cases for 2030 are 111,000. In addition, in 2010, there were 183,417 heart disease cases and the 2030 projection is 814,504. These numbers are staggering and will have an astronomical financial burden on the state. In addition, the state has approximately 700,000 people covered through Medicaid, so a large portion of these illnesses will need to be paid for with state funding. Between 2013 and 2015 there was an 8.57% increase in Medicaid enrollment in Mississippi; this trend will put even more of a burden on the government to finance medical treatment if enrollment continues to grow. According to the Mississippi State Department of Health, in 2010 41.2% of hospital discharges were due to chronic conditions and the total charges for chronic related conditions were over $4 billion.

Mississippi ranks:
- #1 for cardiovascular disease death rate
- #3 for diabetes diagnoses
- #5 for high cholesterol diagnoses
- #3 for high blood pressure

Projected Medical Costs 2010 – 2020

Source: CDC BRFSS, n.d.
SOLUTIONS – WHAT ARE WE ASKING FOR?

**Weighing the Options**

- School-Based Nutrition Education
- Faith-Based Nutrition Education
- Farmers Market Subsidies
- Presidential Youth Fitness Program
- PTA & Nutritionist Collaboration
- Coalition for Obesity Prevention

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**Strengthening Individual Knowledge & Skills: School-based Nutritional Education**

We request that the state government require one hour of nutritional education per week for all primary education students. This will education school-aged children on healthy eating practices and help them develop a positive relationship with food.

**Implementation and Evaluation:** The state government will provide funding to the Mississippi Department of Education to develop a new curriculum incorporating nutrition education in each school district. The school district will be required to:

- Hire new educators or train current educators on the nutrition curriculum.
- Spend one hour per week providing age appropriate activities related to healthy eating.
- Obtain pre and post intervention BMI’s of each student.
- Give students a post-intervention survey measuring food choices and healthy food consumption.
Projected outcome & Supporting evidence: It is expected that with this mandatory nutrition education there will be a significant decrease in the student’s BMI, leading to decreased rates of childhood obesity. Strong empirical evidence suggests that school-based nutrition education is effective in decreasing BMI. The journal, Preventative Medicine, published a meta-analysis on research looking at the effects of school-based nutrition education on BMI. The results showed that there was a significant decrease in BMI after healthy eating education. This indicates strong evidence that school-based nutritional education is effective in reducing BMI in children and adolescents.

Promoting Community Education: Faith-based Nutrition Education

We request that the state government provide funding for faith-based education programs that will educate Faith-Based Organizations (FBO’s) on the importance of nutrition and exercise.

Implementation and Evaluation: The provided funding will allow the FBO’s to hire a healthcare professional who can act as a liaison between their religious community and local healthcare organizations. The proposed programming will include:

- Bi-weekly community activities after faith services for 8 months, focusing on reducing cholesterol and blood pressure levels, increasing nutrition knowledge, and reducing weight.
- A multidisciplinary approach with various guest speakers from disciplines such as cardiovascular health, nutrition, and physical education.
- “How to Talk to Your Doctor” forums to educate and empower community members to ask right questions to their providers.
- Obtain pre and post BMI levels, cholesterol levels, and blood pressure readings of all individuals who participate in the education sessions.
- Self-report surveys will be collected to determine level of understanding.

Projected outcome & Supporting evidence: It is expected that since Mississippi is ranked as the most religious state in the nation (82% Christians) this policy will reach a large majority of the population. With the implementation of this policy, faith-based communities will receive important health related education, which will lead to healthier practices behaviors. There is evidence that faith-based health programs yield positive results. The systematic literature review, Health Programs in Faith-Based Organizations: Are They Effective, reported significant improvements in overall health status from 56 different reports. There was a noted increase in fruit and vegetable consumption and a decrease in weight and blood pressure.

A Texas-based health organization implemented “How to Talk to Your Doctor” seminars in 2004. The outcome of these seminars showed improvement in patient/doctor communication across diverse cultural settings, with individuals

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“How to Talk to Your Doctor” Objectives:
- Recognize barriers to good patient-provider communication
- Describe reasons for good patient-provider communication
- Recognize examples of good patient-provider communication traits
- Apply tips for improving patient-provider communication
- Demonstrate good patient-provider communication techniques
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stating they were more confident about speaking with their doctor and asking clarifying questions. This positive result indicates that the same outcome is possible if we education the FBO’s of Mississippi.

**Educating Providers: PTA and Nutritionist Collaboration**

We request that the state government provide grant money to Parent Teacher Associations (PTA) to fund four nutrition-based events per year during PTA meetings. This policy is aimed to ensure that the educators are equipped with the knowledge to provide nutrition education.

**Implementation and Evaluation:** The state government will provide a set amount of grant money to the statewide PTA, who will then be able to divide the money amongst its’ regional organizations.

- PTA will hire nutritionists to create presentations for PTA meetings. These presentations will be geared toward showing parents and teachers how to eat mindfully and instill these values on children.
- Nutritionists will demonstrate fun, healthy eating exercises that teachers can then do with their students.
- Students BMI will be tested at the start of school year and end of the school year to see if there was an improvement after the teacher education sessions.
- Parents and teachers will be polled on the effectiveness of the nutrition sessions at the end of the year.

**Projected outcome & Supporting evidence:** We expect that the PTA/Nutritionist collaborative meetings will broaden parents and teachers knowledge of health and nutrition. Once they have this knowledge, they can disseminate it to their students. In the long term, we would like to see a decrease in the rates of obesity in school-age children. Empirical evidence suggests that school-based and parent-directed nutrition education programs have a positive impact on children’s dietary practices. An article published in the, *International Journal of Education Policy and Leadership* examined the Childhood Obesity Prevention Research Project (COPRP). The COPRP looked at the role of teachers and their influence in disseminating valuable education to students and their families. This project demonstrated that teachers are a valuable and accessible resource for identifying health issues and a vital partner in the development of parent and child obesity interventions. Using the PTA as a platform for nutrition education will bring parents and educators together fostering continuity in the promotion of health for children in and outside the classroom.

**Fostering Coalitions and Networks: Coalition for Obesity Prevention**

We request that the state provide grant money to create a Mississippi Coalition for Obesity Prevention. The coalition would be open and free for all to join and works towards combining the efforts of individuals, government agencies, nonprofit organizations, private businesses, membership organizations, churches and faith based communities towards one common goal of improving the health of Mississippi. The
coalitions will target specific organizations like: the Mississippi Hospital Association, the Mississippi Rural Hospital Alliance, the State Department of Education: Office of Healthy Schools, and major manufacturing companies like Nissan, Toyota and GE.

**Implementation and Evaluation:** The coalition will host meetings, participate in think tank programming, collaborate on research, assist with fundraising and host community outreach events.

- Executive Board of the coalition will be appointed by the Department of Health and Human Services by the state of Mississippi.
- Board will host monthly meetings that citizens can attend. Meetings will encourage people to become part of the coalition.
- Coalition Teams and Standing Committees will be formed by members appointed by the Board to complete specific tasks.
- Coalition will pool resources together to design different programs (examples include walk-a-thon, a health fair, health presentations in schools, nursing homes, and churches).
- The progress of this policy will be measured through the amount of meetings, programming, community events, and research studies that it brings to the community.

**Projected outcome & Supporting evidence:** We expect that the formation of a coalition will help to unite different organizations in Mississippi to combat the obesity epidemic. It is difficult to target obesity throughout the country since every state is unique, which is why this policy will allow for a more individualized approach to obesity control within Mississippi. Evidence shows that state-based coalitions work. Arkansas currently has an active Coalition for Obesity Prevention that was created in 2007. Since its’ creation, the coalition has gained over 1500 members and 120 partners. It has conducted research, hosted events, created an annual health summit, provided scholarships and grants, created educational resources and programming for schools, and formed work groups to target specific communities and outcomes. Obesity rates of children in Arkansas have plateaued since the implementation of this bill.

![Obesity rate in 2-4 year olds and 10-17 year olds](The State of Obesity in Arkansas, n.d.)
Changing Organizational Practices: Presidential Youth Fitness Program

We propose that the state government of Mississippi mandate school participation in the Presidential Youth Fitness Program (PYFP) with a multi-year goal of program participation beginning with elementary schools. The overall goal of this policy is to have all schools participate in the program in order to increase physical activity and build healthy lifestyle practices in children.

Implementation and Evaluation: The state will use the FITNESSGRAM® to measure the success of the PYFP. FITNESSGRAM measures aerobic capacity, body composition, muscular strength, endurance, and flexibility. By using FITNESSGRAM, the school will not be burdened with creating a fitness program; they can use the one that already exists.

- State will purchase rights to use FITNESSGRAM, which costs $599.00.
- School will appoint a FITNESSGRAM leader, who will follow the program’s guidelines for implementing an effective PYFP.
- Leader will measure outcomes with FITNESSGRAM metrics of aerobic capacity, body composition, muscular strength, endurance and flexibility.

Projected outcome & Supporting evidence: We expect that the PYFP implementation in schools will provide an engaging way for students to stay active. By using FITNESSGRAM, schools can get real-time measurements on the efficacy of the program. The Institute of Medicine 2012 conducted a report, *Fitness Measures and Health Outcomes in Youth*, which confirmed that testing of cardiorespiratory endurance and body composition are valid measures and should be utilized in youth health fitness programs. Therefore, it is key to target school age children to stop the obesity problem in Mississippi.

Influencing Policy and Legislation: Farmers Market Subsidies

In order to deal with the Food Deserts in Mississippi, we propose that the state assist individual farms in collaborating to set up farmers markets. This will allow the residents of rural areas of Mississippi to get their needed fruits, vegetables, and grains.

Implementation and Evaluation: The state government will form a committee for the implementation of the farmer’s market subsidies. The committee will have representation from local farmers associations from each county, administrators from SNAP, nutritionists, and physicians. The state government will subsidize Electronic Benefit Transfer (EBT) terminals at farmers markets to increase access to healthy produce for Supplemental Nutrition Assistance Program (SNAP) participants and utilize an incentive program such as Shop N Save.

“Longitudinal data has shown that for each weekday that normal weight adolescents participated in physical education, the odds of becoming an overweight adult decreased by 5%.”
Each county will be assigned farmers’ market days and locations where subsidized EBT terminals will be used.

Committee will create a website for the project which will include locations of participating local farmers markets and operating hours.

The committee will create a series of Public Service Announcements (PSA) for TV, print, and online use on the importance of eating fruits and vegetables with promotion of local farmers markets.

Two Public Service announcements will be made: one 10 second and one 30 second spot for both television and radio to announce the availability of EBT terminals at specific farmers markets.

Progress will be measured in conjunction with farmer’s market/SNAP initiatives by looking at profits from farmers markets before and after the implementation of EBT terminals.

Projected outcome & Supporting evidence: We expect that this policy will mobilize farms in the area to come together and take part in local farmers markets. Farmers associations will be incentivized to participate with the promise of increased profits from subsidy shoppers. Studies have shown that eating more fruits and vegetables goes hand in hand with better health outcomes. “Among US adults, exposure to advertising for fruits and vegetables resulted in increased willingness to pay for such foods, and resulting simulation models suggested that broad-based advertising for fruits and vegetables would lower average individual caloric intake by ~1,800 kcal per year.” Surveys of the US have also shown that people are in favor of advertising to increase healthy behaviors.

CONCLUSION

With all the information provided, do you think it is worth caring about the obesity crisis in Mississippi? Do you think we, as a state, have a responsibility to implement policies that will combat obesity? Based on the research collected by the Weighing the Outcome Coalition, we believe that the obesity epidemic in Mississippi will best be combated with local, community based interventions. We think that these interventions begin with education; we need to educate the citizens of Mississippi on the health repercussions caused by obesity.
The six separate initiatives in the Weighting the Outcomes Coalition will provide rural and impoverished areas of Mississippi the funding and resources they need to combat obesity. Our aims are to:

- Improve nutritional understanding
- Help individuals make smarter food choices
- Increase exercise in the juvenile population
- Empower individuals to ask questions of their doctors
- Educate providers about the importance of conversations about nutrition

By gaining this skillset, we will reduce the Mississippi incidents of:

- Diabetes
- Cardiovascular Disease
- Obesity
- Death

In one year, Mississippi spent $925 million on obesity-related medical costs. We want to help get this number down! We request that the state of Mississippi provide us with $11.2 million to spearhead the Weighing the Outcomes Coalition. Through education, campaigning, public service announcements and community-based forums, we can spread the knowledge that is necessary to end the obesity epidemic in this great state. By supporting Weighing the Outcomes Coalition, Mississippi can be a part of the solution.
REFERENCES


