

2 0 0 9

MISSISSIPPI



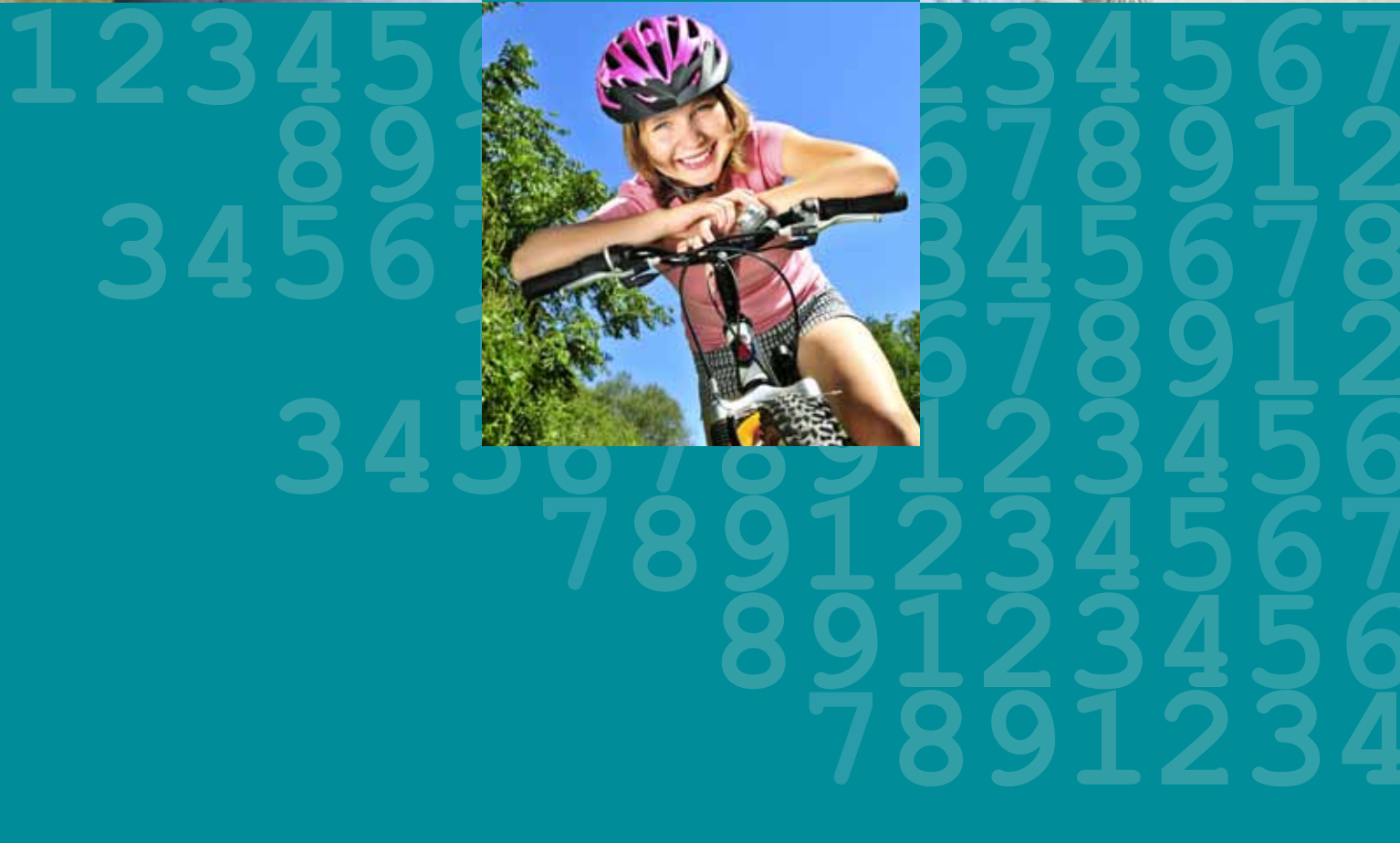
kids
count

DATA
BOOK





OBESITY



123456789101112131415161718192021222324252627282930313233343536373839404142434445464748495051525354555657585960616263646566676869707172737475767778798081828384858687888990919293949596979899100

OBESITY
123456789101112131415161718192021222324252627282930313233343536373839404142434445464748495051525354555657585960616263646566676869707172737475767778798081828384858687888990919293949596979899100

OBESITY



The well-being of children is the most important determinant of Mississippi's future. Healthy children and adolescents are much more likely to have higher academic achievement, become healthy adults and provide communities with a viable and productive workforce (Gable, Britt-Rankin, & Krull, 2008; HHS, 2001). Childhood obesity must be addressed to ensure that Mississippi's children have the opportunity to grow into healthy adults. Effective approaches to prevent and reverse childhood obesity involve children's families and communities, coupled with progressive statewide policies.

According to data from the National Health and Nutrition Examination Survey (NHANES), childhood obesity prevalence rates have increased steadily in the U.S. since 1980 (CDC, n.d.). Mississippi's childhood

obesity rates are among the highest in the nation. Data from the 2007 Youth Risk Behavior Surveillance System (YRBSS) of the Centers for Disease Control and Prevention (CDC) showed that 35.8% of Mississippi's high school students were overweight or obese, compared to 28.8% nationwide (CDC, 2008). The Healthy People 2010 national health goal (HHS, 2007, Objective 19-3c) is to reduce the proportion of children and adolescents (aged 6 to 19 years) who are overweight or obese to 5% by 2010. Depending on the data source and age of children included, the percentage of overweight or obese children and adolescents in Mississippi was between seven and nine times more than this goal in 2007 (CDC, 2008; HHS, n.d).

CONSEQUENCES OF CHILDHOOD OBESITY

The high rates of childhood obesity in Mississippi cause great concern because of the serious consequences for children who are overweight or obese:

- Overweight children are at risk for early development of chronic disease, leading to disability and premature death (Ludwig, & Ebbeling, 2001).
- Overweight children miss more school days and demonstrate lower academic performance (Schwimmer, Burwinkle, & Varni, 2003).
- Childhood obesity is a significant predictor of coronary heart disease in adulthood (Baker, Olsen, & Sorensen, 2007).
- Overweight adolescents have a 70% chance of becoming overweight or obese adults (Office of Surgeon General, 2001).
- Overweight and obese individuals are at increased risk for type 2 diabetes, heart disease, hypertension, osteoarthritis, sleep apnea, gallbladder disease, respiratory problems, stroke, endometrial cancer, breast cancer, colon cancer, prostate cancer, depression, and other conditions (Narayan, Boyle, Thompson, Sorensen, & Williamson, 2003).
- Obesity accounts for a substantial part of increased disability in adults and is expected to result in an increase of 10% – 25% in the nursing home population by 2020 (Lakdawalla et al., 2003).

The national health objective for 2010 is to reduce to

5%

the proportion of children and adolescents (aged 6 to 19 years) who are overweight or obese

Mississippi has the highest rate of adult obesity in the nation and the highest rate of premature death. The state ranks at the top of the list for most chronic disease rankings, including heart disease, hypertension, diabetes, and stroke, and has high disability rates. Given these striking health effects, it is no surprise that obesity has a significant impact on the economy of the state.

- Obesity accounts for approximately 9.1% of total annual medical expenditures (Finkelstein, Fiebelkorn, & Wang, 2003).
- The estimated annual health care cost attributed to adult obesity (in 2003 dollars) in Mississippi is \$757 million (Finkelstein, Fiebelkorn, & Wang, 2004).
- Of the \$757 million, \$223 million is cost to Medicare, and \$221 million is cost to Medicaid (Finkelstein, Fiebelkorn, & Wang, 2004).
- Approximately 8% of private employer medical claims are due to overweight and obesity (Finkelstein, Fiebelkorn, & Wang, 2003).
- About 27% of the increase in medical costs from 1987 to 2001 was due to obesity (Thorpe, Florence, Howard, & Joski, 2004).



HOW THE TOPIC OF OBESITY IS ADDRESSED IN THIS DATA BOOK

Given the consequences and Mississippi's high rates of childhood obesity, the need to address the problem is urgent. An understanding of the collective influences affecting childhood obesity is necessary to change the epidemic of obesity within Mississippi. These interconnected influences on children's lives—their families, schools, communities and access to built environments—all impact children's nutrition and physical activity levels and pose potential benefits or risks for overweight and obesity among Mississippi's children. To explore these influences and the health status of Mississippi's children, the remainder of the chapter will include the following:

- The Data Section provides an overview of a) childhood and adolescent overweight and obesity rates; b) factors that influence those rates (e.g., diet, nutrition and physical activity); c) school health policies in Mississippi designed to reduce childhood obesity and d) key findings of a survey of 3,710 parents in Mississippi on the implementation of the Healthy Students Act of 2007, funded by the Robert Wood Johnson Foundation. Relevant Healthy People 2010 goals appear in the Data Section for the topics discussed.
- The Programs and Policy Considerations Section provides information on numerous efforts that are currently being considered or employed, with promising results, to combat childhood obesity.
- The final section contains a success story that highlights the multifaceted "Get a Life! My Life, My Health, My Choice" program in preventing, intervening and reversing childhood obesity in northwest Mississippi.

OBESITY

DATA SECTION



OVERWEIGHT/OBESITY

According to 2007 data from the Youth Risk Behavior Surveillance System (YRBSS), 35.8% of high school students in Mississippi were defined as overweight (17.9%) or obese (17.9%) using body mass index (BMI) calculations from self-reported height and weight. These percentages were significantly higher than those for the nation as a whole (15.8% overweight and 13.0% obese). In addition, Mississippi had a significantly higher percentage of students who were obese, compared to other Southern states (e.g., 13.9% for Arkansas and 13.8% for Georgia). In that same year, 27.1% of Mississippi high school students described themselves as slightly or very overweight. This percentage was significantly lower than the percentage for the nation as a whole (29.3%), but was not significantly different from Arkansas (27.3%) or Georgia (28.5%) (CDC, 2008). [FIGURE 34]

2007 High School Students' Reports on Overweight / Obesity-related Topics

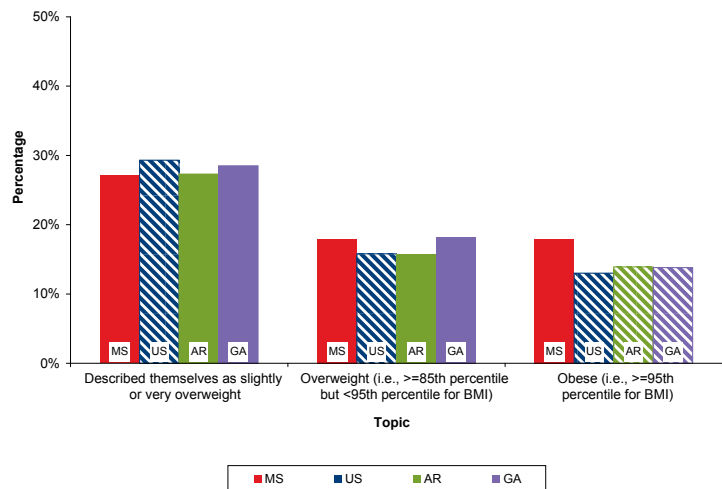


FIGURE 34

Source:

Figure 34 was created using data from the Youth Risk Behavior Surveillance System (YRBSS), 2007.

Notes:

Bars with diagonal lines indicate that Mississippi was significantly different than the U.S. and/or other states. For example, if the U.S. bar is filled with diagonal lines, then Mississippi is significantly different from the United States. Solid bars indicate the differences were not significant between Mississippi and the U.S. and/or other states.^a

The topic labels in Figure 34 are abbreviated versions of the YRBSS questions. For further information, visit the CDC's YRBSS web site at <http://www.cdc.gov/HealthyYouth/yrbss/>

Research that uses actual height and weight measurements of students in Mississippi suggests that the actual prevalence of overweight and obesity could even be higher than the YRBSS data indicate. Researchers from the College of Health at the University of Southern Mississippi developed the Child and Youth Prevalence of Overweight Survey (CAYPOS) to estimate the prevalence of obesity among children in Mississippi using actual height and weight measurements. When 2003 YRBSS self-reported data were compared to data collected through measured heights and weights (CAYPOS), researchers found that the measurements revealed even higher childhood obesity rates (Kolbo et al., 2006).

[FIGURE 35]

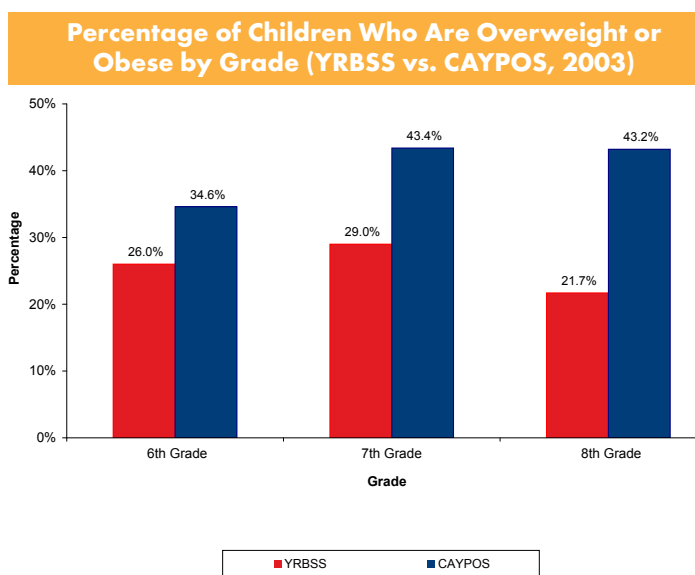


FIGURE 35

Source: Kolbo, Penman, Meyer, Speed, Molaison, & Zhang, 2006. Prevalence of overweight among elementary and middle school students in Mississippi compared with prevalence data from the Youth Risk Behavior Surveillance System.

When the CAYPOS measurements were collected again in 2005, children at almost every grade level showed increasing prevalence of overweight and obesity (Molaison et al., 2007). [FIGURE 36]

Grade	Overweight or Obese	
	2003	2005
1st	26.9%	42.1%
2nd	31.7%	35.2%
3rd	42.8%	41.9%
4th	42.5%	50.1%
5th	44.7%	50.4%
6th	34.6%	50.7%
7th	43.4%	54.9%
8th	43.2%	42.9%

FIGURE 36

Source: Molaison, Kolbo, Speed, Dickerson, & Zhang, 2007. Prevalence of overweight among children and youth in Mississippi: A comparison between 2003 and 2005.

O B E S I T Y

DATA SECTION

Results of the 2007 Child and Youth Prevalence of Overweight Survey (CAYPOS) provided the first signs that childhood obesity rates in Mississippi may be reaching a plateau. Although not statistically significant, the survey showed drops in obesity rates in middle school and high school students (Kolbo et al., 2008). [FIGURE 37]

Source:

Kolbo et al., 2008. *Prevalence of obesity and overweight among children and youth in Mississippi: Current trends in weight status.*

2007 data from the National Survey of Children's Health (NSCH) indicate that, for children ages 10-17 in Mississippi, 44.5% were overweight or obese. In this telephone-based survey, adults provided information about the height and weight of a child in the household, and BMI information was calculated from those reports. For this survey, 22.6% of children ages 10-17 in Mississippi were classified as overweight, and 21.9% were classified as obese in 2007 (HHS, n.d.). Using these statistics, the percentage of overweight and obese children ages 10-17 in Mississippi was almost nine times more than the national Healthy People 2010 goal of 5% (HHS, 2007). When these results are extrapolated to the entire population of children in the state, the magnitude of the issue is sobering. An estimated 75,543 children, ages 10-17, statewide were overweight, and an estimated 73,308 were obese in 2007 (HHS, n.d.). [FIGURE 38]

Source:

U.S. Department of Health and Human Services (HHS), (n.d.) Health Resources and Services Administration, Maternal and Child Health Bureau. *The National Survey of Children's Health (NSCH), 2007.* Retrieved from <http://www.childhealthdata.org/content/Default.aspx>

Percentage of Public School Students in Mississippi Who Were Overweight or Obese (CAYPOS, 2005 & 2007)

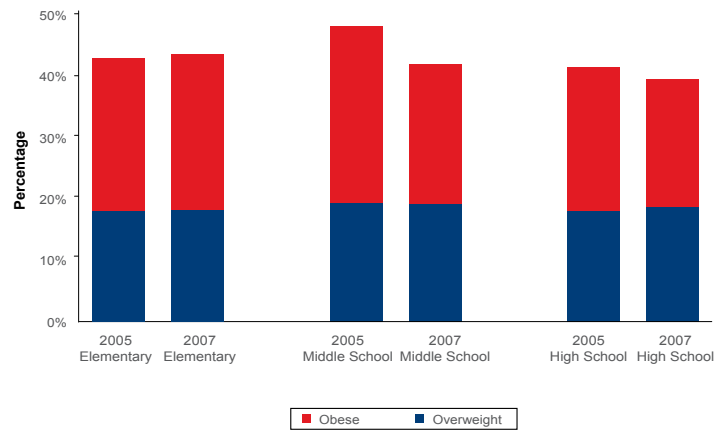


FIGURE 37

Weight Status of Mississippi Children Ages 10-17, 2007 National Survey of Children's Health

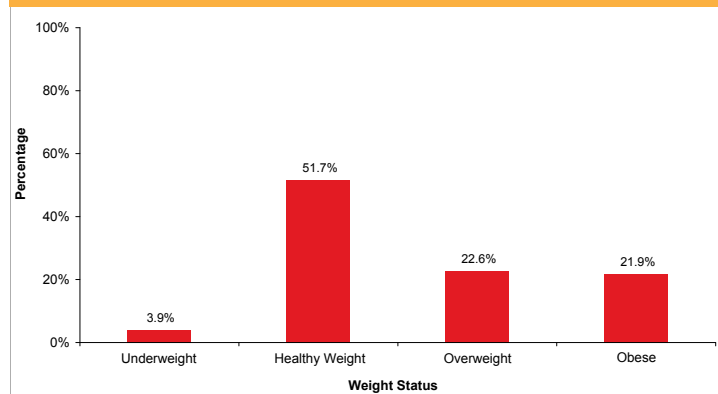


FIGURE 38

In 2009, a telephone-based survey of parents of Mississippi school-aged children (kindergarten through 12th grade), funded by the Robert Wood Johnson Foundation, was conducted to evaluate the impact and implementation of the Mississippi Healthy Students Act of 2007 (Southward et al., 2009). As part of that survey, 3,710 parents of Mississippi public school children were asked to provide heights and weights for themselves and for their children. Statewide, 39.2% of parents were classified as obese, and 37.3% of children were classified as overweight or obese based on parent reports of height and weight (Southward et al., 2009). [See Figure 40, next page] The 2009 data suggest that the percentage of overweight and obese school-aged children in Mississippi is approximately seven and a half times more than the national health goal (HHS, 2007). The national health objective for 2010 is to reduce to 5% the proportion of children and adolescents (aged 6 to 19 years) who are overweight or obese (HHS, 2007). Figure 39 shows the percentage of children who were classified as overweight or obese by public health district in Mississippi (Southward et al., 2009). [FIGURE 39]

Percentage of School-aged Children (Kindergarten-12th Graders) Who Were Overweight or Obese, 2009

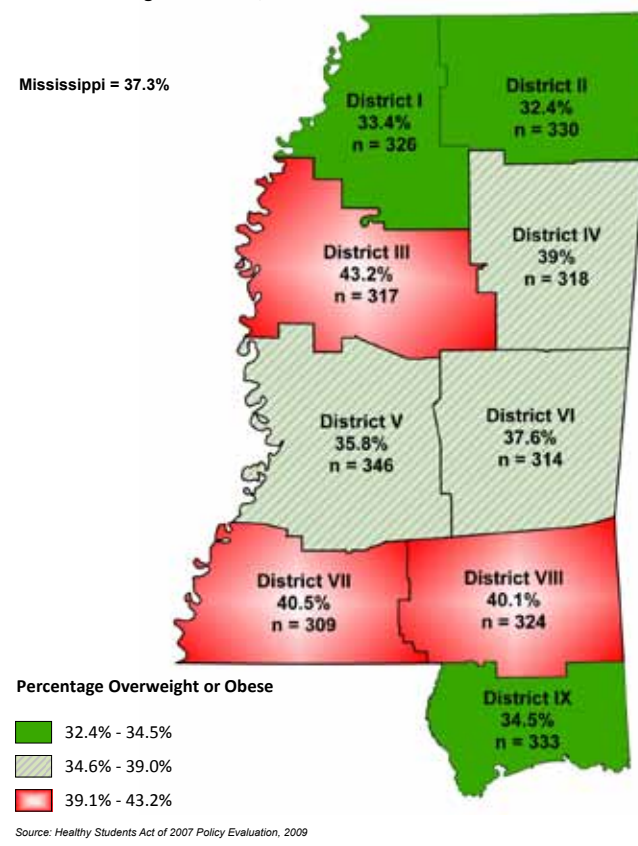


FIGURE 39

“American society has become ‘obesogenic,’ characterized by environments that promote increased food intake, nonhealthful foods, and physical inactivity. Policy and environmental change initiatives that make healthy choices in nutrition and physical activity available, affordable, and easy will likely prove most effective in combating obesity.”

—Centers for Disease Control and Prevention, Overweight and Obesity, 2009

OBESITY

123456789123456789123456
 912345678912345678912345
 8912345678912345678912345
 8912345678912345678912345
 8912345678912345678912345
 12345678912345678912345
 678912345678912345678912345
 912345678912345678912345
 23456789123456789123456
 123456789123456789123456
 89123456789123456789123456
 9123456789123456789123456
 23456789123456789123456

DATA SECTION

Weight Status Categories for School-aged Children in Mississippi and Their Parents (Parent Responses)				
Weight Status Category	Parents		Children	
	n	%	n	%
Underweight	40	1.2%	195	6.7%
Normal / Healthy Weight	882	25.9%	1,633	56.0%
Overweight	1,151	33.8%	474	16.2%
Obese	1,335	39.2%	615	21.1%
Total	3,408	100.0%	2,917	100.0%

FIGURE 40

Source:

Southward, Cross, Baggett, Hanna, Edwards, Carmack, Parrish, Buffington, Mathews, & Thompson, 2009. *Parents', Youth and Policymakers' Perspectives on the Mississippi Healthy Students Act of 2007: Baseline Findings.* The Center for Mississippi Health Policy, funded by The Robert Wood Johnson Foundation.

Notes:

For **Figures 39 and 40**: BMI for parents, BMI and BMI percentiles for children, and weight status categories were calculated using standard formulas and tools available on the Centers for Disease Control and Prevention's web site: <http://www.cdc.gov/healthyweight/assessing/index.html>. In this survey, parents reported their own height and weight, as well as the height, weight and gender of their child. To determine BMI, age was inferred from the grade level provided for the child (e.g., those who were in Kindergarten were assumed to be 6 years old, and one year was added for each grade level, up to those who were in 12th-grade that were assumed to be 18 years old).

By applying a finite population correction formula, the margin of error for the total dataset (n >= 3,500) is no larger than ± 2.5% at a 99% confidence level (for binomial response options with 50/50 split). For sub-samples of approximately 400 cases, the margin of error is no larger than ± 5.0% at a 95% confidence level. For sub-samples of approximately 300 cases, the margin of error is no larger than ± 5.0% at a 90% confidence level.



DIET AND NUTRITION

As part of the 2007 YRBSS, Mississippi high school students answered questions related to diet and nutrition. The results from selected questions are shown in Figure 41 (CDC, 2008).

Source:

Figure 41 was created using data from the Youth Risk Behavior Surveillance System (YRBSS), 2007.

Notes:

Bars with diagonal lines indicate that Mississippi was significantly different than the U.S. and/or other states. For example, if the U.S. bar is filled with diagonal lines, then Mississippi is significantly different from the United States. Solid bars indicate the differences were not significant between Mississippi and the U.S. and/or other states.⁹

The topic labels in Figure 41 are abbreviated versions of the YRBSS questions. For further information, visit the CDC's YRBSS web site at <http://www.cdc.gov/HealthyYouth/yrbss/>

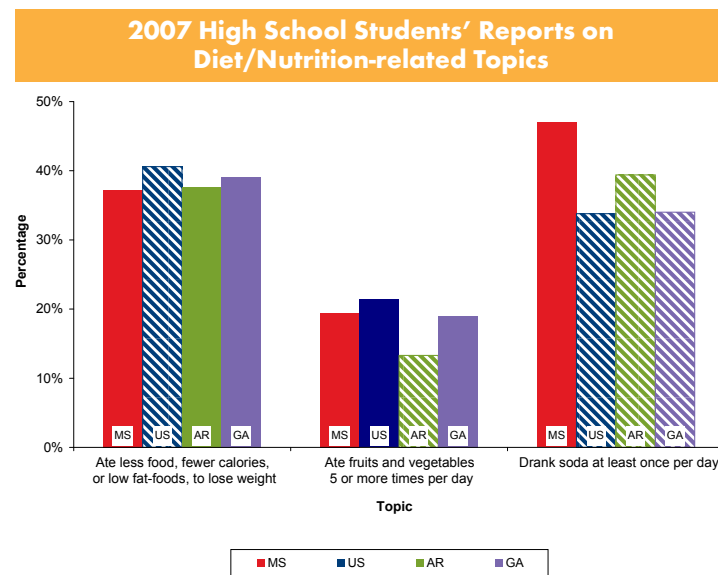


FIGURE 41

In 2007, a significantly lower percentage of Mississippi high school students reported eating less food, fewer calories, or low-fat foods to lose weight or to keep from gaining weight, compared to the nation as a whole (37.2% of Mississippi students compared to 40.6% nationwide).

In that same year, only 19.4% of Mississippi high school students reported that they ate fruits and vegetables five or more times per day, compared to 21.4% nationwide. As a point of reference, the national health objective for 2010 is to increase to 75% the proportion of children and adults who consume at least two daily servings of fruit (Objective 19-5), and increase to 50% the proportion of children and adults who consume at least three daily servings of vegetables (HHS, 2007, Objective 19-3c).

In addition, in 2007, a significantly higher percentage of Mississippi high school students reported that they drank “a can, bottle, or glass of soda or pop (not including diet soda or diet pop) at least one time per day during the seven days before the survey,” compared to the nation as a whole (47% of Mississippi students compared to 33.8% nationwide). This percentage was also significantly higher than those for other Southern states, including Arkansas (39.4%) and Georgia (34%) (CDC, 2008).

Overweight adolescents have a **70%** chance of becoming overweight or obese adults

OBESITY

DATA SECTION

In a 2009 Robert Wood Johnson Foundation-funded telephone survey of 3,710 parents of Mississippi school children, parents were asked, “How many servings or helpings of fruits and vegetables do you think a person should eat each day for good health?” Approximately 2 out of 10 parents (18.3%) responded that a person should eat five or more servings each day (Southward et al., 2009). These results align well with the 2007 YRBSS results that show that approximately 2 out of 10 high school students (19.4%) indicated that they ate fruits and vegetables five or more times per day (CDC, 2008). [See FIGURE 42]

How Many Servings of Fruits and Vegetables Should a Person Eat Each Day for Good Health?
(n=3,710 Mississippi Parents, 2009)

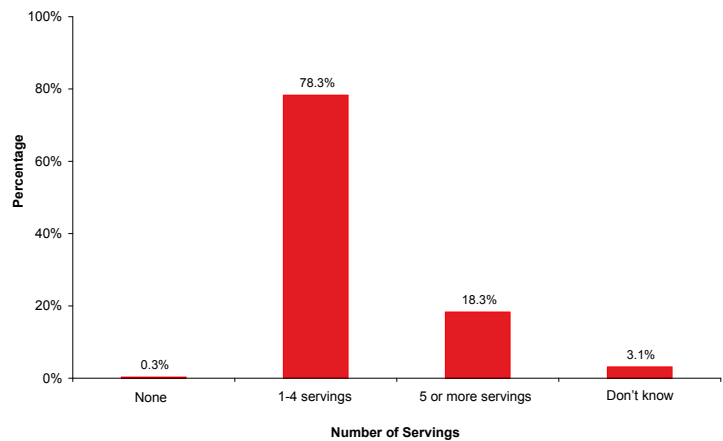


FIGURE 42

In the same survey, parents were asked, “During the past week, how many days were sodas served to your family?” Over 25% of parents indicated that sodas were served every day during the past week, and 27.8% of parents indicated that sodas were not served at all (i.e., served on 0 days) during the past week (Southward et al., 2009). [FIGURE 43]

During the Past Week, How Many Days Were Sodas Served to Your Family?
(n=3,710 Mississippi Parents, 2009)

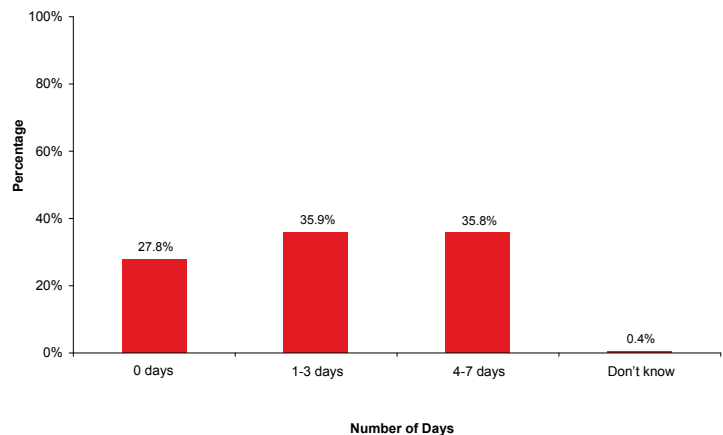


FIGURE 43

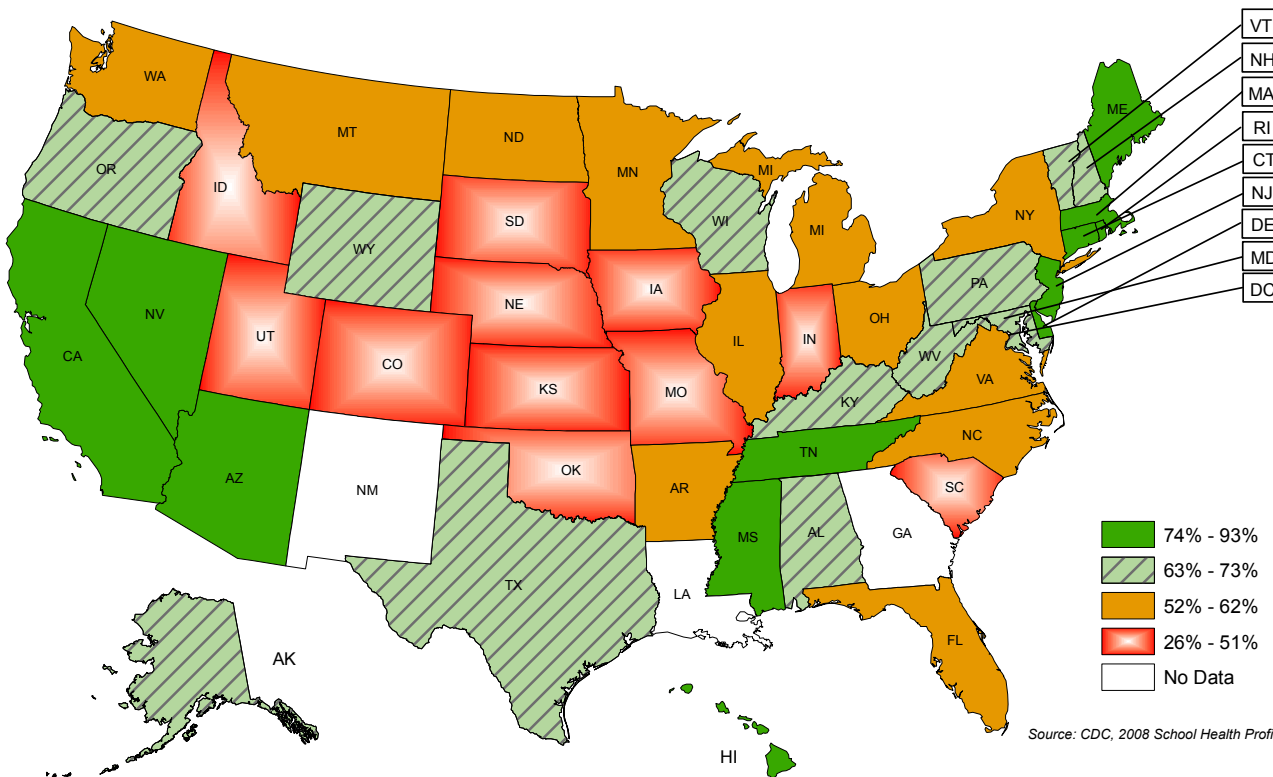
Source: Southward et al., 2009

One of the primary components of the **Mississippi Healthy Students Act of 2007** is the promotion of healthy food options

The promotion of healthy food options is one of the primary components of the Mississippi Healthy Students Act of 2007. Through the Office of Healthy Schools within the Mississippi State Department of Education, a multifaceted approach has been employed to improve the nutritional environments of school-age children in Mississippi. This has included, but is not limited to the following: installation of combination-ovens (offering baking as alternative to frying foods) and providing more healthy choices in vending machines, including snack and beverage machines (Mississippi Office of Healthy Schools, 2008).

According to the Centers for Disease Control and Prevention’s (CDC) 2008 School Health Profiles Survey for public secondary schools, 74.7% of schools in Mississippi reported that their students could not purchase soda or fruit drinks that were not 100% juice from school vending machines or snack bars. This was a significant increase from the 21.8% of schools reporting the same for the 2006 School Health Profiles Survey. In fact, according to a report by the CDC, “from 2006 to 2008, the largest increases in the percentage of schools in which students could not purchase candy, salty snacks, and soda pop were observed in Mississippi and Tennessee.” (CDC, 2009a). In addition, 61.7% of Mississippi schools reported that they “did not sell less nutritious foods and beverages anywhere outside the school food service program.” These foods and beverages included “baked goods not low in fat, salty snacks not low in fat, chocolate candy, other kinds of candy, and soda pop or fruit drinks that are not 100% juice” (Brener et al., 2009; CDC, 2009b). [FIGURES 44 and 45]

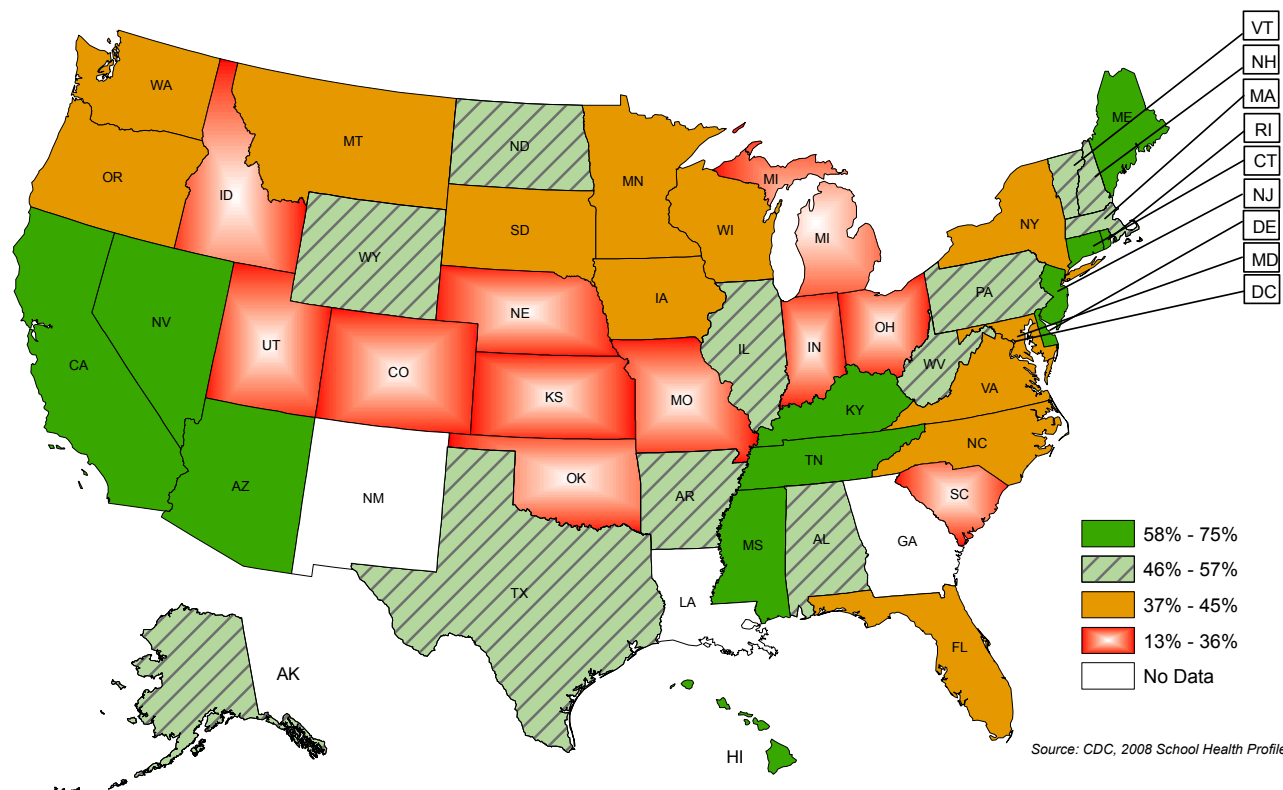
Percentage of Schools in Which Students Could Not Purchase Soda Pop or Fruit Drinks That Are Not 100% Juice from Vending Machines or at the School Store, Canteen, or Snack Bar



OBEESITY

DATA SECTION

Percentage of Schools That Did Not Sell Less Nutritious Food and Beverages*
Anywhere Outside the School Food Service Program



*Baked goods not low in fat, salty snacks not low in fat, chocolate candy, and soda pop or fruit drinks that are not 100% juice

FIGURE 45

"Although the school is only one of many exposures, I am inspired that, based on the MS-NEEDS data, Mississippi schools are rising to the challenge and implementing positive changes to the school nutrition environment. Such changes will help to stimulate sustainable improvements in the health of our children over time, and that is exactly what MS needs!"

—Teresa Carithers, PhD, RD, AD
Associate Dean, School of Applied Sciences Chair,
Department of Family & Consumer Sciences, University of Mississippi



PHYSICAL ACTIVITY

In 2007, Mississippi high school students who completed the YRBSS were asked several questions related to physical activity. Just over 36% of Mississippi students indicated that they were physically active for at least 60 minutes per day for at least five of the seven days prior to the survey. This figure is slightly, but not significantly, higher than the national average of 34.7%, though it is significantly lower than the percentages for students in Arkansas (42%) and Georgia (43.8%) (CDC, 2008).

When asked about the amount of time spent watching television, 47.4% of Mississippi high school students indicated that, on an average school day, they watched television for three or more hours each day. This is significantly higher than the nation as a whole (35.4%) and for students in Arkansas (34.3%). In addition, 23.3% of Mississippi students reported that, on an average school day, they played video or computer games or used a computer for things unrelated to school work for three or more hours each day. This figure is significantly higher than the percentage of students in Arkansas (19%), but is not significantly different than Georgia (24.2%) or the nation as a whole (24.9%) (CDC, 2008). [FIGURE 46]

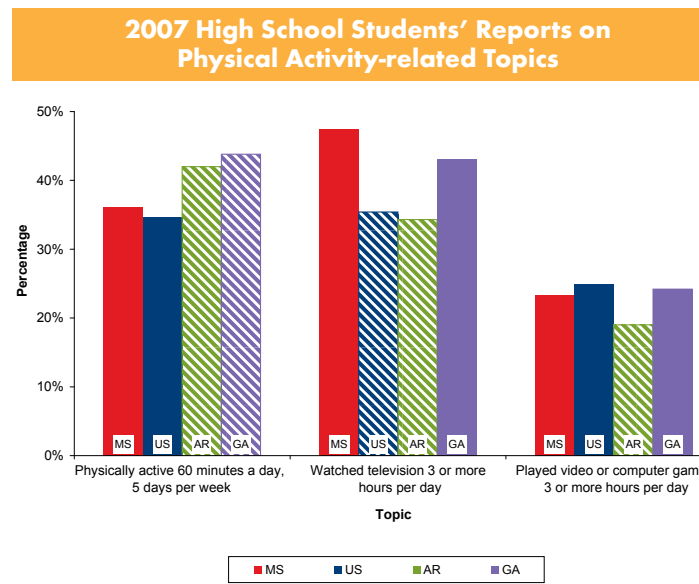


FIGURE 46

Source:

Figure 46 was created using data from the Youth Risk Behavior Surveillance System (YRBSS), 2007.

Notes:

Bars with diagonal lines indicate that Mississippi was significantly different than the U.S. and/or other states. For example, if the U.S. bar is filled with diagonal lines, then Mississippi is significantly different from the United States. Solid bars indicate the differences were not significant between Mississippi and the U.S. and/or other states.^o

The topic labels in Figure 46 are abbreviated versions of the YRBSS questions. For further information, visit the CDC's YRBSS web site at <http://www.cdc.gov/HealthyYouth/yrbss/>

OBESITY

OBESITY

DATA SECTION

When it comes to physical education in the classroom, the national Healthy People objective for 2010 is to increase to 50% the proportion of adolescents (grades 9-12) who participate in daily school physical education (HHS, 2007, Objective 22-9). This is approximately double the percentage of Mississippi students who attended physical education class five days a week in 2007 (23.4%). It should be noted that these data were collected prior to the implementation of the Healthy Students Act of 2007. [FIGURE 47]

2007 High School Students' Reports on Physical Activity-related Topics (Mississippi vs. United States)			
Topic	Mississippi	United States	Significantly Different?
Percentage of students who were physically active for at least 60 minutes each day on at least 5 of the 7 days before the survey	36.1%	34.7%	No
Percentage of students who watched television 3 or more hours per day on an average school day	47.4%	35.4%	Yes
Percentage of students who used a computer for something unrelated to school work or who played video or computer games for 3 or more hours per day on an average school day	23.3%	24.9%	No
Percentage of students who attended physical education classes on 1 or more days in an average week when they were in school	35.9%	53.6%	Yes
Percentage of students who attended physical education classes 5 days in an average week when they were in school	23.4%	30.3%	No
Percentage of students who played on at least one team (run by their school or community groups) during the 12 months before the survey	53.4%	56.3%	No

FIGURE 47

Source:

Figure 47 was created using data from the Youth Risk Behavior Surveillance System (YRBSS), 2007.

In a 2009 Robert Wood Johnson Foundation-funded telephone survey of 3,710 parents of Mississippi school children, 52% of parents indicated that they had increased their child's physical activity or exercise in the past year, and 60.1% indicated that they had signed their child up for sports or exercise classes. Figure 48 shows the percentage of parents who indicated that they had increased their child's exercise or physical activity in the past year, by public health district (Southward et al., 2009).

In the same survey, parents were asked if they limited the amount of time that their child could spend using the internet, watching television or playing video games; 62.3% of parents who had a home computer reported that they limited internet time for their children; 60.9% of parents reported that they limited time spent watching television or playing video games (Southward et al., 2009).

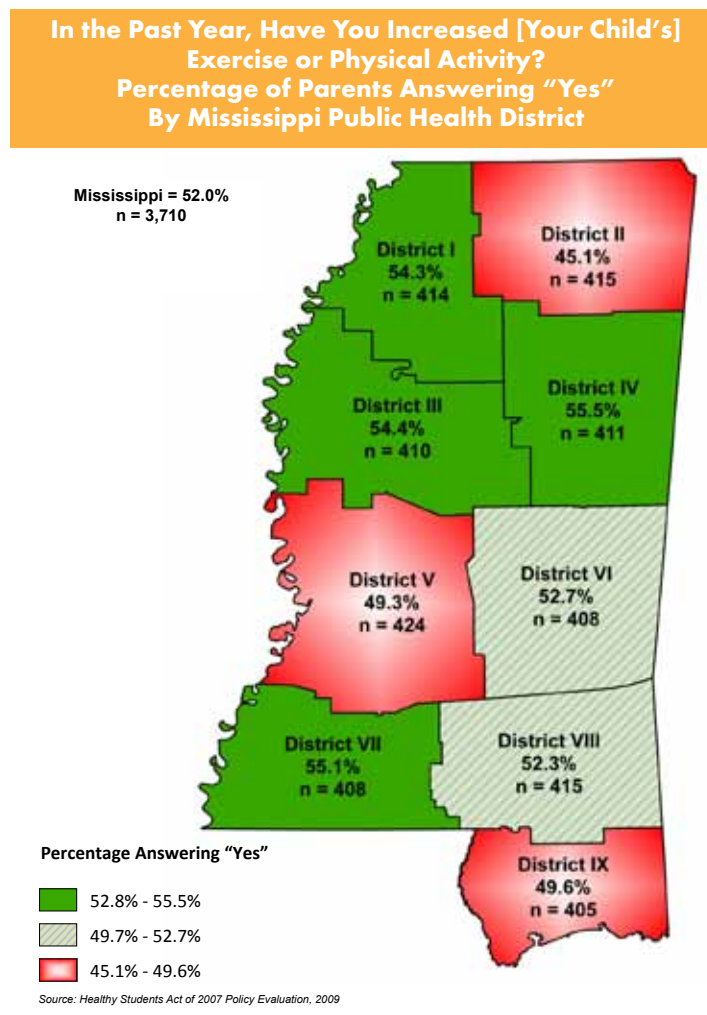


FIGURE 48

Note:
 By applying a finite population correction formula, the margin of error for the total dataset ($n \geq 3,500$) is no larger than $\pm 2.5\%$ at a 99% confidence level (for binomial response options with 50/50 split). For sub-samples of approximately 400 cases, the margin of error is no larger than $\pm 5.0\%$ at a 95% confidence level. For sub-samples of approximately 300 cases, the margin of error is no larger than $\pm 5.0\%$ at a 90% confidence level.

OBESITY

DATA SECTION

The National Survey of Children's Health (NSCH) also includes questions related to children's physical activity (HHS, n.d.). Parents were asked, "During the past week, on how many days did your child exercise, play a sport, or participate in physical activity for at least 20 minutes that made him/her sweat and breathe hard?" In 2007, only 10.1% of Mississippi parents reported zero days of physical activity, one-quarter (24.5%) reported one to three days of physical activity, and almost two-thirds (65.4%) of parents reported that their child exercised from four to seven days. When the results were divided by age group, older children (ages 12-17) were significantly less likely to participate in physical activity everyday (21.0% versus 37.6% for children ages 6-11) (HHS, n.d.). As a reference point, the national Healthy People objective for 2010 is to increase to 35% the proportion of adolescents (grades 9-12) who engage in moderate physical activity for at least 30 minutes per day on five or more days per week (Objective 22-6). The national goals for vigorous exercise are much higher. The Healthy People 2010 objective is to increase to 85% the proportion of adolescents (grades 9-12) who engage in vigorous physical activity three or more days per week for 20 minutes or more (HHS, 2007, Objective 22-7). [FIGURE 49]

Source:

U.S. Department of Health and Human Services (HHS), (n.d.) The National Survey of Children's Health (NSCH), 2007.

How Many Days Did Your Child Exercise, Play a Sport, or Participate in Physical Activity for 20 Minutes... (NSCH, 2007)

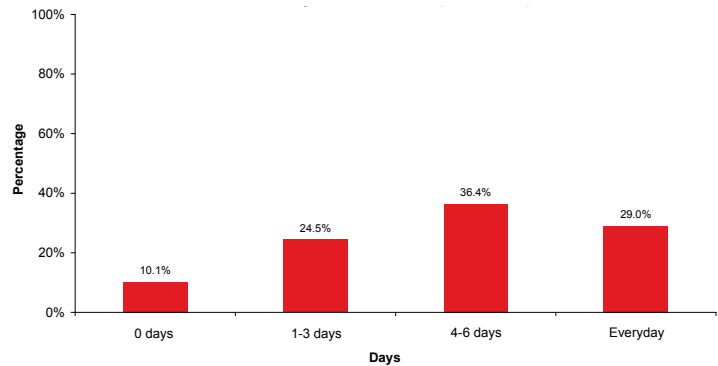


FIGURE 49

“People may make decisions based on their environment or community. For example, a person may choose not to walk to the store or to work because of a lack of sidewalks. Communities, homes, and workplaces can all influence people’s health decisions. Because of this influence, it is important to create environments in these locations that make it easier to engage in physical activity and to eat a healthy diet.”

—Centers for Disease Control and Prevention, Overweight and Obesity, 2009

PROGRAMS & POLICY CONSIDERATIONS

CREATING HEALTHIER LIFESTYLES THROUGH EDUCATIONAL SETTINGS



The Mississippi Healthy Students Act of 2007

In 2007, the Legislature passed the Mississippi Healthy Students Act, which accomplishes the following:

- Mandates minimum requirements for health education and physical education in public schools
 - » for grades K – 8, 150 minutes per week of physical education and 45 minutes per week of health education
 - » for grades 9 – 12, ½ Carnegie unit in physical education or physical activity for graduation requirement
- Designates an appropriation for a physical activity coordinator at the State Department of Education
- Makes the statutory duties of local school health councils mandatory rather than permissive
- Directs the State Board of Education to adopt regulations that address healthy food and beverage choices, healthy food preparation, marketing of healthy food choices to students and staff, food preparation ingredients and products, minimum and maximum time allotments for lunch and breakfast periods, the availability of food items during lunch and breakfast periods, and methods to increase participation in the Child Nutrition School Breakfast and Lunch Programs
- Provides for the appointment of an advisory committee to advise the State Board of Education in developing these regulations

The Department of Education has utilized multiple strategies to support the implementation of the Healthy Students Act of 2007 by Mississippi schools. The following are the most prominent strategies:

- Through funding from The Bower Foundation, several schools have been awarded a Five Star Food Grant to increase consumption of fruits and vegetables in Mississippi Public Schools.
- The Nutrition Integrity Grant Initiative was designed to remove fryers from school kitchens and replace them with combination oven steamers. A joint effort of the Mississippi Department of Education/Office of Healthy Schools and The Bower Foundation, this program also includes a step-by-step guide to implementation, including site suitability surveys and kitchen modifications.

O B E S I T Y

123456789123456789123456
912345678912345678912345
8912345678912345678912345
8912345678912345678912345
123456789123456789123456
678912345678912345678912345
9123456789123456789123456
23456789123456789123456789
123456789123456789123456789
89123456789123456789123456
9123456789123456789123456
23456789123456789123456

PROGRAMS & POLICY CONSIDERATIONS

- The Excellence in Physical Education Certificate Program is a joint program between the Governor's Commission on Physical Fitness and Sports and Mississippi Department of Education's Office of Healthy Schools. The program offers an annual award available to public and private schools to officially recognize a school's commitment to a quality physical education program.
- The Committed to Move Grant project, funded by the Bower Foundation, provides school districts with curriculum, training, and up to \$9,400 to purchase physical education equipment and resources to assist in complying with the Mississippi Healthy Students Act of 2007.
- Through the Health in Action Initiative, health education and physical education lesson plans are available to teachers to provide instruction through an online database of 1,300 lesson plans.
- The John D. Bower, MD School Health Network enables school districts to strengthen the role of health coordinators, establish local school health councils, improve the school health instruction programs for all students, reconfigure the use of existing school resources, and nurture broad-based school and community support for a coordinated school health program.
- Through Local School Wellness Policy Technical Assistance, the Mississippi Department of Education (MDE) provides help to Mississippi schools to ensure school compliance with federal requirements that schools develop wellness policies.



• The Office of Healthy Schools, Child Nutrition Programs awarded 20 Mississippi schools Team Nutrition Grants to achieve the goal of promoting student and staff wellness by involving parents, students, school board members, school administrators and the community in the development of nutrition and physical wellness policies.

• The Mississippi Department of Education's Office of Healthy Schools and The University of Mississippi Medical Center's Center of Excellence partnered to promote TEAM Mississippi: A Partnership for Healthy

Families. This partnership began as a result of understanding the relationship between the health of students and academic achievement and the role the parent plays in promoting a healthy environment in the home setting.

- Launched by Blue Cross & Blue Shield of Mississippi, the Let's Go Walkin' Mississippi program provides teachers and students with promotional materials, motivational tools and tracking systems to help children meet the 150 minutes physical activity requirement of the Mississippi Healthy Students Act of 2007.

Healthy Students Act of 2007 Policy Evaluation

In October 2008, the Robert Wood Johnson Foundation (RWJF) awarded the Center for Mississippi Health Policy a five-year, \$2 million grant to study the impact of the Mississippi Healthy Students Act of 2007 on childhood obesity. The Center uses the RWJF grant in conjunction with a Bower Foundation grant to evaluate the effectiveness of state policies aimed at preventing childhood obesity, working in coordination with similar projects in five other states.

This evaluation project is directed by the Center for Mississippi Health Policy in collaboration with researchers at the University of Southern Mississippi, Mississippi State University, and the University of Mississippi. The comprehensive evaluation effort is comprised of several studies:

- Child and Youth Prevalence of Overweight Survey (CAYPOS) – The purpose of the Child and Youth Prevalence of Overweight Survey is to estimate the prevalence of overweight and obesity among children in Mississippi using height and weight measures. It is conducted every two years by researchers from the College of Health at the University of Southern Mississippi.



- School Wellness Policy Principal Survey – Principals of all public schools in Mississippi are surveyed to gauge the implementation of the federal Child Nutrition and WIC Reauthorization Act of 2004 and the Mississippi Healthy Students Act of 2007. The survey assesses the degree to which schools have established school wellness policies and implemented requirements of the federal and state laws and associated regulations. This survey is conducted every two years by researchers from the College of Health at the University of Southern Mississippi.
- Committed to Move Evaluation – The 25 schools selected to participate in the Committed to Move Quality Physical Education Program offer the Physical Best Curriculum and

OBESITY

123456789123456789123456
912345678912345678912345
8912345678912345678912345
8912345678912345678912345
12345678912345678912345
678912345678912345678912345
912345678912345678912345
23456789123456789123456
123456789123456789123456
89123456789123456789123456
9123456789123456789123456
23456789123456789123456

PROGRAMS & POLICY CONSIDERATIONS

electronically document fitness (muscle strength and endurance, flexibility, aerobic capacity) and body mass index (BMI) data on all students through the FITNESSGRAM. Data are being collected on individual students over five periods, from spring 2008 to spring 2010, by researchers from the College of Health at the University of Southern Mississippi. Data will be matched with academic performance records to study the relationship between fitness and academic performance.

- Survey of Local and State-level Policymakers – The goal of this survey is to assess state and local policymakers' knowledge and opinions of the Mississippi Healthy Students legislation and their support for it. The study considers state and local policymakers to include state legislators, members of the State Board of Health and State Board of Education, local school board members, school district superintendents and local health officials. Policymaker surveys are conducted by researchers from the Social Science Research Center at Mississippi State University.
- Parent Survey – The annual Parent Survey evaluates parental attitudes, changes in family environments and changes in children's health behaviors throughout the evaluation period. The purpose is to better understand how parents feel about school health policies, how they influence those policies and to what extent family knowledge, attitudes, practices and constraints influence children's health and health behaviors. Parent surveys are conducted by researchers from the Social Science Research Center at Mississippi State University.
- Mississippi School Nutrition Environment Evaluation Data System (MS-NEEDS) – To obtain an independent assessment of statewide progress implementing school nutrition policies, researchers at the University of Mississippi conduct onsite evaluations of school nutrition environments at a representative sample of schools statewide.



In a RWJF-funded telephone survey,

52%

of Mississippi parents indicated that they had increased their child's physical activity in the past year

The POWER Project

Mississippi received funding through the National Governors' Association's Healthy Kids, Healthy America Program for a project entitled Preventing Obesity with Every Resource (POWER). The State Department of Education was designated by the Office of the Governor as the lead agency for this project. Under the POWER project, the Department engaged a wide range of stakeholders to identify additional opportunities for childhood obesity prevention policy development in Mississippi. At the initiation of the project, the State Department of Health conducted an environmental scan of childhood obesity prevention efforts in Mississippi. The report issued by the department presented information from literature reviews and key informant interviews outlining the extent to which state and local governments, businesses, and community-based organizations were collaborating to address childhood obesity in Mississippi.

Amory School District Coordinated School Health Program

The school district's comprehensive health initiative began three years ago when it received a \$3,000 grant from the Mississippi Office of Healthy Schools. The grant, along with funding from The Blue Cross & Blue Shield Foundation, built the foundation for the district's Coordinated School Health Program.

The Amory School District has implemented a variety of programs, including Supper at School, giving the students and their parents the opportunity to enjoy a healthy meal together at the school. Recipes are distributed to parents to help them incorporate the healthier eating habits at home.

Preventive healthcare is another component of the Coordinated School Health Program, which the district has taken several steps further. It is the first in the country to support three onsite Medicaid clinics at its schools, offering preventive and screening services. Dental care is another overlooked preventive service when it comes to children's health services. Making Smiles another program funded through the grant, which has provided screenings for students with no coverage and has enabled some of the children to see a dentist for the very first time for preventive and basic dental care.



In data collected at schools that began the Project Fit America program in fall 2008, students increased their performance in a cardiovascular step test by more than 20%, increased their upper body strength by 60% and improved their abdominal strength by 20%. DeSoto County Schools have enjoyed the program for several years and continue to see marked improvements in the fitness levels of their students. At the conclusion of the second school year using the equipment, students at Oak Grove Central Elementary saw a 107% increase in lower body strength and a 53% increase in upper body strength. Students at Pleasant Hill Elementary also saw a sharp improvement in lower body strength, with a nearly 70% increase on vaults, and they improved their cardiovascular strength 32% during a step test.

Moving Toward the Art of Good Health

Malcolm White, Executive Director of the Mississippi Arts Commission, a state agency serving artists and arts organizations, got the idea to promote the arts as a vital component in the recovery effort along the coast after Hurricane Katrina. White had read a study about the impact of the arts on healthcare, and the notion of ballroom dancing in the classroom as a form of physical fitness seemed like the perfect medicine for a community whose spirit had been dampened by the hurricane.

Knowing that overall good health and well-being is a key component in the mission of the Blue Cross & Blue Shield of Mississippi Foundation, White approached the organization to seek backing for the pilot program, and they agreed. With the support of the Bay St. Louis - Waveland School District administration, the ballroom dance pilot program, Moving Toward the Art of Good Health, danced its way toward reality.

Now in its third year, the ballroom dancing pilot program has been integrated into 5th-grade physical education, the 6th-grade health curriculum, 7th- and 8th-grade elective block, and is now offered in the 9th-grade health curriculum at the high school.

Mississippi Healthiest Hometown Award

Beginning September, 2009, towns and cities across Mississippi began a "healthy" competition for Mississippi's Healthiest Hometown Award to be awarded July, 2010.

This is being sponsored by the Blue Cross & Blue Shield of Mississippi Foundation. The five areas that municipalities will be scored on include:

1) community leadership and involvement; 2) promotion, support and encouragement of exercise; 3) being a tobacco-free community; 4) encouragement of health community nutrition and 5) ensuring healthy students. Being recognized as the healthiest hometown within the state of Mississippi would be quite an honor, indeed.

For more information on the award criterion and application process, please see the following link: http://www.healthiermississippi.org/healthy_hometown.php

OBESITY

123456789123456789123456
912345678912345678912345
8912345678912345678912345
8912345678912345678912345
123456789123456789123456
678912345678912345678912345
9123456789123456789123456
23456789123456789123456789
123456789123456789123456789
89123456789123456789123456
9123456789123456789123456
23456789123456789123456

PROGRAMS & POLICY CONSIDERATIONS

The program is an artful response to and meets the criteria for the Mississippi Healthy Students Act of 2007, which requires Mississippi's public schools to provide increased amounts of physical activity and health education instruction for K-12 students. Moving Toward the Art of Good Health encompasses not only the ballroom dancing portion for physical fitness, but includes instruction on wellness and good nutrition.

One unanticipated result is that Bay-Waveland Middle School has also seen an increase in parent participation. In the past, the school had low attendance at school activities, and now they have a packed house at events featuring the students' ballroom dancing. Children may not be able to change their eating and exercise habits by themselves, so having this level of buy-in from the families helps to ensure the children's overall success and may even benefit additional family members.



47.4%

of Mississippi high school students who completed the YRBSS in 2007 reported that, on an average school day, they watched television for three or more hours

OTHER STATEWIDE EFFORTS

In December 2008, the Mississippi Health Summit was held in downtown Jackson and was hosted by Governor Haley Barbour and First Lady Marsha Barbour, along with the Mississippi Department of Education. Participants at the Summit heard about the many programs and initiatives active in Mississippi at both the state and local levels. At the end of the Summit, all participants were provided with the list of policy initiatives developed through the stakeholder meetings and asked to rate their priority. The resulting ranking of the top 10 policy initiatives from highest priority to lowest was as follows:

1. Improve built environments to promote physical activity in communities
2. Replace fryers with combination oven steamers in school kitchens
3. Increase the number of school nurses in the schools

2345678912345678912345678912345
678912345678912345678912345678912
345678912345678912345678912345678
912345678912345678912345678912345
67891234567891234567891234567891234

4. Support comprehensive fitness testing in schools
5. Improve state standards for child care centers and youth programs to promote healthy foods
6. Encourage recipients of public benefit programs to purchase healthy foods
7. Restrict advertising of unhealthy foods to children and/or require public service announcements that offer health messages
8. Require schools to provide BMI (Body Mass Index) reports to parents.
9. Improve access to supermarkets/produce
10. Require labeling of restaurant menus and prepared foods

Action has occurred on several of these initiatives since the Summit. The Legislature increased funding for school nurses; the State Department of Health has strengthened nutrition standards for licensed child care centers; and the State Department of Education has awarded over \$1 million from federal stimulus funds to school districts to replace fryers with combination oven steamers.

ADDITIONAL POLICY CONSIDERATIONS

The success of multiple statewide policies and community-level programs across Mississippi are providing a clear and steady course for implementing and promoting changes that can affect the course of the childhood obesity epidemic in Mississippi. Additional policy considerations include the following:

- Require schools to provide fitness testing reports along with BMI reports to parents of school-age children
- Provide increased access to school gyms and tracks after school hours to community members
- Promote full implementation of the Healthy Students Act of 2007
- Promote community gardens as one way of improving access to fresh produce

In 2007, **19.4%** of Mississippi high school students reported that they ate fruits and vegetables five or more times per day, according to the Youth Risk Behavior Surveillance System (YRBSS)

OBESITY

SUCCESS STORY

Community Foundation of Northwest Mississippi **“GET A LIFE! MY LIFE, MY HEALTH, MY CHOICE” INITIATIVE**

A well-maintained car can have a long life. However, without gas it will quickly come to a stop, and cheaper grades of fuel may make it sluggish. To run efficiently, it must be given regular maintenance check-ups. It must be driven; it cannot sit idly in the garage on a day-by-day basis. When the owner pays attention to maintenance, the vehicle lasts longer, looks better and saves money by avoiding expensive repairs.

So it is with the health of people. Just like the newly purchased automobile, children deserve to be well-nourished and cared for. They must be given opportunities to eat healthy foods and to run and play. When given a healthy diet on a daily basis, children have the energy and attention to devote to their school work. When provided recreational facilities and places to play, as well as an opportunity to participate in school physical fitness activities, their bodies become well-maintained machines. A child who learns at an early age to eat nutritionally and to exercise daily is much more likely to grow up to be an adult who does the same.

Children who eat properly and exercise regularly will not be among the one-third in our nation who are either obese or at risk of becoming obese. Their quality of life will increase, and their futures will look brighter. They also reduce their risk of adult onset diseases, such as diabetes, heart disease and hypertension.

In Mississippi, which leads the nation in childhood obesity rates, all children do not necessarily have the “equipment” to lead a healthy life. Because approximately 30% of the state’s children are living in poverty (Population Reference Bureau, 2009; AECF, n.d.), parents may be forced to serve foods that are cheaper, but often not nutritionally sound. Many communities do not have the recreational facilities needed to provide a healthy environment for their youngest members. When faced with the fact that approximately 45% of the state’s children are overweight or obese (HHS, n.d.), many communities wring their hands and leave it up to individual family units to try and solve the problem.



“We have a chance to change things.”

—Chip Johnson
Mayor, Hernando

OBESITY

SUCCESS STORY

“Health is not just something medical people are concerned about. Health is something the community is concerned about... It’s something that the community has to take responsibility for.”

—Tom Pittman
President, Community Foundation of Northwest Mississippi



Mayor Chip Johnson and Tom Pittman

The foundation itself does not provide direct services; instead they provide resources and links to faith-based organizations, schools, government officials and businesses as they work together to create healthier communities. “We identify things that might be helpful.” He adds, “We’re developing the capacity of local people to do what they want to do in their local community.”

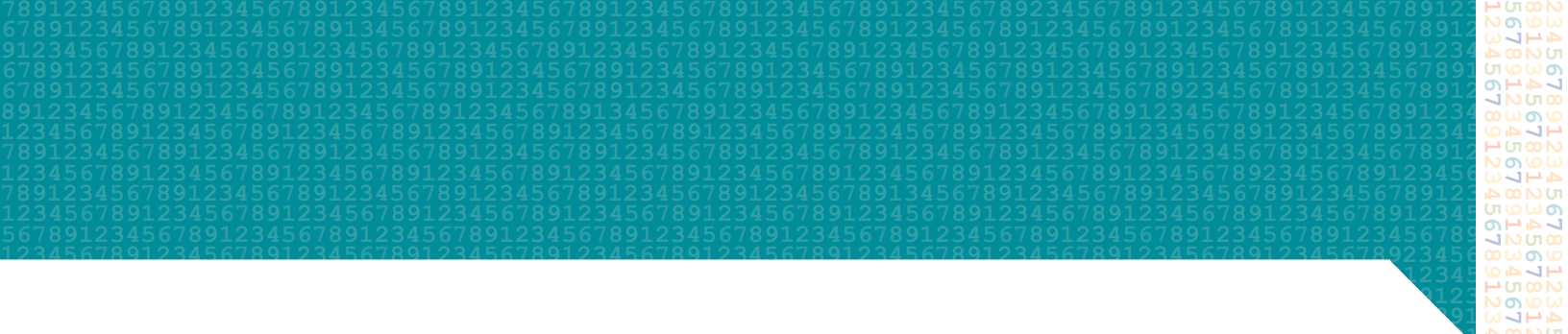
“We have a chance to change things,” said Chip Johnson, who is beginning his second term as mayor of Hernando. Just four years ago, the town of 15,000 did not even have a Parks and Recreation department. Today, it is one of 93 cities in 33 states selected as a Playful City USA recipient. The national recognition program honors cities and towns who are committed to physical activity for their youngest residents.

Johnson said that a little ingenuity goes a long way, “You must have people who are willing to work...commit to work, and that’s all it takes.” When members of his staff noticed that an abandoned football field owned by the city schools was simply collecting weeds, Johnson contacted the school superintendent. The school district gave the field to the city; they cleaned it up, and now kids are playing football there every Saturday morning. The city also renovated an old abandoned factory located in a low-income neighborhood and turned the front yard into a community garden. Before long, residents of the neighborhood began to show up. “If you work in the garden, you get some food,” said Johnson.

Dr. Michael O. Minor, Pastor of the Oak Hill Baptist Church, was part of the community foundation’s initial planning team in 2005. He had been working for several years with the Rising Sun Usher Federation in his congregation to promote healthy living. “It was the meeting of two rivers,” he recalls. Today over 500 congregations from various denominations in the area are part of the Healthy Congregations coalition.



*Dr. Michael O. Minor
Pastor, Oak Hill Baptist Church*



Participating congregations are encouraged to form their own health ministries. How-to guides developed by the Usher Foundation are distributed across the Healthy Congregations coalition. Ideas are exchanged. For example, some churches host “Taste Test Sundays” in which healthy desserts are sampled during church luncheons. “If you’ve got people bringing healthy dishes to church, then hopefully, prayerfully, they’re doing something at home, too,” said Minor. Churches are encouraged to serve healthy foods at church functions, and healthy and cost-efficient menus are shared. Emphasis is placed on healthy meal planning for families.

Minor stresses that exchanging ideas and building on them is important, “The key to success is not starting something new, but working on something and building upon it. It’s not about us. It’s all about what we can do as a community.”



The school community echoes that sentiment. At Shadow Oaks Elementary, a K-2 school located in DeSoto County, signs fill the hallways and classrooms proclaiming the school to be free of junk food. Healthy eating has become a mindset among the students and staff. “It’s just understood,” said Anna Holland, a first-grade teacher. “I don’t even remember a time when a child tried to bring a canned drink to school.” Physical activities are emphasized, and physical education classes are a priority. “You don’t miss PE, no matter what,” said fellow teacher Patty McAlexander.

Recognizing that more than 60% of children and adolescents eat too much fat and saturated fats and not enough fruits and vegetables, the school implemented a community garden last year. Each grade has its own planting box. “Children are fascinated that food is growing from the ground,” said Holland. The garden is part of a local Kiwanis Club initiative to locate a garden at each of the 17 elementary schools in DeSoto County by Earth Day 2011.



*Patty McAlexander and Anna Holland
Shadow Oaks Elementary School teachers*



O B E S I T Y

SUCCESS STORY



*Dr. Norma Strickland
ICS Director of Curriculum*



The younger children of the area are getting in on the action, too. The Institute of Community Services (ICS) operates 20 Head Start centers in 13 counties. Children in the centers spend part of their day singing, dancing and moving their way to healthier lifestyles with the help of Choosy (Choose Healthy Options Often and Start Young), a furry green champion of healthy living. Adopted by the national Head Start “I Am Moving, I Am Learning” Initiative, Choosy Kids, Inc. influences children to adopt physically active lifestyles and healthy food choices with the aid of the mascot Choosy.

Structured and unstructured movement is grounded in daily classroom activities. “They are moving around as they are learning,” said Dr. Norma Strickland, the Director of Curriculum for ICS. She adds, “It’s becoming a part of our classroom structure. It’s becoming a part of our curriculum.”

Last summer, five teachers from ICS attended training seminars and became certified in the Choosy Kids program. They have returned to train others. The goal is to have all teachers in the Head Start centers using the Choosy Kids ideas in their classrooms. Three community health councils in the area were the primary funders for the training.

In Charleston, Mississippi, children who participate in Boys and Girls Club activities are dancing their way to fitness. Nedra Jackson, the director of the Mississippi Delta Boys and Girls Club’s Charleston Unit, said, “In Charleston, we don’t have a gym, so we make fun.” With financial help from five health councils and the Blue Cross & Blue Shield of Mississippi Foundation, the video dance game *Dance Dance Revolution* was purchased. A dance pad lights up the floor, and participants try to keep up with the choreographed moves.



Latacha Davis and Nedra Jackson
Mississippi Delta Boys and Girls Club
Charleston Unit

The partnership between the Boys and Girls Club and the Community Foundation was further extended last summer when the “Get A Life!” Director, Judy Belue, approached Jackson with the idea of starting an organic garden at the club. “If there’s an opportunity there, she will let me know, so I can jump on it. I would have never been in the garden if it wasn’t for her,” said Jackson. Today members of the Green Thumb Club till and plant vegetables and fruit in their garden that they named the “So Fresh So Clean” organic garden, named for a popular song of the same title.



“When groups start to share ideas, big things can happen. It’s just a lot of love and a desire to really impact the youth and expose them to things that will change them—mind, body and soul.”

—Nedra Jackson
Director, Mississippi Delta Boys and Girls Club
Charleston Unit

As a community service, the members proudly donate their produce to local retirement homes. Latacha Davis, the club’s Health and Life Skills instructor said, “It gives the kids a sense of ownership...That’s something I accomplished.” With a staff of five, Jackson said it’s important to involve parents and volunteers. “It’s knowing what you’re working with and using the person who’s the best fit.”

“Connecting People who Care with Causes that Matter” is the Community Foundation’s slogan. The “Get A Life!” initiative does connect all working partners in their efforts to curb childhood obesity. With the Community Foundation serving as the “facilitator for healthy living,” government, churches, schools, and businesses are merging their ideas, each contributing different components to ensure that children’s bodies are the “well-maintained machines” they need to be for lasting health.

OBESITY

SUCCESS STORY

Other Mississippi communities may want to replicate the successes in Hernando. Many improvements can result from communication, collaboration and sharing of resources within communities. Other efforts may warrant funding and support from organizations outside of the community. The efforts of the Community Foundation of Northwest Mississippi have been supported through grants from the Robert Wood Johnson Foundation and others. Many state and national agencies and foundations support the efforts of communities that seek to improve the health of their residents.

All of the stakeholders agree it takes a lot of passion, enthusiasm and creativity. Their collaborative approach enhances creativity and reaches into every corner of community life. When groups start to share ideas, big things can happen. According to Ms. Jackson, "It's just a lot of love and a desire to really impact the youth and expose them to things that will change them—mind, body and soul."



"The key to success is not starting something new, but working on something and building upon it."

—Dr. Michael O. Minor
Pastor, Oak Hill Baptist Church