



Childhood Obesity & School Health Initiatives

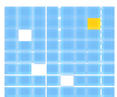
Presentation to the House Education
Subcommittee on Nutrition and Physical Activity
September 21, 2006

Center for Mississippi Health Policy
120 North Congress Street, Suite 700
Jackson, MS 39201
601-709-2133



Why Be Concerned about Overweight Children?

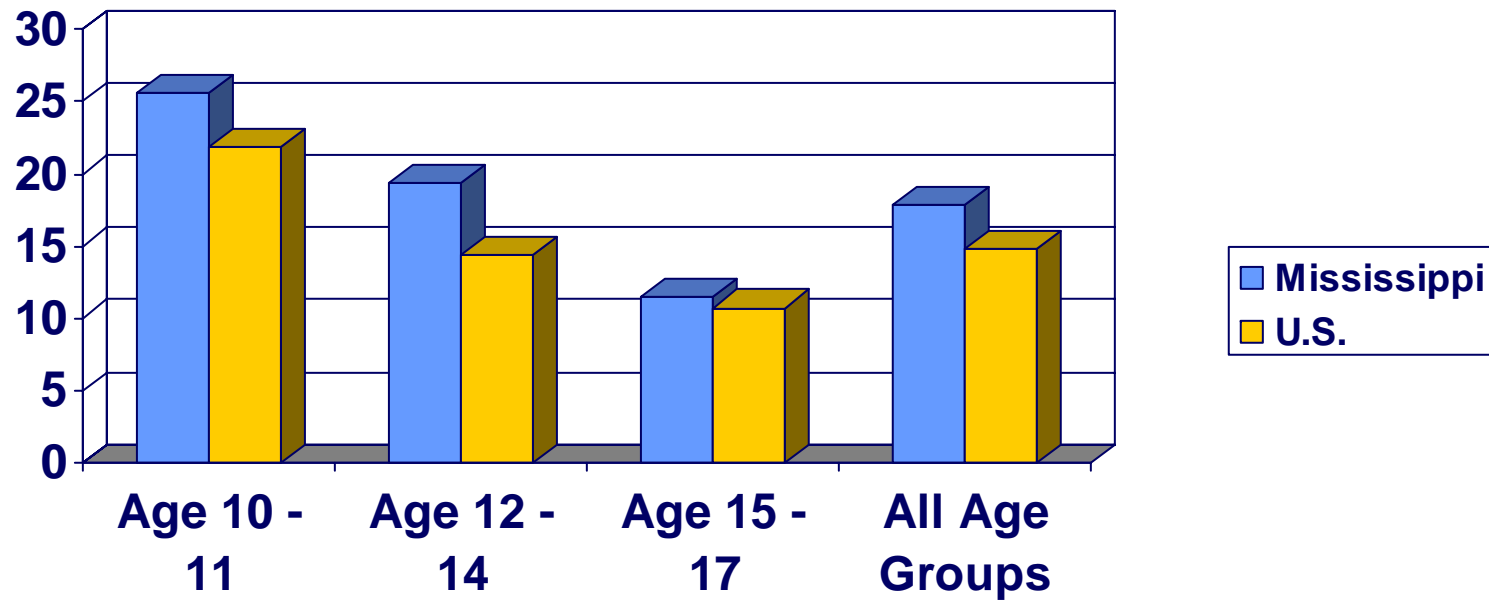
- Risk factors for heart disease (such as high cholesterol and high blood pressure) and type 2 diabetes occur more frequently in overweight children and adolescents.
- Children who develop type 2 diabetes at a young age lose 20 – 28 “life years” and 28 – 35 “quality-adjusted life years.”
- Overweight children miss significantly more school days than normal weight children.
- Overweight children perform less well academically than average weight students.



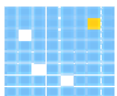


The Problem Starts Early

Percent of Children Who Are Overweight, 2005



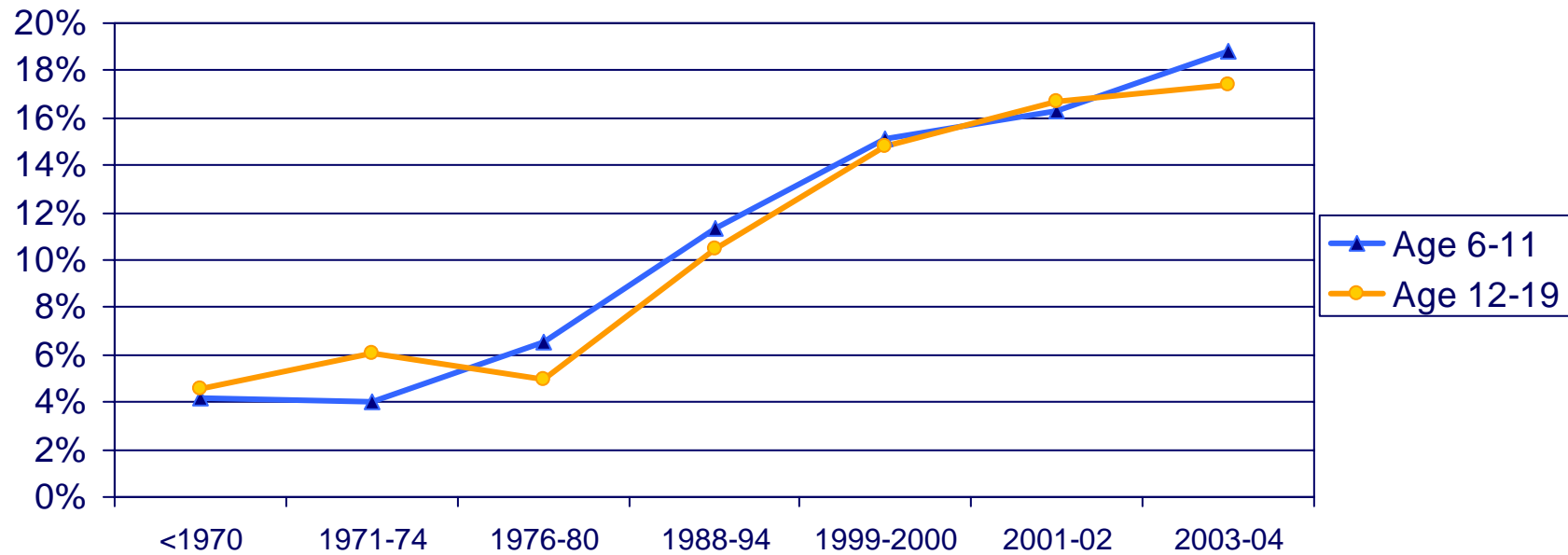
Source: U. S. Health Resources and Services Administration, *Overweight and Physical Activity among Children: A Portrait of States and the Nation, 2005*; *The National Survey of Children's Health*.



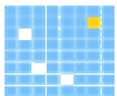


It's Been Growing a Long Time

**Prevalence of Overweight among Children & Adolescents
1970-2004**



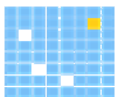
Source: Centers for Disease Control. National Center for Health Statistics. Prevalence of Overweight among Children and Adolescents: United States, 2003-2004.





Overweight Children Often Become Overweight Adults

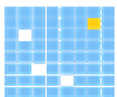
- Overweight adolescents have a 70% chance of becoming overweight or obese adults.
- Overweight and obese individuals are at increased risk for type 2 diabetes, heart disease, hypertension, osteoarthritis, sleep apnea, gallbladder disease, respiratory problems, stroke, endometrial cancer, breast cancer, colon cancer, prostate cancer, depression, and other conditions.
- 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.





Mississippi's Problem is Worse

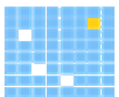
- Mississippi has high rates of disease, disability, and death:
 - Premature death
 - SSI beneficiaries, overall disability
 - Heart disease, diabetes, hypertension, & stroke
- Mississippi has the highest rate of adult obesity.





Obesity Affects the “Bottom Line”

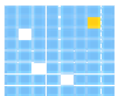
- Obesity accounts for approximately 9.1% of total annual medical expenditures.
- The estimated annual health care cost attributed to adult obesity (in 2003 dollars) in Mississippi is \$757 million, of which \$223 million is cost to Medicare and \$221 million is cost to Medicaid.
- Approximately 8% of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





It's Worse Than We Thought

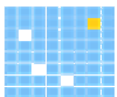
- The percentage of children found to be overweight is higher when data are collected through measured heights and weights than through self-reports.
- Parents of overweight children often do not recognize that their child is overweight.





Other Supporting Evidence

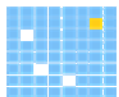
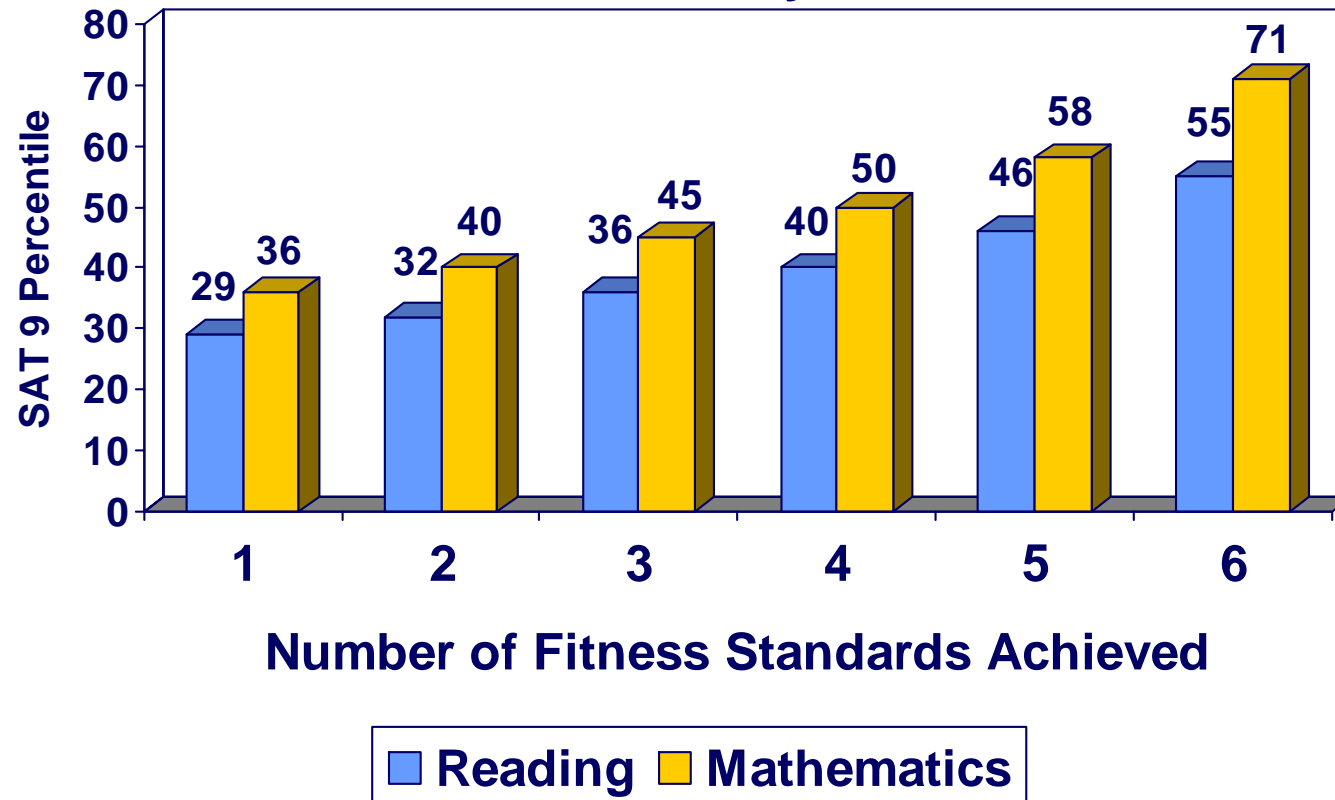
- There is a direct relationship between consumption of sugar-sweetened beverages and “junk foods” and the body-mass index of adolescents.
- Regular physical activity in childhood and adolescence improves:
 - Strength and endurance
 - Weight control
 - Anxiety and stress
 - Self-esteem
 - Blood pressure and cholesterol
 - Academic performance





Fitness and Academic Performance

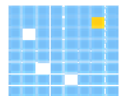
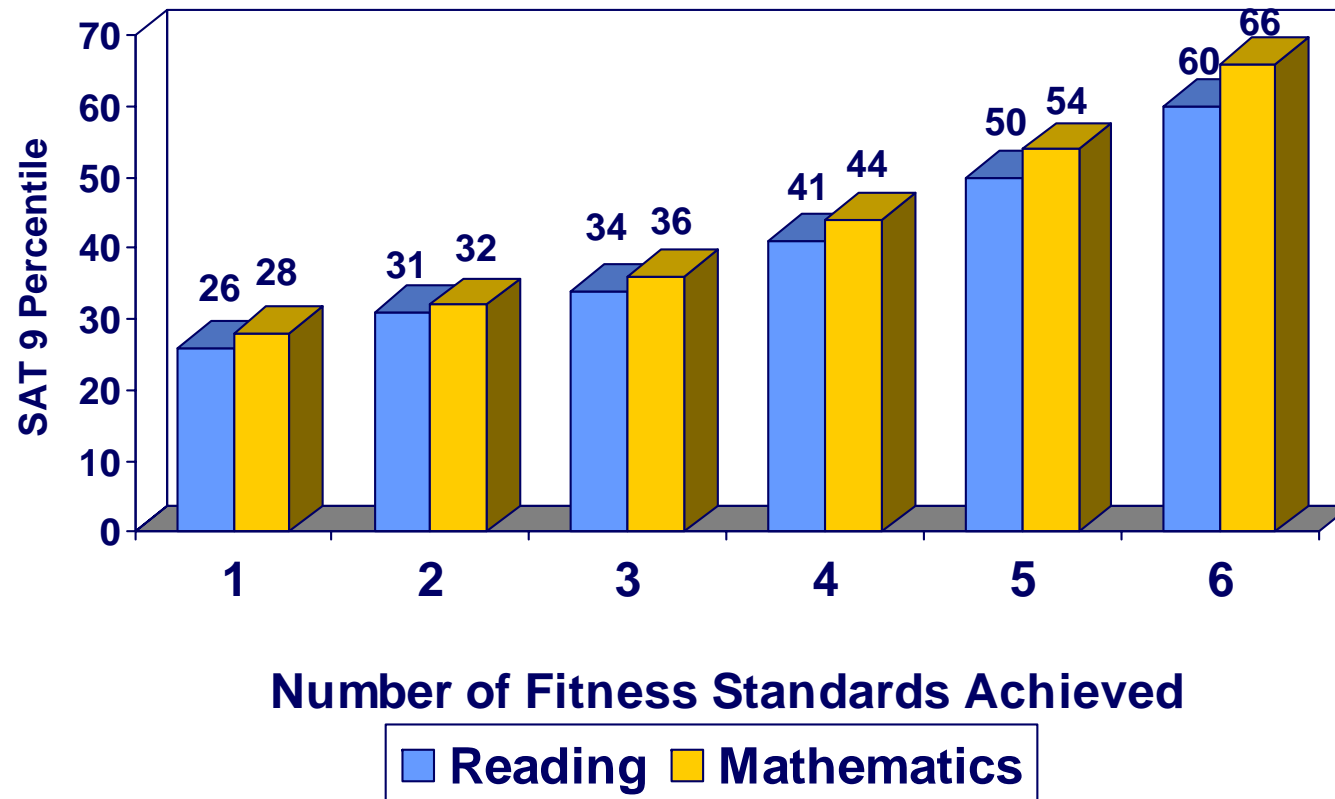
2001 Grade 5 SAT 9 and Physical Fitness Scores





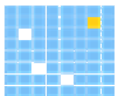
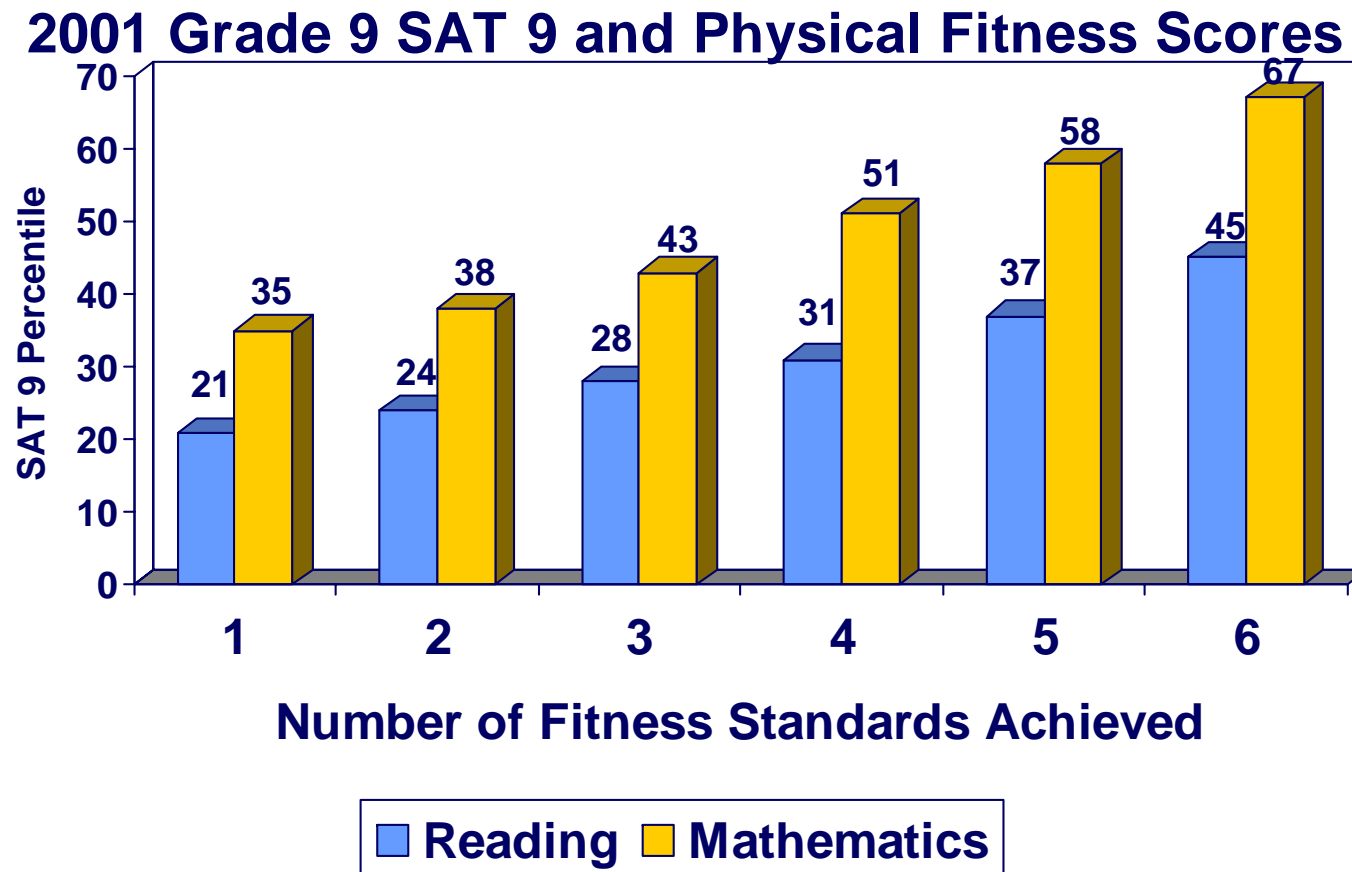
Fitness and Academic Performance

2001 Grade 7 SAT 9 and Physical Fitness Scores





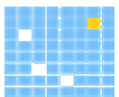
Fitness and Academic Performance





Now, The Good News

- In 2003, the Arkansas Legislature passed landmark legislation that implemented a comprehensive initiative to reduce and prevent overweight among children.
- Data collected during the 2004-05 school year indicate that Arkansas has halted the increase in the prevalence of overweight children.

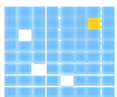




Arkansas' Results

Category	2003-04	2004-05	2005-06
Overweight	20.9%	20.8%	20.4%
At Risk	17.2%	17.2%	17.1%
Healthy Weight	60.1%	60.1%	60.6%
Underweight	1.8%	1.9%	1.9%
Total Students Assessed	348,710	372,369	371,082

Source: Arkansas Center for Health Improvement. *Tracking Progress: The Third Annual Arkansas Assessment of Childhood and Adolescent Obesity*. August 2006.

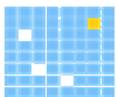




What Did Arkansas Do?

- Act 1220 of 2003
 - Required annual BMI* reports on each child to be sent to the child's parents
 - Set limitations on vending machine products
 - Created local school district level advisory committees
 - Established a Child Health Advisory Committee (CHAC) to make further recommendations to the State Board of Education

*BMI=Body Mass Index. BMI is calculated from the child's height and weight and is considered a proxy measure for body fat.

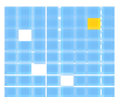




Regulations of the Arkansas State Board of Education

- Mandate the establishment of local School Nutrition and Physical Activity Advisory Committees to assist with the implementation of and monitor compliance with state standards.
- Mandate an annual assessment of each school using CDC's *School Health Index for Physical Activity, Healthy Eating, and a Tobacco-Free Lifestyle*. (5 specific modules as a minimum)
- Mandate that the annual assessment be included in the individual school's improvement plan.

Note: Many of these recommendations are designed to be phased in over several years.



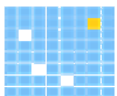


Arkansas Regulations (Continued)

- Restrict access to Foods of Minimal Nutritional Value (FMNV)*
 - Elementary Schools – prohibited during the declared school day
 - Middle/Junior High & High Schools – prohibited during the declared school day until 30 minutes after the end of the last lunch period
- Limit portion sizes for competitive foods (when allowed)
- Require certain healthy foods to be offered whenever competitive foods are sold.

*A list of foods published by the U.S. Department of Agriculture that have few nutrients. Carbonated sodas, chewing gum, hard candies, licorice candy, and marshmallows are examples of items on this list.

Note: Many of these recommendations are designed to be phased in over several years.

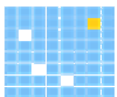




Arkansas Regulations (Continued)

- Prohibit schools from providing extra servings of desserts, french fries, or ice cream in elementary schools even when served during meal periods.
- Develop grade-appropriate academic content standards and learning expectations for nutrition education and integrate nutrition education into the curriculum.

Note: Many of these recommendations are designed to be phased in over several years.

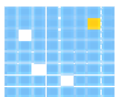




Arkansas Regulations (Continued)

- Require at least 30 minutes of physical activity each day in grades K – 12.
- Require a minimum level of physical education per week that varies by grade level.
- Require that there be at least one certified FTE physical education teacher for every 500 students in grades K-6.

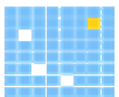
Note: Many of these recommendations are designed to be phased in over several years.





Other CHAC Recommendations

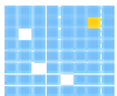
- Establish certain restrictions on fat content and on fried foods.
- Place certain requirements on professional development for child nutrition professionals in the schools.
- Define minimum time periods for lunch and breakfast.





Enacted Legislation in Other States

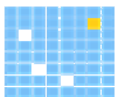
- In 2005, at least 19 states enacted legislation to curtail the increasing rate of obesity among children and adolescents.
- The most frequently occurring category is legislation to establish an obesity commission to explore the issues of obesity among children and adolescents.
- Vending machine access/content and nutritional education, and recess/physical education requirements are the next two most common types of legislation to address obesity prevalence.
- Eight states have vending machine restrictions and at least seven states have nutrition standards for schools.





Enacted BMI Legislation & Policies

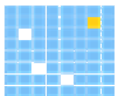
- Arkansas enacted legislation in 2003 requiring annual BMI reports to parents.
- California legislation in 2003 included BMI measurement as part of a diabetes screening pilot program.
- Missouri, Tennessee, and West Virginia enacted BMI legislation in 2005.
- State health departments in Florida and Pennsylvania require BMI measurement in schools.





Enacted Nutrition Legislation

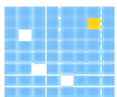
- A number of states enacted legislation mandating State Boards of Education to establish nutritional standards for all food and drinks sold outside the school meal programs. (e.g., KY, NC, SC, TN)
- Arizona legislation prohibits the sale of Foods of Minimal Nutritional Value (FMNV) during the normal school day at any elementary, middle, or junior high school.
- Kentucky enacted legislation that prohibits serving deep-fried foods in schools and requires schools to publish a menu that specifies nutritional information.





Kentucky Legislation: Competitive Foods

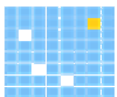
- Requires the Board of Education to issue regulations that set minimum nutritional standards for all food and beverage programs that are sold outside the Nutritional School Breakfast and National School Lunch programs.
- Bans the sale of competitive foods and beverages from the arrival of the first student at the school building until 30 minutes after the last lunch period.
- Allows only “school-day-approved beverages” to be sold in elementary school vending machines, school stores, canteens, or fundraisers during the school day:
 - water
 - 100 percent fruit juice
 - low-fat milk
 - other beverages containing less than 10 grams of sugar per serving





Kentucky Legislation: Enforcement (Competitive Foods)

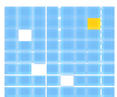
- Assesses penalties for schools that violate the requirements:
- 1st violation – fined at least one week’s revenue from the sale of competitive food
- Subsequent Violations – fined at least one month’s revenue from the sale of competitive food
- “Habitual Violations” (more than 5 within a six month period) – a six-month ban on competitive food sales
- Money from the fines will be transferred to the local school district’s food service fund





Kentucky Legislation: School Food Service Personnel

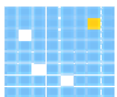
- Sets requirements for food service personnel. (CA, HI, NC also target food service personnel)
- Each district must hire a credentialed “school food service and nutrition specialist” within the years of the effective date of the bill.
- The specialist and cafeteria managers are required to receive continuing education in nutrition and healthy meal planning.





New Jersey's Model Policy on Competitive Foods

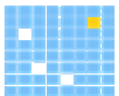
- The policy was developed in 2005, and it must be fully adopted by all NJ schools by September 2007.
- Soda, any food item listing sugar as its first ingredient, all forms of candy, and FMNV as defined by USDA cannot be served, sold or given for free anytime during the school day.
- The above applies to vending machines, cafeterias, a la carte items, school stores, school fundraisers, and the after-school snack program.
- Snacks and drinks sold anywhere on a school campus must have no more than 8 grams of fat and 2 grams of saturated fat per serving, and drinks can't exceed more than 12 ounces, except bottled water.
- Time was spent reaching out to parents, teachers, and students, sharing the proposed policy's scientific evidence base and building support.
- Five NJ schools that started the policy early in 2005 have yet to experience any revenue losses.





Physical Education Legislation

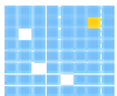
- Most states (45) introduced measures to enhance physical education (P.E.) for school children in 2005.
- Many states have established committees, councils, task forces, etc. to develop plans/recommendations and examine current policies to improve physical activity to prepare for future policy actions.
- A number of states have legislation that established time and frequency requirements for physical education and activity.





Physical Education Policies

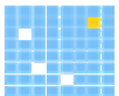
- At least 28 states have developed standards and/or curriculum frameworks for physical education.
- Usually their standards are based on the standards set by the National Association for Sports and Physical Education (NASPE).





South Carolina

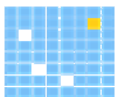
- SC passed H.B. 3499 setting the student-to-certified P.E. teacher ratios for elementary school to be phased in from:
 - 700:1 for 2006-07
 - 600:1 for 2007-08
 - 500:1 for 2008-09
- Each elementary school must appoint a P.E. teacher to serve as its Physical Education Activity Director to coordinate additional physical activity outside of scheduled physical education instruction times.





Legislation Considered But Not Enacted

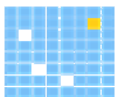
- Legislation has been introduced in a majority of states (27) mandating time for recess and physical education.
- Controlling access to less healthful foods and beverages also generated great interest.
- Legislation was initiated in 27 states to limit vending machine access or content.
- At least 12 states considered the proactive response of assessing body mass index in children.
- Twelve states considered mandating curricula to address nutrition education and obesity awareness.





Pricing Strategies

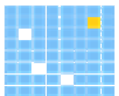
- Pricing strategies are also used as an effective means of promoting the sale of healthful foods, while discouraging sales of high fat or energy dense foods and beverages.
- Reducing the prices of targeted foods has produced increases in their purchase among adolescents in school settings, regardless of whether the target foods were vending machine snacks or fresh fruits and vegetables sold in food service areas.
- No significant reduction in vending machine profits has been observed with pricing interventions.





Recommendations of Leaders in the Field

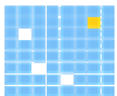
- National Association of State Boards of Education (NASBE)
- Centers for Disease Control
- Institute of Medicine





National Association of State Boards of Education and Centers for Disease Control

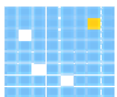
- Address physical activity and nutrition through a Coordinated School Health Program approach.
- Designate a school health coordinator and maintain an active school health council.
- Assess the school's health policies and programs and develop a plan for improvement.
- Strengthen school nutrition and physical activity standards.
- Implement high quality courses of study in health education and physical education.
- Implement a high quality health promotion program for school staff.





NASBE & CDC Recommendations (Continued)

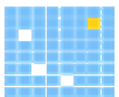
- Increase opportunities for students to engage in physical activity.
- Implement a quality school meals program.
- Ensure that students have appealing, healthy choices in foods and beverages offered outside of the school meals program.
- Ensure that P.E. teaching involves the ability to provide significant skills and knowledge to students.
- If it is not possible to require all elementary P.E. teachers to be certified at the elementary level, employ at least one certified P.E. teacher per school who is accountable for advising and mentoring other P.E. teachers.





Institute of Medicine

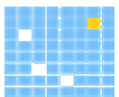
- Establish accountability mechanisms for school nutrition and physical activity standards, including school-specific reports.
- Ensure that children and youth participate in at least 30 minutes of moderate to vigorous physical activity during the school day.





Other IOM Recommendations

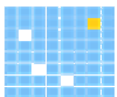
- Conduct annual assessments of students' height, weight, and BMI, and report to parents.
- Make schools as advertising-free as possible.
- Will issue recommendations in October regarding appropriate nutrition standards for the availability, sale, content, and consumption of foods and beverages at school.





Mississippi Standards: Health Education

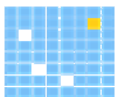
- Compliance with all National Health Education Standards
- MS Public School Accountability Standard 20
 - Requires ½ Carnegie unit for high school graduation
- MS Code 37-13-134
 - ALLOWS school health councils to recommend number of hours of instruction





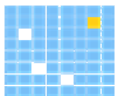
Mississippi Standards: Physical Education

- Compliance with National Physical Education Standards
- MS Code 37-13-134
 - Recommends 30 minutes per day K-6
 - Recommends 2 hours per week 7-12
- MS Public School Accountability Standard 33
 - Requires Physical Education to be part of the basic curriculum in grades K-8 must be based on MS Framework
 - No time or frequency required



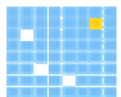
Mississippi Standards: Child Nutrition

Calories & Nutrient Levels for School Lunch (school <u>WEEK</u> averages)				
	Preschool	Grades K-6	Grades 7-12	Grades K-3 Optional
Calories	517	664	825	633
Protein (g)	7	10	16	9
Calcium (mg)	267	286	400	267
Iron (mg)	3.3	3.5	4.5	3.3
Vitamin A (RE)	150	224	300	200
Vitamin C (mg)	14	15	18	15
Total Fat	No more than 30 percent of total calories for the week should come from fat.			
Saturated Fat	Less than 10 percent of total calories for the week should come from saturated fat.			





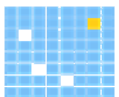
Recurring Themes





Recurring Themes - Structure

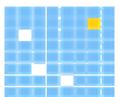
- Work through a Coordinated School Health Program. (Mississippi does this at MDE)
- Establish and maintain effective local school health councils and designate school health coordinators. (Mississippi has done this)
- Schools annually assess the health policies and programs. (CDC School Health Index)
- Develop mechanisms of accountability for adhering to standards.





Recurring Themes - Nutrition

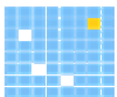
- Provide healthy foods, and remove foods with little or no nutritional value. (MS vending regulations for competitive foods)
- Train and/or certify food service staff. (MS standard/training could be increased)
- Provide effective nutrition education. (MS framework in place)
- Coordinate food service and nutrition education.
- Involve and educate parents and communities.





Recurring Themes – Physical Education

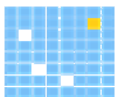
- Require minimum levels of physical education.
- Establish standards and curriculum frameworks for P. E. (Mississippi does this)
- Require P. E. to be provided directly by or under the supervision of certified P. E. teachers.
- Encourage students to participate in sports and extracurricular physical activity programs. (Mississippi does this)





Recurring Themes - Vending Machine Legislation

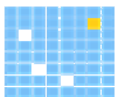
- Prohibit access to vending machines and school stores in elementary schools.
- Require middle/junior high schools to keep vending machines turned off during regular school hours or until the end of the last lunch period.
- Require, if soft drinks are allowed, that “healthy beverages” account for more than half of the total beverages offered and be located near the vending machines containing soft drinks.





Nutrition Action Items to Consider

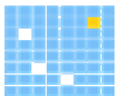
- Prohibit schools from providing extra servings of desserts, fried foods, or ice cream in elementary schools even when served during meal periods.
- Restrict fat content of any and all food offered on school campus.





What's Next

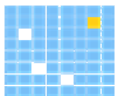
- Determine components desired for legislation.
- Identify research needs associated with these components.





References

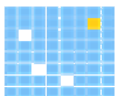
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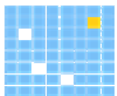
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