

# The Arkansas Experience in Combating Childhood Obesity

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**New Approaches to State  
Surveillance of Children's BMI**

**September 15, 2008**

# 84th General Assembly Act 1220 of 2003

*An act to create a Child Health Advisory Committee; to **coordinate statewide efforts to combat childhood obesity and related illnesses**; to improve the health of the next generation of Arkansans; and for other purposes.*

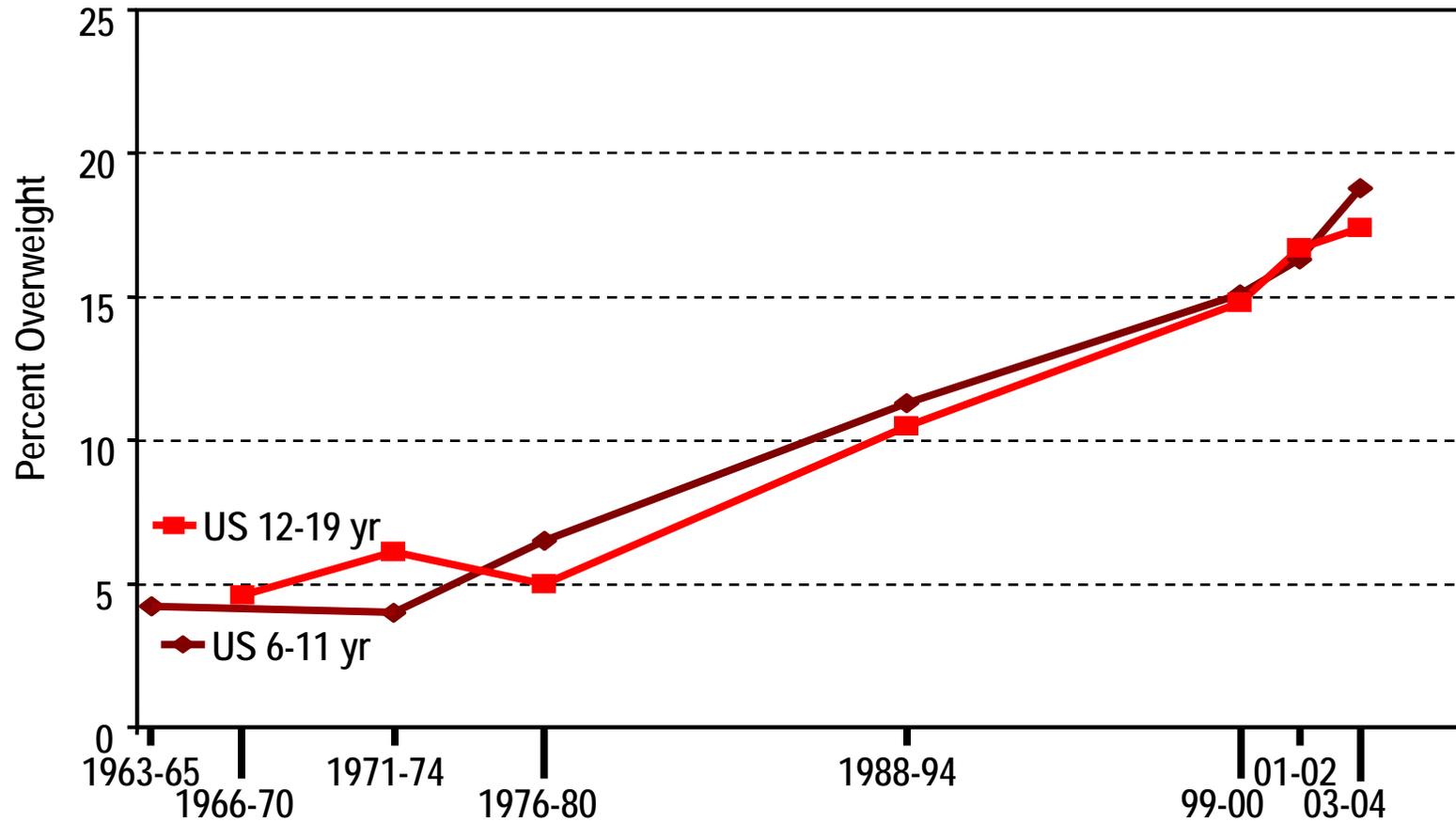
## **Goals:**

- Change the environment within which children go to school and learn health habits everyday
- Engage the community to support parents and build a system that encourages health
- Enhance awareness of child and adolescent obesity to mobilize resources and establish support structures

# Act 1220 Requirements

1. **Establishment of an Arkansas Child Health Advisory Committee**
2. **Vending machine content and access changes**
3. **Physical activity / education requirements**
4. **Requirement of professional education for all cafeteria workers**
5. **Public disclosure of “pouring contracts”**
6. **Establishment of local parent advisory committees for all schools**
7. **Confidential child health report delivered annually to parents with body mass index (BMI) assessment**

# National Childhood Obesity Trends



NHANES data sources: Ogden et al. *Prevalence and Trends in Overweight Among US Children and Adolescents, 1999-2000*. JAMA 2002;288(14):1728-1732. Ogden et al. *Prevalence of Overweight and Obesity in the United States, 1999-2004*. JAMA 2006;295(13):1549-1555.

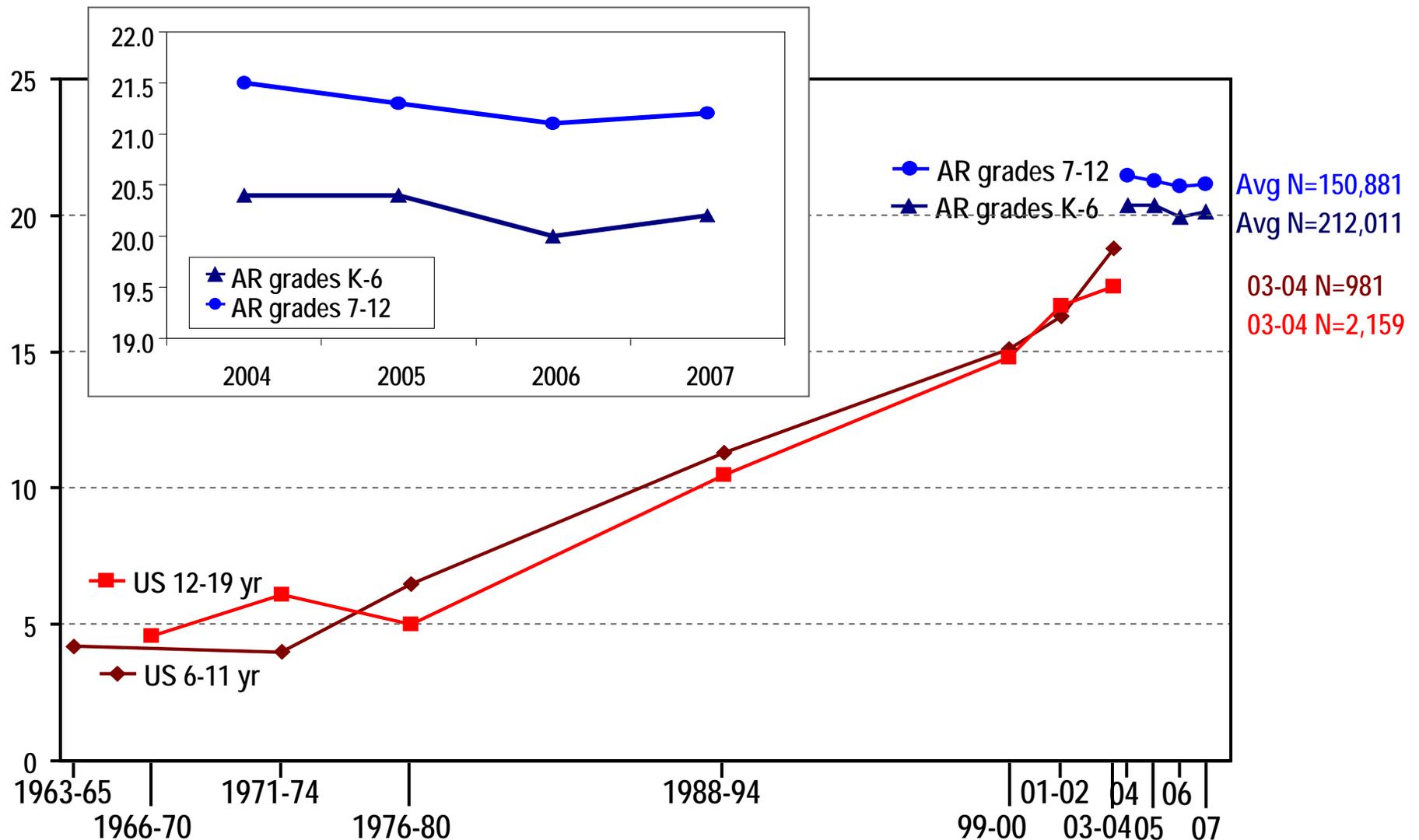


# Percentage of Arkansas Students by Weight Classification (Grades K–12)

Category	Year 1 (‘03–‘04)	Year 2 (‘04–‘05)	Year 3 (‘05–‘06)	Year 4 (‘06–‘07)
Overweight	20.9%	20.8%	20.5%	20.6%
At risk for overweight	17.2%	17.2%	17.1%	17.2%
Healthy weight	60.1%	60.1%	60.5%	60.4%
Underweight	1.8%	1.9%	1.9%	1.8%
Total students assessed*	347,753	368,871	369,416	366,801

\*Results include all data available for years 1, 2 and 3 for grades K–12 and data received by June 6, 2007 for year 4. Data source: Arkansas Center for Health Improvement. Year Four Assessment of Childhood and Adolescent Obesity in Arkansas (Fall 2006–Spring 2007), Little Rock, AR: ACHI, September 2007.

# National and Arkansas Childhood Obesity Trends



NHANES data sources: Ogden et al. *Prevalence and Trends in Overweight Among US Children and Adolescents, 1999-2000*. JAMA 2002;288(14):1728-1732. Ogden et al. *Prevalence of Overweight and Obesity in the United States, 1999-2004*. JAMA 2006;295(13):1549-1555.



Arkansas data source: Arkansas Center for Health Improvement, Little Rock, AR, September 2007.

# Child Health Report (2004)

BRYANT SCHOOL DISTRICT  
BRYANT ELEMENTARY SCHOOL  
200 NW 4TH  
BRYANT, AR 72022

T60PC394

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Dear Parent or Guardian,

This Child Health Report is being sent to you because of her weight.

**Why is this report being sent to you?**  
If a child is overweight, there are health problems that can develop. Children who are overweight are at a higher risk for heart disease, diabetes, and other health problems.

**Is your child's weight a health problem?**  
Your child was weighed and measured at Bryant Elementary School on November 17, 2003. She was 60.5 inches tall and weighed 137.4 pounds. Based on her height and weight, she has a Body Mass Index (BMI) of 26.4 for a 10-year-old girl. This suggests that your child may be overweight (see chart). This may be a major health problem for Samantha.

**What is a BMI?**  
A BMI tells if a person may be overweight or underweight. It is a screening test. Doctors use screening tests to find problems early. This may help prevent more serious problems from developing later. A healthy BMI number changes as children age and is different between girls and boys. So, it is important to measure BMI each year to see if your child is growing and developing in a healthy way.

**What should you do?**  
Because Samantha is overweight, please visit your doctor, please because of her weight. For example, the American Diabetes Association recommends:

- Offer healthy snacks, like fruits, vegetables, and other foods low in sugar and salt.
- Drink fewer sodas and drink more water, low-fat milk, or low-calorie drinks.
- Limit television, video games, and computer time to no more than 2 hours a day.
- Take family walks, bicycle, run, or exercise with your child.

Healthy habits start early. Please be aware that diet, physical activity, and other health habits will affect your child's health and life. Thank you.

On behalf of your child's school

*Joe Thompson*

Joseph W. Thompson, MD, MPH  
Director, Arkansas Center for Health Improvement

Please go to [www.achi.net](http://www.achi.net) for more information.  
A free CME project for doctors is available at [www.achi.net](http://www.achi.net).

A generous gift from the American Diabetes Association made distribution of this letter possible.

## Is your child's weight a health problem?

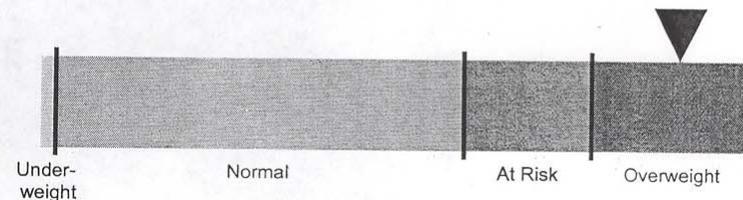
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## What should you do?

Your Child's BMI



The arrow shows how your child's BMI compares with other Arkansas school children.

*Spanish-language versions were made available in 2005*

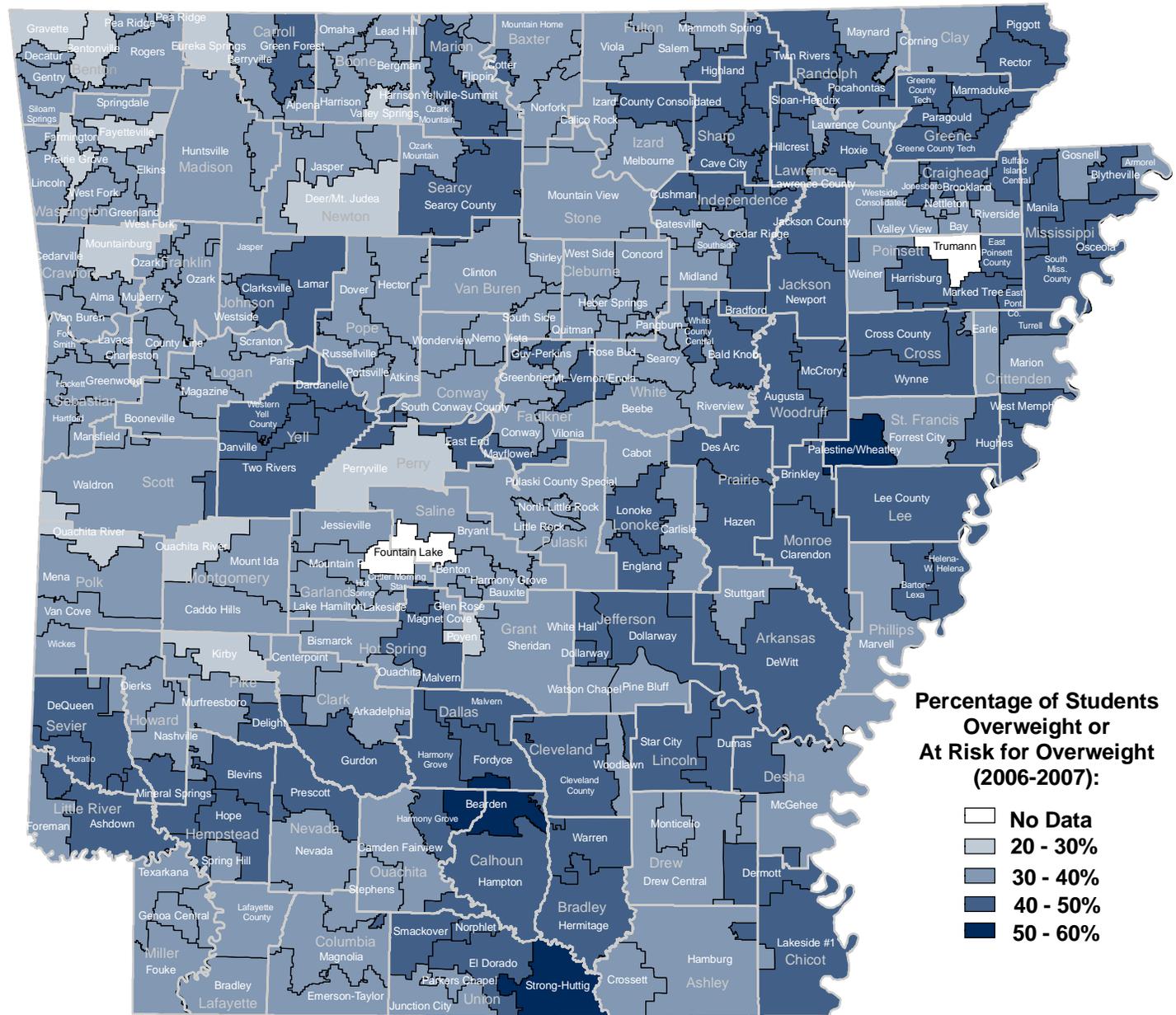
Source: Arkansas Center for Health Improvement, Little Rock, AR, 2004.

## Participation in Arkansas BMI Assessments (Grades K–12)

Category	Year 1 ('03–'04)		Year 2 ('04–'05)		Year 3 ('05–'06)		Year 4 ('06–'07)	
	Percent	Total	Percent	Total	Percent	Total	Percent	Total
Participation*								
Public schools	<b>94.4%</b>	1,060/ 1,123	<b>98.8%</b>	1,115/ 1,129	<b>98.6%</b>	1,090/ 1,106	<b>99.1%</b>	1,070/ 1,080
Students (K–12)	<b>92.7%</b>	425,372/ 458,991	<b>96.1%</b>	443,632/ 461,815	<b>91.9%</b>	431,981/ 470,279	<b>96.3%</b>	472,558/ 490,495
Student data		<b>425,372</b>		<b>443,632</b>		<b>431,981</b>		<b>472,558</b>
Valid for analysis	<b>81.8%</b>	347,753	<b>83.1%</b>	368,871	<b>85.5%</b>	369,416	<b>77.6%</b>	366,801
Invalid	<b>1.4%</b>	5,796	<b>1.1%</b>	4,678	<b>0.4%</b>	1,539	<b>0.1%</b>	647
Unable to assess	<b>16.9%</b>	71,821	<b>15.8%</b>	70,083	<b>14.1%</b>	61,026	<b>22.2%</b>	105,110

\*Results include all data available for years 1, 2 and 3 for grades K–12 and data received by June 6, 2007 for year 4. Some public schools and districts merged after year 2. The most common reason students were not assessed for BMI was absence from school (of total reporting 6.3 percent in year 1, 7.6 percent in year 2, 6.7 percent in year 3 and 8.1 percent in year 4). Annually up to 6 percent of students or their parents refuse to participate. Data source: Arkansas Center for Health Improvement. Year Four Assessment of Childhood and Adolescent Obesity in Arkansas (Fall 2006–Spring 2007), Little Rock, AR: ACHI, September 2007.

# Percentage of students classified as overweight or at risk for overweight by Arkansas public school district ('06-'07)



Source: ACHI. *Assessment of Childhood and Adolescent Obesity in Arkansas: Year 4 (Fall 2006–Spring 2007)*. Little Rock, AR: ACHI; September 2007.

# Challenges Overcome

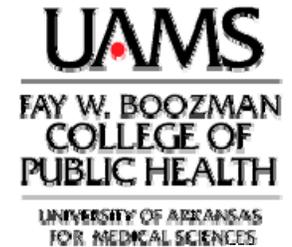
- **Initiative viewed as an unfunded mandate on schools**
- **Concerns about use of academic time for health screenings**
- **Concerns about potential negative consequences (e.g., eating disorders, labeling of children)**
- **Responsibility for developing and implementing BMI assessments not outlined in legislation**
- **Issues related to conducting large-scale screening: confidentiality; standardization of protocol, equipment, and reporting; data oversight**

# Lessons Learned on Implementation

- **Regular, reliable communication with stakeholders is essential**
- **Information exchange had to be multi-directional—program leaders, school staff, state departments, parents**
- **BMI assessments are fundamentally similar to other school-based health screens**
- **Standardized and simple measurement protocol is critical**
- **Equipment had to be readily attainable, affordable, and easy to use**

# UAMS College of Public Health

## Evaluation of Act 1220 (2008)



- **Surveys of school administrators and personnel, parents, and overweight adolescents:**
  - **Assessments were helpful to parents**
  - **No substantial negative consequences of BMI assessments have been identified**
  - **Superintendents and principals did express concern about time taken away from academics**
  - **Increase in school policies and practices, such as limiting “junk foods” that support healthy eating in schools**
  - **Significant increase in percentage of parents who signed their children up for sports or exercise classes**
  - **Parents did not report an increase in inappropriate dieting among their children**
  - **Parents did report modest changes in family diet and nutrition patterns**
  - **Students physical activity has increased since the first year; percentage in physical education has declined**

# Amending Act 1220 – Acts 201, 719, & 317 of 2007

- **Child Health Advisory Committee with 5 new members and broadened scope.**
- **Changes BMI screening periodicity to every 2 years for individuals (grades K, 2, 4, 6, 8, 10 annually); parallels other health screens.**
- **Parents must provide a written refusal to keep child from participating.**
- **Protocol adherence required across school districts.**
- **Eliminates physical activity for all but K-5.**
- **New Health Report to include all screenings.**

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