

The Arkansas
Assessment of
Childhood and
Adolescent Obesity
– Tracking Progress

STATE RESULTS

Year 3 (Fall 2005–Spring 2006)



The Arkansas Center for Health Improvement is a non-partisan, independent health policy center whose mission is to serve as a catalyst for improving the health of Arkansans through evidence-based research, public issue advocacy, and collaborative program development.



Introduction to the Arkansas Year 3 BMI Assessments



Analysis of the Year 3 BMI assessments of public school students reveals that the progression of the childhood obesity epidemic has been halted in Arkansas. Despite these results, almost 38 percent of children and adolescents in the state continue to face an obesity problem and associated health risks.

OVERVIEW

Childhood and adolescent obesity continue to be a major public health threat in our nation. Three years ago, Arkansas led the nation by taking statewide action to combat the childhood obesity epidemic with the passage of Act 1220 of 2003. Arkansas schools, communities, policy makers, health care providers, and most importantly students and their families are now working to change the environment within which students go to school and learn health habits every day. Act 1220 activities engage the community to support parents and build systems that encourage health, enhance awareness of child and adolescent obesity, and create resources and support structures.

One component of Act 1220 is annual confidential reporting of each student's body mass index (BMI) to his or her parents. In this report, the Arkansas Center for Health Improvement (ACHI) provides the third annual analysis of the state's obesity epidemic among public school students.

Watson Chapel School District is a small district that knows how to get a big job done right! At the start of the school year, Watson Chapel's 3,100 students get weighed and measured, have their vision and hearing checked, and have other appropriate screenings. "At Watson Chapel, we get all our health screenings done at the start of the school year," said Juanita Buckmaster, RN. "Then we are able to contact parents earlier if their children have a potential health problem." Last year, Watson Chapel tested ACHI's new web-based data entry system for assessing student BMI. After the success of that year, Buckmaster and the Watson Chapel staff would not have dreamed of going back to a paper method of collecting height and weight data. So, when ACHI wanted to assess more students using the web-based data entry system, Watson Chapel and 15 other districts voluntarily used the program to collect data this year.

"While using technology is definitely the way to go in capturing the heights and weights of all our students," said Buckmaster, "organization and cooperation are the keys to success." A total of five health staff members at Watson Chapel were trained to use the web-based data entry system and they in turn trained other school personnel. Then Buckmaster and her staff organized the student health screenings for the school year. They continued to work closely throughout the school year with ACHI's staff to recommend changes to the system that would help the program run more smoothly.

A future goal at ACHI is to help schools create a coordinated health report that goes beyond BMI to include vision, hearing, other screenings, and perhaps immunization updates. This type of report would give parents an overview of their child's overall health and potential risks and enable nurses to consolidate their reporting efforts during the school year. The work Watson Chapel has done to organize early health screenings and the advice they have given ACHI in developing a user-friendly web-based entry system will certainly help ACHI meet the goal of developing a coordinated child health report.

HIGHLIGHTS OF 2006 FINDINGS

Analysis of the Year 3 (2005–2006) BMI assessments of public school students reveals that the progression of the childhood obesity epidemic has been halted in Arkansas. ACHI's data suggest that the percentage of overweight and at risk for overweight children and adolescents in Arkansas has decreased slightly while the percentage of those who are a healthy weight has increased.

Building on new actions by the Arkansas State Board of Education, ACHI worked closely with public school personnel and community health nurses to improve and streamline the BMI assessment and reporting process. A new web-based data entry system was used to assess BMIs for about one-fourth of public school students, or 130,000 individuals, during the 2005–2006 school year. Overall, BMI assessment forms were completed for nearly 434,000 Arkansas public school students in 2005–2006.

Results of the Year 3 BMI Assessments

PARTICIPATION

In the 2005–2006 school year, 99 percent (1,090 of 1,106) of Arkansas public schools in 257 of 261 school districts participated in the statewide BMI assessments. BMI assessment forms were submitted by June 2006 for 433,808 of the state's 480,811 public school students. While some students were absent or could not be assessed, 371,082 individual Child Health Reports were made available to parents.

Statewide Participation in BMI Assessments

Category	Year 1 ('03-'04)		Year 2 ('04-'05)		Year 3 ('05-'06)	
	Percent	Total	Percent	Total	Percent	Total
Participation*						
Public schools	94.3%	1,060	98.7%	1,115	98.6%	1,090
Students (PK–12)	92.6%	426,555	95.1%	447,712	90.2%	433,808
Student Data						
Valid for analysis	81.8%	348,710	83.2%	372,369	85.5%	371,082
Invalid	1.4%	5,937	1.1%	4,784	0.4%	1,568
Unable to assess†	16.9%	71,908	15.8%	70,559	14.1%	61,158

*Results include all data available for years 1 and 2 and data received by June 14, 2006 for year 3 analysis. 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% in year 1, 7.7% in year 2, and 6.7% in year 3). Annually, only 5%–6% of students or parents refused to participate.

OVERALL CLASSIFICATIONS

Among public school students in Arkansas, 20.4 percent met the Centers for Disease Control and Prevention criteria for being overweight and 17.1 percent were at risk for overweight. Despite a decline in the percentage of students who were overweight and at risk for overweight during the past three years, 37.5 percent of children and adolescents statewide still have a potential obesity problem and face health risks associated with being overweight.

The highest obesity rates were found among Hispanic males and African-American females. More than half (53–56 percent) of Hispanic males in grades 3–7 were classified as overweight or at risk for overweight and 47–49 percent of African-American females in grades 5–9 were overweight or at

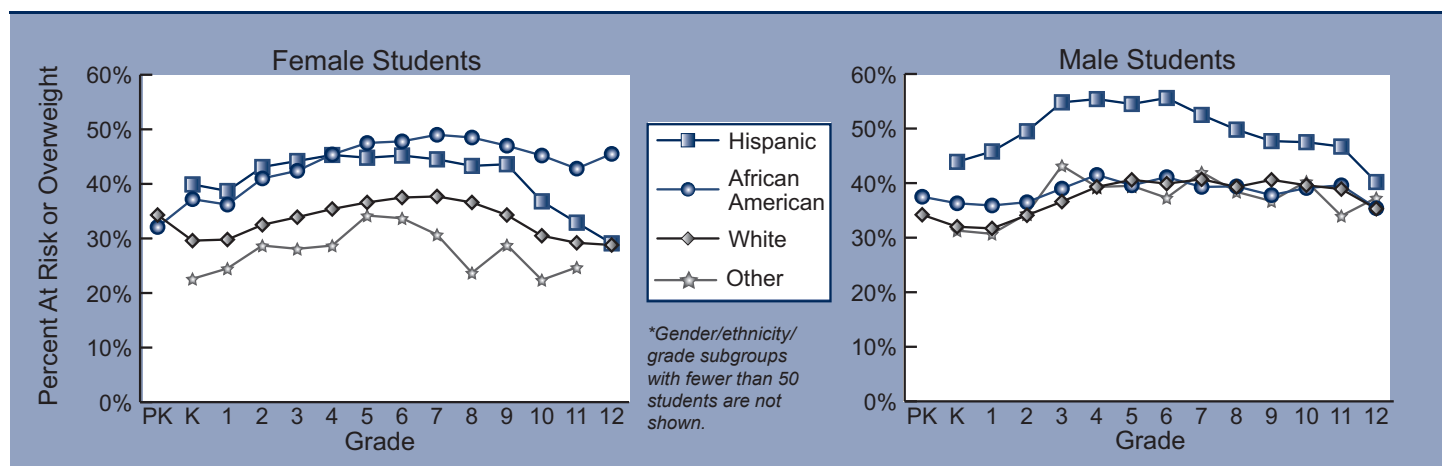
risk for overweight. The lowest obesity rates for females were among whites and other ethnic groups in high school grades and, for males, among whites and other ethnic groups during elementary grades.

Percentage of Students by Weight Classifications

Category	Year 1 ('03-'04)	Year 2 ('04-'05)	Year 3 ('05-'06)
Overweight	20.9%	20.8%	20.4%
At risk for overweight	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

*Data presented include all data for years 1 and 2 and data received by June 14, 2006 for year 3 analysis.

Percentage of Students Classified as Overweight or At Risk for Overweight by Gender, Ethnicity, and Grade (2005–2006)*

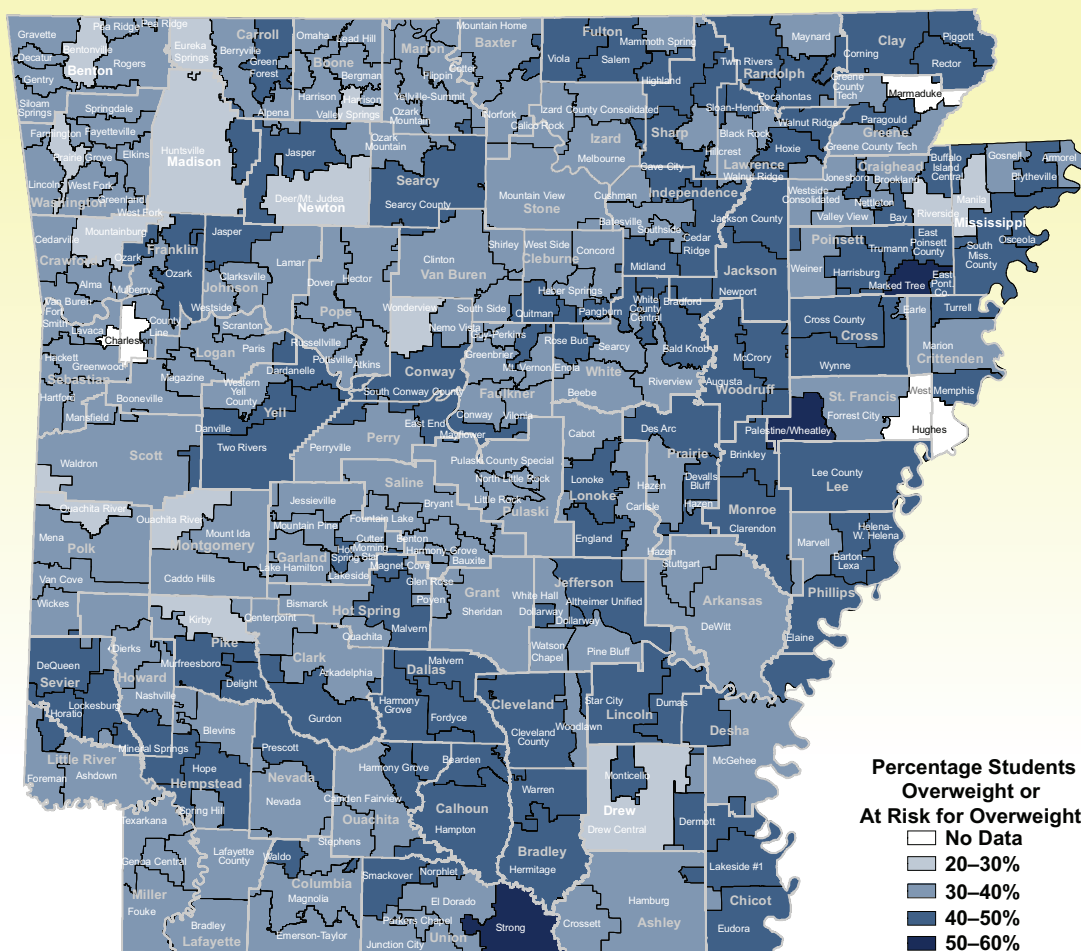




PERCENTAGE OVERWEIGHT OR AT RISK FOR OVERWEIGHT BY SCHOOL DISTRICT (2005–2006)

Childhood and adolescent obesity is a problem in every county in Arkansas. The percentage of students within a school district who were overweight or at risk for overweight are shown in the map below. The map is shaded according to the magnitude of the percentage. The lightest shade represents the districts with the lowest percentage (20–30 percent) and the darkest shade represents those with the highest percentage (50–60 percent) of students classified as overweight or at risk for overweight.

Percentage of Students Classified as Overweight or At Risk for Overweight by Arkansas Public School District (2005–2006)



Sources: Arkansas Center for Health Improvement, Arkansas Department of Education, and Census 2002 TIGER Lines Files.

Notes: Results are reported for 257 of 261 Arkansas school districts. Of the 13 school districts included on the map that fall within the lowest range for percentage of students classified as overweight or at risk for overweight, Manila School District submitted BMI assessments for less than one-third of its students, and Eureka Springs, Prairie Grove, Deer/Mt. Judea, Valley Springs, Ouachita River, Huntsville, Kirby, and Riverside school districts each submitted assessments for less than two-thirds of their students. Therefore, the map may not reflect accurate results for some of these school districts. The other four districts in the lowest range submitted BMI assessments for more than two-thirds of their students. Three districts that did not report data are shown in white. One other district that did not report data is too small to be seen on the map. Eight other school districts that have special school classifications are not displayed on the map (e.g., Arkansas School for the Blind) because of small geographic district size.

Future Steps for Arkansas BMI Assessments



ACHI has worked closely with public school personnel and community health nurses to improve and streamline the BMI assessment and reporting process.

The success of and positive response to last year's small pilot of new web-based technology encouraged ACHI to expand a web-based data entry system to 16 school districts (216 schools) during the 2005–2006 school year. This new web-based data entry system allowed data to be collected in a streamlined paperless fashion. Approximately 130,000 students, or one-fourth of the Arkansas student population, were assessed using the web-based system in 2005–2006.

Working with the Educational Cooperatives, which allowed school personnel and ACHI staff access to computer labs and IT specialists, pilot school district personnel completed training on the web-based system by January 2006. The North Little Rock School District again used Pocket PCs, while other schools used computers. Pilot schools entered student BMI data either from paper records kept while weighing and measuring students or directly into computers with Internet connectivity. The web-based system enabled schools to weigh and measure students, enter data directly into the system, and print individual Child Health Reports for parents. This system eliminates the need for schools to print assessment forms and student labels, ship data to an entry center, and wait for notification that reports have

been processed and are ready for printing. The majority of the technology pilot schools had Child Health Reports ready for parents by March 2006.

Nurses using the web-based system evaluated it and provided valuable feedback to ACHI. Most participants noted how easy the system was to use and enjoyed being able to retrieve reports quickly. There is also a strong desire on the part of school health staff to merge BMI reports with other health assessments, such as vision, hearing, and other screenings.

Districts that did not participate in pilot tests of the web-based data entry system received student labels in September 2005 so the assessment process could begin early in the school year. Student data were collected by school nurses and other school personnel. Paper records were sent to the University of Arkansas at Fayetteville's Survey Research Center for data entry. School personnel were able to print confidential reports for parents by accessing ACHI's secure website.

ACHI intends to expand the web-based entry system to all districts in the 2006–2007 school year. Working in conjunction with the Arkansas Public School Computer Network (APSCN) and others within the Arkansas Department of Education, ACHI will develop a data entry system that incorporates components of the pilot web-based system and other currently available programs. Training sessions will be scheduled during the 2006–2007 school year with assistance from the Educational Cooperatives. Information will be available on ACHI's website at www.achi.net.

School Districts Using ACHI's Web-based BMI Data Entry System

- Bentonville
- Cabot
- Fayetteville
- Greene County Technical
- Lake Hamilton
- Lisa Academy
- Little Rock
- North Little Rock
- Nettleton
- Pine Bluff
- Rogers
- Springdale
- Texarkana
- Van Buren
- Watson Chapel
- White Hall

For the last two years, the UAMS College of Public Health (COPH) has published an evaluation of Act 1220. The year 3 evaluation is expected in early 2007. Overall findings from the second year indicate that change is beginning to occur among schools and families. The evaluation asked questions of students, parents, school personnel, and physicians. The COPH reported that Arkansans generally accepted and were comfortable with the BMI measurement process and reporting. The report also noted that no negative outcomes were associated with the BMI process.

(Year Two Evaluation: Arkansas Act 1220 of 2003 to Combat Childhood Obesity. Little Rock, AR: Fay W. Boozman College of Public Health, University of Arkansas for Medical Sciences, January 2006. Available at www.uams.edu/coph/reports.)

ACKNOWLEDGMENTS

ACHI recognizes and thanks the dedicated and hardworking school personnel—nurses, teachers, PE instructors, principals, superintendents, and others—who recognize the importance of continuing this ground-breaking work in combating childhood and adolescent obesity. In particular, we applaud the vision of school administrators who encouraged nurses to be trained in the pilot web-based system and we thank those nurses for agreeing to learn a new task while continuing to carry out their daily work.



1401 West Capitol Avenue
Suite 300, Victory Building
Little Rock, Arkansas 72201
www.achi.net