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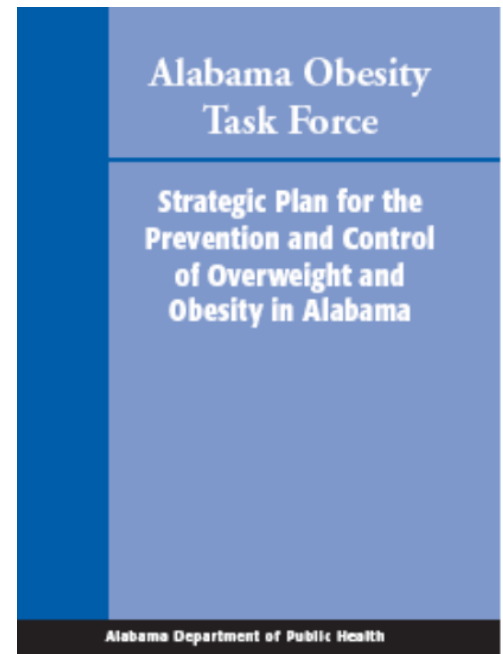
**Obesity Rates among  
Kindergarteners and 3<sup>rd</sup>  
Grade Children in  
Alabama,  
2011-2012**





## Introduction

- The *Strategic Plan for the Prevention and Control of Overweight and Obesity in Alabama* authored by the Alabama Obesity Task Force charges the Surveillance, Research and Evaluation Sub-Committee to:
  - Identify sources of obesity data for Alabama that are representative of the state, public health districts and counties;
  - Assess the gaps in the overall state obesity surveillance system; and
  - Develop and implement a plan to address the gaps in the current system.
- In early 2005 the committee assessed the gaps in the overall state obesity surveillance system. The committee decided to focus on obtaining rates of obesity for all age groups in Alabama. Data were available for teens and adults. Thus, the committee decided to develop a plan to obtain data on young children.
- The committee partnered with the Division of Oral Health at Alabama Department of Public Health to obtain heights and weights of children who participate in the Oral Health Screenings within the nine dental districts in the state. This partnership yielded the first statewide obesity data for school-aged children in 2006-7. The Oral Health Screenings are completed every five year. This report focuses on the data collected in 2011-2012.



## Description of the Data

- A random sample of schools within each dental district was selected.
- Schools were selected based on income eligibility for free or reduced price school lunches so that all incomes for each dental district are represented.
- Once a school was selected, the principal was contacted and if permission was granted, the students that were at school on that specific day, and had parental permission, had an oral health screening performed on them.
- Trained professionals obtained height, weight, and estimated age during the oral health screenings.
- BMI was calculated and BMI-for-age was plotted to a gender specific CDC growth chart to determine weight status.
  - Overweight is considered a BMI-for-age between the 85<sup>th</sup> and 95<sup>th</sup> percentile
  - Obesity is defined as a BMI-for-age greater than or equal to the 95<sup>th</sup> percentile
- Only students with valid heights, weights and ages were eligible for inclusion in analyses.

# Obesity Rates Among Kindergarteners and 3<sup>rd</sup> Grade Children in Alabama, 2011-2012



## Sample Characteristics

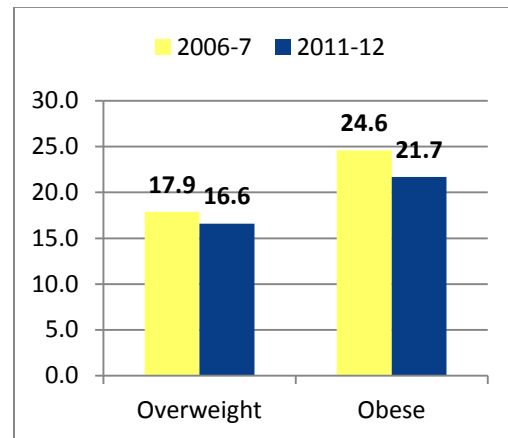
	Kindergarten Number (%)	3 <sup>rd</sup> grade Number (%)
<b>Sex</b>		
Male	2471 (51.4%)	2010 (50.5%)
Female	2334 (48.6%)	1969 (49.5%)
<b>Race/Ethnicity</b>		
White	2752 (57.9%)	2212 (56.5%)
Black	1523 (32.1%)	1392 (35.6%)
Hispanic	294 (6.2%)	306 (5.2%)
Other	180 (3.8%)	107 (2.7%)
<b>Sample with Valid Heights and Weights</b>	4362	3952

- In 2011—2012, 4362 Kindergarteners and 3952 3<sup>rd</sup> graders had their heights and weights taken during an oral health screening.
- Slightly higher number of male students participated in the BMI screening.
- Race/Ethnicity of the participants is similar to the 2010 census data for Alabama children in this age group.

## Overall Trends

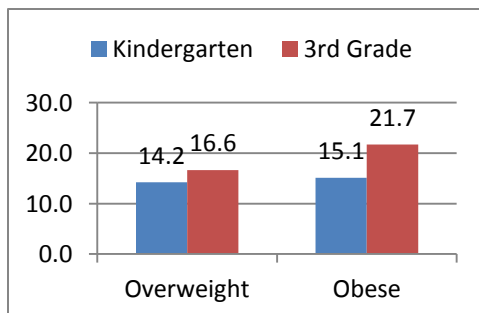
- One out of every five 3<sup>rd</sup> graders in Alabama is obese, which is higher than the national average (Chart 1). National obesity rate for 6-11 year olds in 2009-2010 was 18.6%
- Approximately 38% of 3<sup>rd</sup> graders were classified as either overweight or obese.
- Chart 1 depicts the obesity rates for 2006-7 and 2011-12. Caution is warranted when comparing the rates because the data were collected differently.

**Chart 1: Overweight and Obesity Rates, Alabama 3<sup>rd</sup> grade Students, 2006-7 and 2011-12**



## Obesity Rates by Age

**Chart 2: Overweight and Obesity rates by age, Alabama 2011-12**



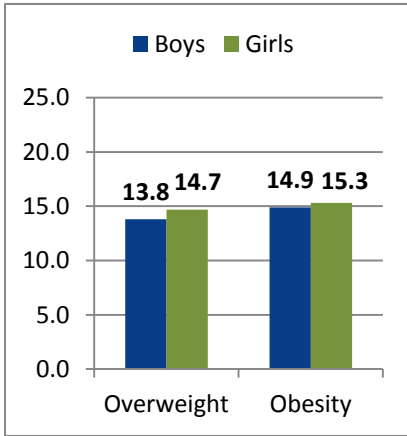
- Alabama data are consistent with US data in that obesity rates increase with age.
- Approximately 38.3% of 3<sup>rd</sup> graders were classified as overweight/obese.
- Approximately 29.3% of Kindergarten students were classified as overweight/obese.

# Obesity Rates Among Kindergarteners and 3<sup>rd</sup> Grade Children in Alabama, 2011-2012



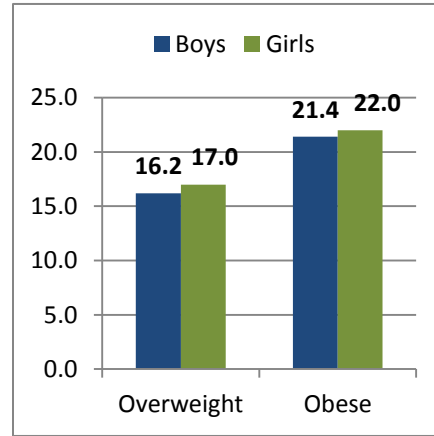
## Obesity Rates by Gender

Chart 3: Overweight and Obesity rates, Alabama, kindergarten and 3<sup>rd</sup> grade students; 2011-12



P=0.63

### Kindergarten



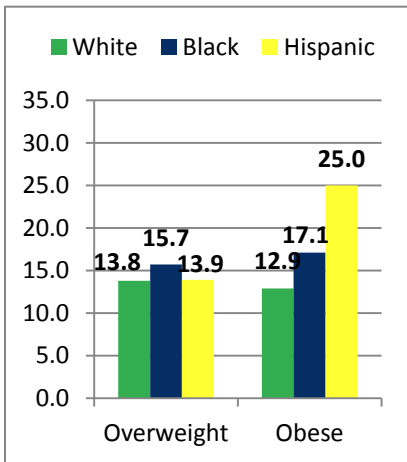
P=0.64

### 3<sup>rd</sup> Grade

- No significant differences in obesity rates by gender were noted for both Kindergarten and 3<sup>rd</sup> grade students.

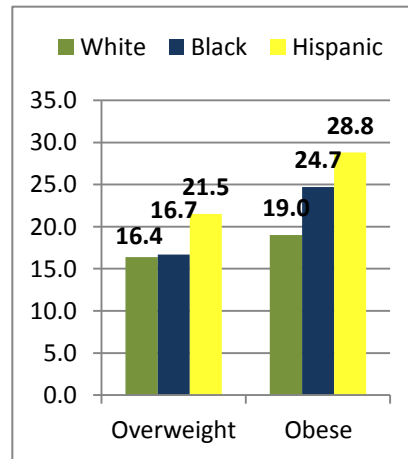
## Obesity Rates by Race/Ethnicity

Chart 4: Overweight and Obesity rates, Alabama kindergarten and 3<sup>rd</sup> grade by race/ethnicity; 2011-12



P<0.001

### Kindergarten



P<0.001

### 3<sup>rd</sup> Grade

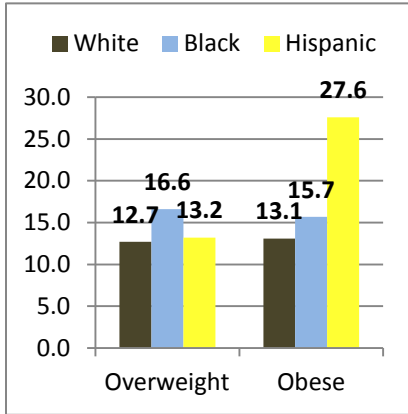
- There are significant differences in obesity rates by race/ethnicity.
- Obesity rates are higher among minority children with the highest rates found in Hispanic children

# Obesity Rates Among Kindergarteners and 3<sup>rd</sup> Grade Children in Alabama, 2011-2012



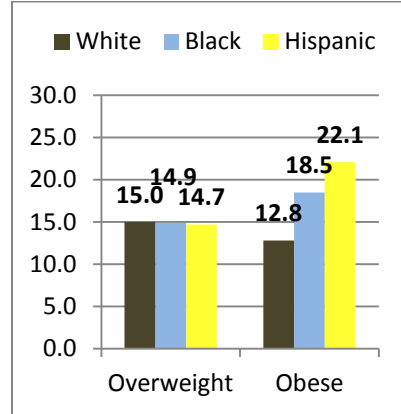
## Kindergarten

Chart 5: Overweight and Obesity rates, Alabama Kindergarten students by race/ethnicity and gender; 2011-12



P=0.0002

**Boys**



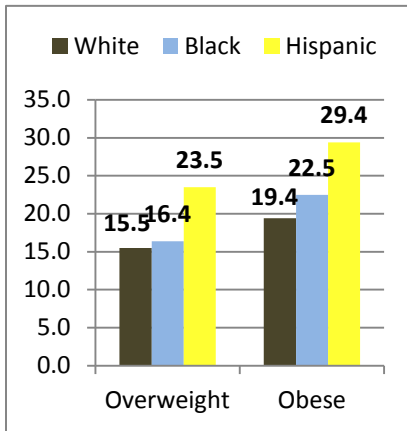
P=0.015

**Girls**

- The highest rates of obesity occur in Hispanic boys and girls. This trend is consistent at both grade levels.
- Two out of every five Hispanic kindergarteners are either overweight or obese. Over one half of third grade Hispanic boys and girls are overweight or obese.

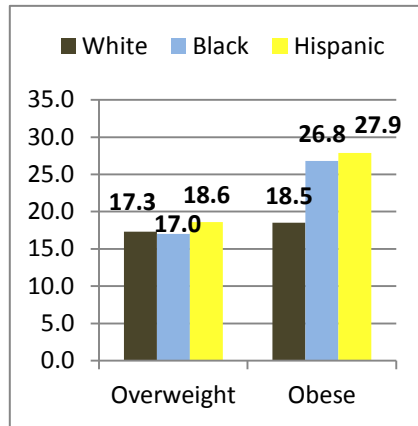
## 3<sup>rd</sup> Grade

Chart 6: Overweight and Obesity rates, Alabama 3<sup>rd</sup> grade students by race/ethnicity and gender; 2011-12



P=0.014

**Boys**



P=0.002

**Girls**



### **Kindergarten Obesity Rates in Alabama by Dental Districts (pictured on page 7)**

- Dental District 1 and District 3, found in the Southern portion of the state, have the lowest percentage of obese kindergarteners within Alabama.
- Dental District 8, the northern most counties, has the second lowest percentage of obese children in Alabama.
- Across the middle of the state, the percentage of obese children increases as you move west to east through the middle of Alabama, with the exception of Dental District 7 (includes Jefferson and Shelby Counties ) which is not following the trend.
- There is no available data for Dental District 4, depicted in white on the map, so it cannot be compared to the other Districts within the state.

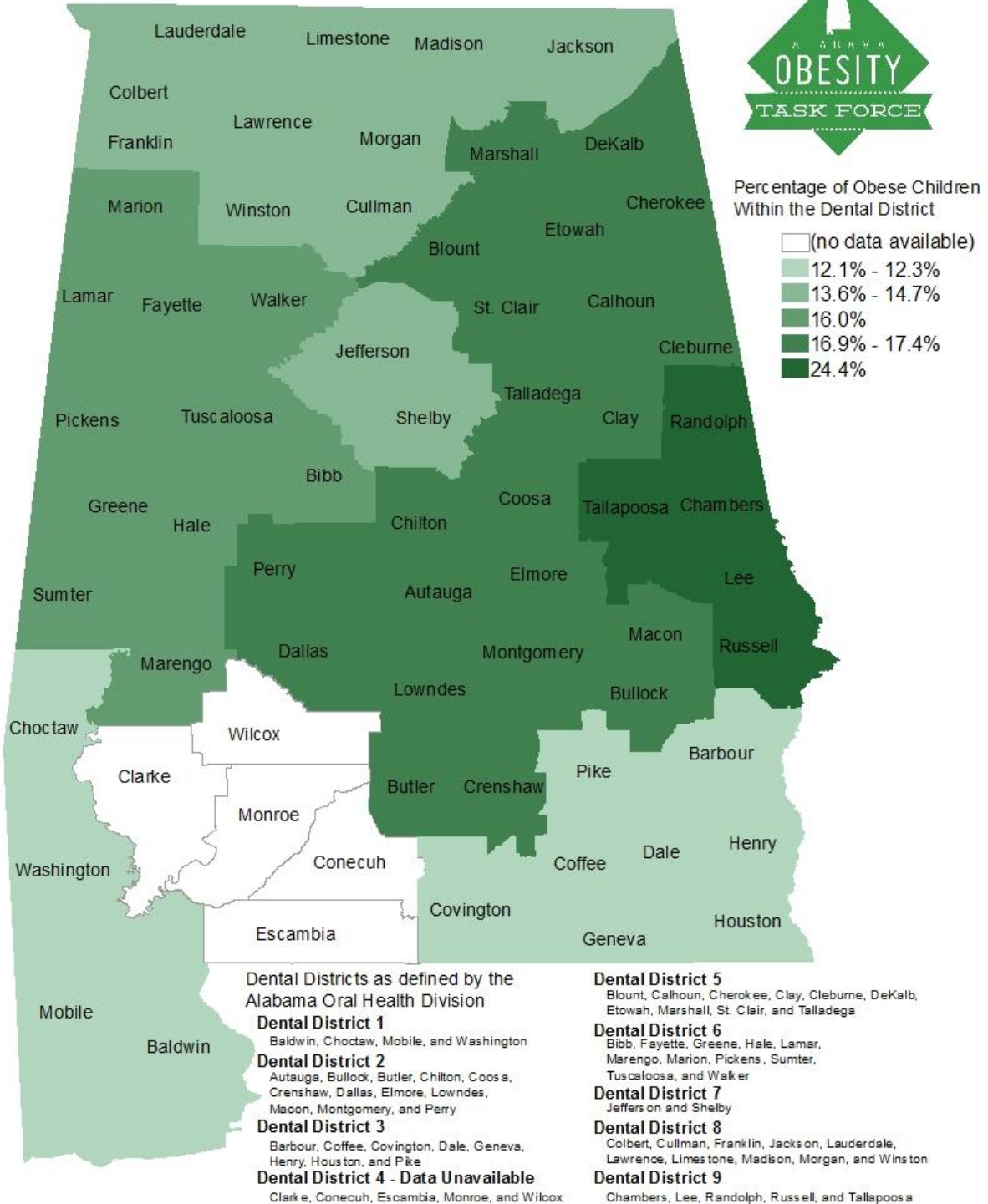
### **3rd Grade Obesity Rates in Alabama by Dental Districts (pictured on page 8)**

- In the Dental Districts, the percentage of obese children increases as you move east to west through the middle of Alabama, which is not consistent with the Kindergarten data.
- Dental District 8 and 9 have the lowest percentage of obese 3<sup>rd</sup> graders in Alabama.
- Dental District 1 has the second lowest percentage of obese 3<sup>rd</sup> graders in Alabama.
- There is no available data for Dental District 4, so it cannot be compared to the other Districts within the state.

# Obesity Rates Among Kindergarteners and 3<sup>rd</sup> Grade Children in Alabama, 2011-2012



## Obesity Rates Among Kindergarten Children in Alabama by Dental District 2011-2012 Alabama Oral Health Screening Program





# Obesity Rates Among Kindergarteners and 3<sup>rd</sup> Grade Children in Alabama, 2011-2012



## Obesity Rates Among Third Grade Children in Alabama by Dental District 2011-2012 Alabama Oral Health Screening Program

