Childhood Obesity Baseline for Greenville County

Background: More than 65% of American adults are classified as overweight (BMI 25-29.9) or obese (BMI≥30), and there has been a sharp increase in the prevalence of obesity in children and adolescents over the past three decades. According to The Centers for Disease Control and Prevention, obesity is fast approaching tobacco as the top underlying preventable cause of death in the United States and is a major risk factor for cardiovascular disease, diabetes, and certain forms of cancer. Obesity related to poor diet and physical inactivity is responsible for 400,000 deaths annually and is the nation's number two killer behind tobacco (435,000 deaths annually). In addition, obesity carries a high fiscal burden with direct and indirect health care expenses exceeding $117 billion annually. South Carolina ranks seventh in the country in the number of adults who are obese, according to the CDC's 2008 Behavioral Risk Factor Surveillance System.

Purpose: In Greenville County, the Health and Wellness Task Force of Greenville Forward (Vision 2025) was eager to obtain child obesity data for its five-year reassessment of the county's health status. The Piedmont Health Care Foundation and Activate Greenville, a partnership of the YMCA of Greenville, the Greenville Hospital System and Furman University, are promoting and developing interventions to address childhood obesity, and baseline data was needed to assess the impact of these upcoming programs. The specific objective of the proposed study, funded by the Piedmont Health Care Foundation, was to determine the prevalence of childhood obesity in Greenville County (2008).

Methods: Furman University's Department of Health and Exercise Science received permission from the Greenville County School District to measure height and weight for a representative sample of school children to determine the prevalence of childhood obesity as determined by Body Mass Index (BMI). Sixteen hundred students were selected from grades 3, 5, 7, and 9 in 19 schools (ten elementary schools; five middle schools; four high schools, 400 total in each grade). For children and adolescents, BMI is specific to age and gender and is referred to as BMI-for-Age. The CDC's Child and Teen BMI Calculator (Website: http://apps.nccd.cdc.gov/dnpabmi/Calculator.aspx) was used to calculate BMI, corresponding Percentile Rank, and Weight Status Category (i.e., underweight, healthy weight, at risk of overweight, and overweight).

Results

- Overall, 41% of those measured were overweight or obese. Specifically, 1% were underweight, 58% were at a healthy weight, 19% were overweight, and 22% were obese.
- No significant differences were found between genders.
- Significantly ($p<0.05$) more African American children/adolescents overweight or obese.

	Healthy Weight	Overweight	Obese	Overwt & Obese (combined)
Caucasian	61%	18%	18%	36%
African American	50%	21%	28%	49%
Hispanic	54%	21%	23%	44%

Table. The CDC's BMI-for-Age Weight Status Categories

Weight Status Category	Percentile Range
Underweight	Less than the 5th percentile
Healthy weight	5th percentile to less than the 85th percentile
At risk of overweight	85th to less than the 95th percentile
Overweight	Equal to or greater than the 95th percentile