

# SHAPE Briefing

## The great disconnect: Hennepin County parents' awareness of childhood obesity



1998  
2002  
2006

Number 11

Trends and insights from SHAPE, the Survey of the Health of All the Population and the Environment

### Highlights

- Children's weights and heights reported by parents are not considered to be highly accurate.
- One in three parents of children aged 2 to 5 in the **SHAPE 2006 – Child Survey** were unable to report a height or weight value that would be considered reasonably reliable.
- Among all children (aged 0 to 17 years old) only 8.4 percent of parents chose the term *overweight* to describe their child.
- More than one in six (18.0%) of the parents of children aged 0 to 17 years indicated that their child's doctor or health professional *did not say anything* about the child's weight status during their most recent visit.

### Upcoming Issues

- ◆ Leisure time physical activity
- ◆ Adult weight status
- ◆ Family connectedness

### Introduction

This *Briefing* provides insights on the degree of awareness parents in Hennepin County may have on the issue of childhood obesity<sup>1</sup> and its relevance for their own children. The findings are drawn from the **SHAPE 2006 – Child Survey**, which collected information on the health of Hennepin County children and key factors that affect their health. More than 4,000 households with children aged 0 to 17 participated in the **SHAPE 2006 – Child Survey**. The questionnaire and the data collection strategy for the **SHAPE 2006 – Child Survey** are available on our website at: [www.hennepin.us/SHAPE](http://www.hennepin.us/SHAPE).

### The great disconnect on childhood obesity

The **SHAPE 2006 – Child Survey** included a series of questions aimed at gauging the prevalence of childhood obesity in Hennepin County, and at determining what parents<sup>2</sup> know or might *think they know* about their children's weight status.<sup>3</sup> The questions were included in the survey because of the substantial health risks associated with childhood obesity, and because there are recent public health intervention activities that start with raising parental awareness to help limit these risks. Yet, though current intervention strategies are based on building parental awareness and linking this knowledge to the health of their own children, there appears to be a significant "disconnect."<sup>4</sup>

### Defining "healthy weight" for children: BMI percentiles

For children and young adults under age 20, the standards for defining current "weight status" and "healthy weight" are based on BMI (body mass index)<sup>5</sup> percentiles. To determine the child's weight status, the child's BMI score is calculated and then compared to a set of growth charts displaying normative standards for the child's gender by age group.<sup>6</sup> The weight status categories defined by the CDC's National Center for Health Statistics are displayed in Figure 1.

**"There is a disconnect between public awareness of childhood obesity as a public health problem and the ability to recognize it in one's own children."**

--Sandra G. Boodman  
*The Washington Post*  
January 8, 2008

## What do parents really know about the height and weight of their children?

In the field testing and community consultation phases that preceded implementation of the *SHAPE 2006 – Child Survey*, preliminary findings suggested that especially for older children, parents were much less likely to be able to give reasonably reliable reports of their child's height and weight. For this reason, the SHAPE team opted to focus on young children (aged 0 to 5) as the primary subjects for collecting data on children's heights and weights.

Yet, even among parents of children aged 0 to 5 who were at least *somewhat confident* that they could accurately report their child's height or weight, the survey results found that nearly one in four parents provided heights and weights that were *highly incongruent* (i.e., too tall for the weight given, or too heavy for the height given) or were otherwise *biologically implausible*.<sup>7</sup> Overall, the *SHAPE 2006 – Child Survey* found that one in three parents of children aged 2 to 5 were unable to report a height or weight value that could be considered reasonably reliable.<sup>8</sup>

## Do the heights and weights reported by parents provide adequate estimates for determining their child's weight status?

After completing data reasonability checks, the heights and weights of the children aged 2 to 5 years were used to calculate BMI percentiles. These values were then classified using the CDC's definitions for the *weight status categories*. As displayed in Figure 2, these results appear to be quite alarming. Even when the height and weight values have been pre-screened for reasonability, the remaining data yield an estimate for the percentage of Hennepin County children aged 2 to 5 who would be considered "overweight" that is nearly twice the rate reported by the National Health and Nutrition Examination Survey (NHANES).

This difference (13.9 percent versus 25.0 percent estimated to be *overweight*) suggests that when parents' reports are used as a substitute for direct measurements, errors are likely to occur. The NHANES approach to gathering children's weight and height data (based on using standardized measurement instruments administered by

Figure 1. Weight status categories defined in terms of BMI percentiles

<b>Weight Status Categories</b>	
<b>Underweight</b>	Less than the 5 <sup>th</sup> percentile
<b>Healthy weight</b>	From the 5 <sup>th</sup> percentile to less than the 85 <sup>th</sup> percentile
<b>At risk of overweight</b>	From the 85 <sup>th</sup> percentile to less than the 95 <sup>th</sup> percentile
<b>Overweight</b>	Equal to or greater than the 95 <sup>th</sup> percentile

Source: [www.cdc.gov/nccdphp/dnpa/bmi/childrens\\_BMI/about\\_childrens\\_BMI.htm](http://www.cdc.gov/nccdphp/dnpa/bmi/childrens_BMI/about_childrens_BMI.htm), p. 2.

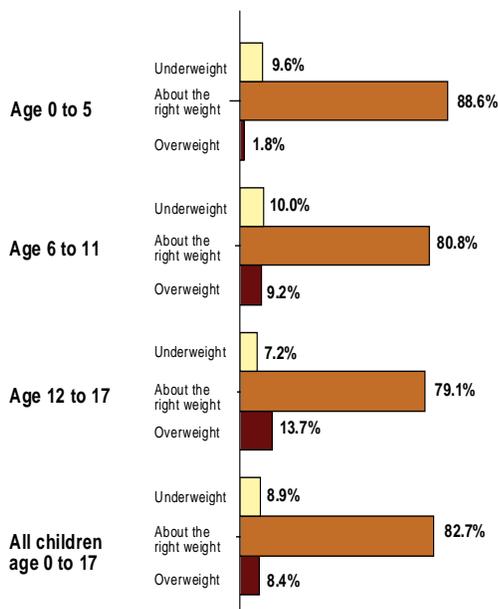
Figure 2. Estimated percentages of children aged 2 to 5 who would be classified as "overweight" comparing NHANES 2003-04 results to SHAPE 2006 findings

<b>For Children aged 2 to 5</b>	<b>Percent estimated to be overweight*</b>
<b>NHANES 2003-04</b> National findings based on heights and weights measured by professionals	<b>13.9 percent</b> Considered to be highly accurate
<b>SHAPE 2006 – Child Survey</b> Based on heights and weights reported by parents without direct measurements	<b>25.0 percent</b> NOT considered to be highly accurate

\*CDC definition of "overweight" is equal to or greater than the 95<sup>th</sup> BMI percentile.

professional staff in mobile examination centers) provides a more reliable assessment of children's weight status.

**Figure 3. Parent's subjective view of their child's weight status, percentages by age group, Hennepin County children, 2006**



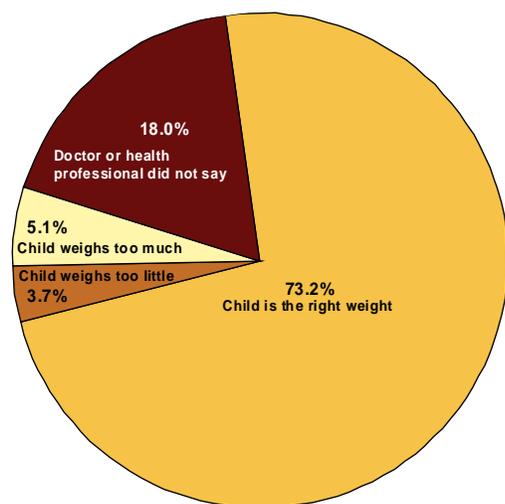
Source: SHAPE 2006

## Parents' subjective view of their child's weight status

The *SHAPE 2006 – Child Survey* also included an opportunity for parents to provide their own subjective opinion of their child's overall weight status by asking the following question: *Do you consider your child to be overweight, underweight, or about the right weight?*

As shown in Figure 3, most parents consider their children to be *about the right weight*; 82.7 percent of all children were reported to be *about the right weight*. Very few parents of children aged 0 to 5 years old (less than two percent) chose the term *overweight* to characterize their child's weight status. Overall, among all children (aged 0 to 17 years old), only 8.4 percent of parents chose the term *overweight* to describe their child.

**Figure 4. Recently reported assessment of the child's weight status by doctor or healthcare professional among children aged 0 to 17 in Hennepin County, 2006\***



\*Less than one half of one percent of all cases indicated that the child has not been to a doctor.

Source: SHAPE 2006

## What are doctors or other health professionals telling parents about their child's weight status?

Parents of all of the children in the *SHAPE 2006 – Child Survey* were asked if they had been recently told about their child's weight status by a doctor or health professional. They were asked: *Has a doctor or other health professional recently told you that your child weighs too much, too little, or is at the right weight?* As shown in Figure 4, the results indicate that for 18 percent of children aged 0 to 17, parents reported that their child's doctor or health professional had *not said anything* about the child's weight status.

This suggests that another potential source of the "disconnect" may be due to a lack of information about the child's weight status from a health professional. Although it is possible that a health professional did provide information about the child's weight status in recent conversations with the parent, one out of six parents either missed receiving the information or could not recall having had that discussion.

## The gap between reality and perception

Even when parents acknowledge having been told some information by a doctor or health professional about the status of their child's weight recently, their own subjective view often does not correspond with the professional interpretation they were given.

As shown in Figure 5, when the doctor or health professional said the child was *at the right weight*, 6.4 percent of the children's parents still gave a different interpretation (did not agree). When the child's doctor or other health professional indicated that the child *weighed too much* 16.0 percent gave an answer that disagreed. For children who were said to *weigh too little*, nearly one out of four (24.3 percent) had parents who reported that they considered the child to be *the right weight* or *overweight*. This suggests that a further source of the *disconnect* may come from parents disregarding professional opinions on the subject of their child's weight status.

Figure 5. Percentage of children whose parent's response disagrees with the assessment given by a doctor or health professional of the child's weight status, Hennepin County Children, 2006

Doctor or health professional has recently said:	Percentage of children whose parents disagreed with the doctor or health professional:
Child is the right weight	<b>6.4 percent</b> of children aged 0 to 17
Child weighs too much	<b>16.0 percent</b> of children aged 0 to 17
Child weighs too little	<b>24.3 percent</b> of children aged 0 to 17

Source: SHAPE 2006

## Acknowledgments

The **SHAPE** project would like to thank the many individuals, community organizations, and subject-area experts who provided advice and support for the development of **SHAPE 2006**. A partial list of those who provided assistance to the **SHAPE 2006** project can be found on the **SHAPE** web site listed below. The **SHAPE** project would especially like to thank the more than 10,000 residents of Hennepin County who generously took the time to complete the **SHAPE** survey.

## For More Information

**SHAPE 2006** is a collaborative project between the Hennepin County Human Services and Public Health Department and the University of Minnesota School of Public Health.

For more information on this *Briefing* or other topics related to the **SHAPE** project, or to receive this information in an alternate format, please contact [SHAPE@co.hennepin.mn.us](mailto:SHAPE@co.hennepin.mn.us) or 612-348-6150.

[www.hennepin.us/SHAPE](http://www.hennepin.us/SHAPE)

## Notes:

1. The CDC's classification of children's weight status does not use the term *obesity*. Yet, the presence of this term in popular discussions and journalistic treatments of children's weight status (as a public health issue) make it an important term in the current discussion.
2. Here and throughout, "parent" has been used as a generic term for the adult in the household most knowledgeable about the child's health. In most cases this term is referring to the child's biological, adoptive or step parents, although in a small number of cases, the survey was answered by another adult/guardian in the household.
3. The questions included the following: a) *How tall is your child without shoes?* b) *How confident are you in the height you just reported?* c) *How much does your child weigh without shoes?* d) *How confident are you in the weight you just reported?* e) *Do you consider your child to be overweight, underweight, or about the right weight?* And, f) *Has a doctor or other healthcare professional recently told you that your child weighs too much, too little, or is at about the right weight?*
4. Boodman, Sandra G., Many Parents can't see child's obesity, *The Washington Post*, 1/8/2008, page HE02; downloaded at [www.washingtonpost.com/wp-dyn/content/article/2008/01/07](http://www.washingtonpost.com/wp-dyn/content/article/2008/01/07).
5. *Body mass index* (BMI) is calculated using a standard formula:  $BMI = (\text{weight in kilograms}) \div (\text{Height in meters})^2$  or  $BMI = 703 * (\text{weight in pounds}) \div (\text{Height in inches})^2$
6. Available in Series 11, No. 246 at [www.cdc.gov/nchs/data/series/sr\\_11/sr11](http://www.cdc.gov/nchs/data/series/sr_11/sr11_246.pdf), pp. 147-48.
7. The CDC defines "biologically implausible" combinations of height and weight among children in: 2005 National YRBS Data Users Manual, *Section 3.2.3 – biologically implausible BMI value edits*, Department of Health and Human Services, Centers for Disease Control and Prevention.
8. For more information on the data reliability testing procedures please contact the SHAPE team.



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