Introduction to Issues and Implications of Screening, Surveillance, and Reporting of Children's BMI

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On January 16 and 17, 2008, the Robert Wood Johnson Foundation convened a forum of researchers and practitioners working on the issue of childhood obesity to discuss the issues related to surveillance, screening, and reporting of children's BMI. Because obesity has become a major concern of the foundation, it seemed essential to understand the use and limitations of the BMI measurement on which the diagnosis of obesity depended. The goals of the meeting were to gather and review experience in the collection of BMI data and to understand how to communicate BMI results to parents. In addition, the group explored cultural differences in how the BMI was interpreted, and considered the legal and confidentiality implications of collecting and reporting BMI data.

Because of the ease and reliability of measures of height and weight that are used to calculate BMI, BMI is the recommended measure for the identification of overweight and obesity. Obesity in children and adolescents, defined as a BMI at ≥95th percentile for age and gender, provides a useful measure of risk of metabolic complications and persistence. Furthermore, weight increases above the 95th percentile almost always reflect increases in body fatness. Overweight, defined as a BMI between the 85th and 95th percentiles for age and gender, is associated with a lower risk of metabolic complications or persistence.

The use of BMI for surveillance rather than screening is a much less controversial issue with fewer legal implications. The distinction is that surveillance provides information on a population, whereas screening is used to identify children at risk for weight-related problems and requires a referral for additional testing or follow-up. In practice, population measurements of BMI are used for both surveillance and screening. A few states such as Arkansas have implemented statewide data-monitoring public health surveillance systems to track overall population trends in child and adolescent obesity by using measured heights and weights. The Centers for Disease Control and Prevention Youth Risk Behavior Surveillance System monitors the prevalence of obesity among high school students nationwide at the state level through self-reported heights and weights. Because most surveillance has been school based rather than population based, few surveillance systems provide data on heterogeneous samples of preschool children. The Pediatric Nutrition Surveillance System (PedNSS) partially meets this need, but some bias may be associated with the PedNSS results because the system samples low-income children. Attendees at the conference generally agreed that public health surveillance data collected by states fostered a heightened awareness and concern that drove policy changes. Another observation at the conference was that the use of the term "surveillance" may pose difficulties, because it has

a different and potentially threatening meaning to the general public, especially in ethnically diverse populations.

Communication of BMI results to parents can be a challenge unless good principles of health education are used. Currently, many parents simply do not recognize excess weight in their children, perhaps because as overweight and obesity have become more prevalent, excess body weight has become more normative. In Arkansas, notification of the parents led to significant increases in recognition of overweight, particularly among black parents. However, parental values can pose a challenge. Parents in West Virginia were found to be skeptical about the Centers for Disease Control and Prevention growth charts because "children grow at their own rate." Use of percentiles could confuse parents, because in many domains, such as school test scores, higher percentiles are valued. However, it is really not necessary to provide details such as percentiles or to explain how the use of height squared in the denominator of the BMI calculation provides a measure of weight that is independent of height. What parents need to know is simply whether their child is overweight or obese and, if so, what can be done about it. If further background is to be provided, simple graphics such as those used in Arkansas will be much more comprehensible than information about percentiles. Furthermore, "obesity" is a pejorative term that is avoided in clinical practice yet widely used publicly. Focus groups of parents in diverse ethnic groups and regions have indicated that obesity is a pejorative term that parents reject when applied to their own children, even those with a BMI at ≥95th percentile. Although conference participants acknowledged the importance of conveying the risks of excess body fat in children and adolescents, it was beyond the scope of the conference to recommend what terminology could be used to accomplish that task. Finally, cultural perceptions of appropriate body weight differ, and only limited work has been done to understand how to communicate concerns about body weight in a culturally specific and sensitive manner.

When BMI is used for screening, 2 important legal requirements apply to confidentiality of the data: the Health Insurance Portability and Accountability Act (HIPAA) and the Family Educational Rights and Privacy Act (FERPA). Public health programs are not subject to HIPAA. For example, HIPAA does not apply to the collection of BMI data from medical records for public health uses such as surveillance. However, schools control the use of data collected by schools. Because FERPA does not have an exemption similar to HIPAA for data to be used by public health authorities, whether data collected in schools can be shared with public health authorities remains uncertain. In addition, if the data are to be used for research rather than surveillance, their collection and use is subject to institutional review board approval. These issues may be so nuanced and complex that consultation with legal counsel and expertise should be sought at all stages of the collection of BMI data.

Participants generally agreed that several key research questions should be pursued, including how to communicate BMI information to parents, community leaders, and policy makers. Although the issue received limited attention at this forum, the participants recognized that new methods of care are required to address the multifactorial nature of obesity. Finally, more research is needed to clarify the risks for overweight children (ie, those whose BMI is between the 85th and 95th percentiles).

The articles contained in this supplement to *Pediatrics* address these issues in greater detail. The stimulating discussion that followed their presentation at the forum provided the attendees with new insights into promising programs as well as the complexity of some of these issues. We hope that this supplement will have a similar effect on its readers.

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