



Translating Research into Practice

Should Schools Monitor Rates of Overweight and Obesity among Students in Wisconsin?

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The purpose of this Issue Brief is to examine the benefits and problems of weighing and measuring children in schools, as part of community-based efforts to promote physical activity and proper nutrition among children.

Why collect data on children's heights and weights?

Schools play a critical role in promoting physical activity and encouraging a healthy diet among children of all ages. Children consume more than one third of their energy at school and should expend about 50% of their energy in a school day.¹ School-based nutrition and physical activity programs have been shown to be effective, and are listed by the Task Force on Community Preventive Services as evidence-based community interventions www.thecommunityguide.org.

Information on diet and physical activity patterns is important for program planning and evaluation. However, measuring diet and activity is complex, time consuming, and difficult even in research settings. In its Guidelines for Childhood Obesity Prevention Programs, the Society for Nutrition Education recommends screening for weight, height and body fat in schools for clearly identified purposes such as initial assessments and program outcome evaluations.² More recently, in the Institute of Medicine report, "Preventing Childhood

Obesity: Health in the Balance," schools are recommended to conduct annual assessments of students' weight, height and body mass index and make that information available to parents.³

In addition to being useful for program planning and evaluation, these data can be part of a broader surveillance program to assess trends across communities and over time.⁴ The Institute of Medicine notes that it is "an ethical mandate to know what is happening to children (e.g., when they are at risk, whether their health is changing for the better or worse), a solid data foundation to monitor risks and changes in health." It further notes the central importance of developing state and local data systems to monitor children's health over time and as a means to inform policy decisions.³

Don't schools and communities already have information on overweight and obesity among children in Wisconsin?

Very limited data on height and weight of Wisconsin children exist. As part of the national Youth Risk Behavior Survey, the Department of Public Instruction routinely collects self-reported data on the weight and height of Wisconsin teenagers in grades 9-12. The survey also collects data on the teens' perceptions of their weight, that is, whether they think they are overweight, underweight or the right weight.⁵ These data are subjective and vary considerably from data collected from actual height and weight measurements.⁶ They are also only available on a statewide basis.

The only data available for younger children are from a survey of low-income children enrolled in federally funded income and nutritional assistance programs such as WIC.

These children are primarily infants but also include children one to five. At present, the data are reported every year at the county and state level.⁷ The major limitation of these data is they are not representative of all children in the state because the population surveyed is low-income. This survey provides no information on school-age children.

What are the benefits of monitoring rates of overweight and obesity among children in Wisconsin?

Monitoring rates of overweight among school age children serves a number of purposes. First, children at risk of overweight and obesity can be referred for treatment or weight management. Through specific communication, parents of children who are overweight, underweight or at risk of overweight may be encouraged to seek counseling and to follow nutrition and physical activity guidelines.⁸

This information may also be used for community health improvement. Because nearly all current data are based on a sample of the larger population, sub-population data analysis (such as by individual grade) is not often possible. These data may also provide an on-going database for evaluation of intervention programs. Smaller school or grade based multi-school interventions cannot be reliably evaluated without a population wide assessment.

Is there precedence for schools weighing and measuring children?

Arkansas requires annual height and weight measurement of all public school students. Results from the first year of the survey indicated that students were significantly more overweight than previous estimates. Twenty-two percent of students were overweight

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(95th percentile) and 18% were at risk of being overweight. Forty-three percent of children in grades 5-8 were classified at risk of overweight. Parents receive notice of their child's weight status, explanation of possible effects of being overweight, and recommendations to improve nutrition.⁹

Children in Wisconsin's Marshfield School District have been weighed and measured as part of the "Healthy Lifestyle" initiative. (see figure). According to those involved with the program, these data have been critical in developing community-wide support from the program, and are intended to be used to evaluate the long-term impact of the intervention. Only 2 children/families declined to be evaluated out of the school district of over 2500 students (Daniel McCarty, personal communication).

What are the disadvantages of school measurement of children's height and weight?

Measuring height and weight by schools requires resources to take the measurements. Many Wisconsin schools are under substantial pressure to eliminate and reduce programs. School-wide height/weight assessment would add a new duty to an already full schedule and would probably add additional costs. Although most Wisconsin school districts routinely conduct hearing and vision examinations, these are directly related to learning while weight is not considered to be. The percentage of school districts conducting surveys is declining.¹⁰ This may indicate a growing institutional disposition against health measurement.

Finally, the measurement-taking process and results may further stigmatize overweight students.¹¹ Many of these students now suffer from ostracism and bullying due to prejudice against overweight people. Overweight students are acutely aware of their social position due to their weight status.¹² School height and weight measurements would need to be conducted in a sensitive manner with careful privacy protections in place.⁸

Are there alternative ways to collect information on overweight and obesity?

The American Academy of Pediatrics recommends that physicians weigh and measure children. However, many children do not make regular visits to the doctor. Even if physicians took weight and height measurements of all children it would be a very expensive, time-consuming and bureaucratic process to have thousands of physicians report all measurements to a central repository.¹³ Absent the unlikely institution of a reporting requirement for physicians, physician measurement of children would not provide the necessary surveillance data.

Conclusion

Prevention of obesity is a public health priority because of the association between childhood and adult obesity along with the well-documented difficulty of losing weight later in life. Thus, if obesity is not prevented at childhood, the prospects of population-wide reduction are low. As the obesity epidemic increases and public awareness of its effects broadens, attention will likely

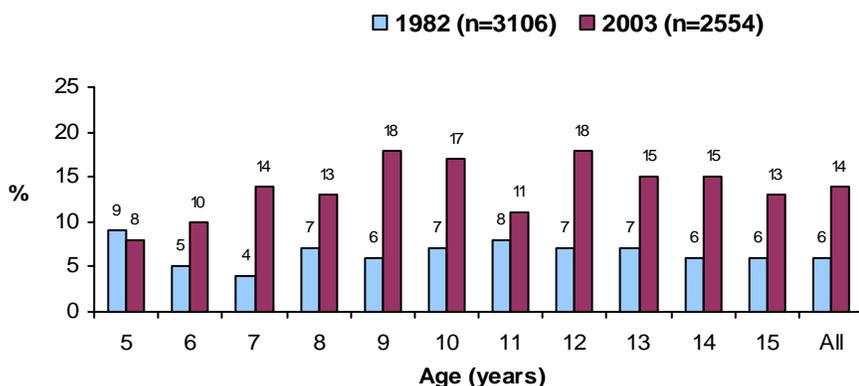
focus on the importance of addressing the problem of childhood obesity.

A fundamental element of all health intervention strategies is measurement of individuals within the population to understand the dimensions of a baseline condition and the effectiveness of the intervention. Optimally, measurement of height and weight by schools in a sensitive, well-planned and communicated protocol can provide children, parents, school personnel and health professionals this important information.

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Age-Specific Trends in Overweight* in Marshfield Children



Overweight = Body mass index (BMI) \geq 95th percentile for age, based on Centers for Disease Control and Prevention (CDC) 2000 growth charts. BMI is calculated as weight (kg)/height (m²).