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Childhood Obesity in School-aged Children: A Public Health Crisis

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Childhood Obesity in School-aged Children: A Public Health Crisis

Over the past thirty years in the United States, obesity in children aged six to eleven has more than doubled (Centers for Disease Control and Prevention (CDC), 2014a). This is evidenced by the percentage of obese children (ages six to eleven) in the United States rising to almost 18% in 2012 from 7% in 1980 (CDC, 2014a). In fact, according to the CDC (2014a), “in 2012, more than one third of children and adolescents were overweight or obese” (para. 1). The effects of childhood obesity can reach beyond the physical and disease-related consequences to include social and psychological issues as well (Savinon, Taylor, Canty-Mitchell, Blood-Siegfried, 2012; Williams et al., 2013). Studies have shown that obese children become obese adults, and the present generation of children may be the first to have shorter life spans than their parents (CDC, 2014a; Lavelle, Mackay, & Pell, 2012; Sandoval et al., 2012; Tuckson, 2013; Wein, Yang, & Goldnaber-Fiebert, 2012; Werner, Teufel, Holtgrave, & Brown, 2012; Williams et al., 2013).

According to the experts, the short- and long-term effects associated with childhood obesity may include chronic health conditions such as cardiovascular disease (stroke, hyperlipidemia, hypertension), type 2 diabetes (insulin resistance), sleep apnea, asthma, orthopedic problems (bone & joint), fatty liver disease, many types of cancer, low self esteem (depression), behavioral problems, poorer education and employment outcomes (CDC, 2014a; Lavelle et al., 2012; Lytle, 2012; Moreno et al., 2013; Sandoval et al., 2012; Savinon et al., 2012; Tuckson, 2013; Wein et al., 2012; Werner et al., 2012; Williams et al., 2013). This has landed childhood obesity on the national policy agenda

as a pressing public health issue (Lytle, 2012; Zhu & Thomas, 2013). According to Williams et al. (2013), childhood is “seen as an important period for interventions to prevent overweight and obesity” (p. 2). And, because “more than 95% of American children are enrolled in schools and spend ~30h per week at school” (Ehlers, Huberty, & Beseler, 2013, p. 943), principals, school nurses, teachers, cafeteria workers, and other school support staff are critical to promoting school-based interventions in order to reduce childhood obesity.

The United States failed to achieve the goals outlined in Healthy People 2010 for reducing childhood overweight and obesity, and because of this, new objectives have been released by the U.S. Department of Health and Human Services (USDHHS) in the Healthy People 2020 guidelines (Savinon et al., 2012). These new objectives focus on increasing the identification, prevention, and management of childhood obesity in the primary care setting by documenting “the BMI in all patients, identify[ing] overweight/obesity, and provid[ing] education and counseling about nutrition and healthy weight maintenance for all patients” (Savinon et al., 2012, p. 464). I propose that elementary school nurses implement annual Body Mass Index (BMI) screening (in conjunction with educational tools that assess nutrition and activity) in order to identify, prevent, and manage (refer for help when warranted) childhood obesity in elementary school children. If we continue to sweep the issue of childhood obesity under the rug; the overweight/obese children of our nation will become unhealthy adults with shorter lifespans, and this will put more burden on our already strained health care system. By working together we can reverse the childhood obesity epidemic, and produce healthier individuals, families, communities, states, and nation.

According to the CDC (2014b), “Body Mass Index (BMI) is a number calculated from a child’s weight and height. BMI is a reliable indicator of body fatness for most children and teens....BMI is age-and sex-specific and is often referred to as BMI-for-age” (para. 1). Once the BMI number is obtained it is plotted on the appropriate growth chart to obtain a percentile ranking (CDC, 2014b). The guidelines are as follows:

- underweight = less than 5th percentile
- healthy weight = 5th percentile to less than 85th percentile
- overweight = 85th percentile to less than 95th percentile
- obese = equal to or greater than the 95th percentile (CDC, 2014b).

The CDC and the American Academy of Pediatrics (AAP) recommend to start screening children for obesity using the BMI calculation at age two (CDC, 2014b). Schools may collect BMI measurements for a couple of reasons, for surveillance and/or screening (CDC, 2014c). According to the CDC (2014c), surveillance is done “to identify the percent of students in the school...who are underweight, healthy weight, overweight or obese” (para. 1). Surveillance data is usually anonymous and is not used to inform parents (CDC, 2014c). On the other hand, screening is done “to provide parents with information on whether their child is underweight, healthy weight, overweight or obese” (CDC, 2014c, para. 1).

There are pros and cons to collecting BMI measurements in schools. The cons to collecting BMI data were cited in an article by Barry, Gollust, McGinty, and Niederdeppe

(2014) to include the social “concern that the portrayals of overweight children could exacerbate weight-based stigma” (p. 466). The study by Barry et al. (2014) explained that “weight-based stigma refers to negative stereotypes that overweight and obese individuals are lazy, unmotivated, and lacking in self-discipline....[and can precipitate] a host of negative psychological, social, and health consequences” (p. 467). Another article considered the social and ethical concerns claiming, “school-based BMI screening is controversial, and concerns center on staff burden, confidentiality issues, stigmatization of children, and erroneous measurement” (Sandoval et al., 2012, p. 240). The CDC (2014c) also stated concerns about tracking BMI measurements in schools citing they can potentially harm “students by increasing the stigma attached to obesity and increasing pressures to engage in unsafe weight control behaviors” (para. 5), again creating social concerns and concerns related to the Public Health Code of Ethics.

In order to minimize the potential harm that measuring BMI can cause, the CDC (2014b) has developed a list of ten safeguards that schools can utilize:

1. Introduce the program to parents, guardians, students, and school staff; ensure that there is an appropriate process in place for obtaining parental consent for measuring students’ height and weight.
2. Ensure that staff members who measure height and weight have the appropriate expertise and training to obtain accurate and reliable results and minimize the potential stigmatization.

3. Ensure that the setting for data collection is private.
4. Use equipment that can accurately and reliably measure height and weight.
5. Ensure that the BMI number is calculated and interpreted correctly.
6. Develop efficient data collection procedures.
7. Do not use the actual BMI-for-age percentiles of the students as a basis for evaluating student or teacher performance (e.g., in physical education or health class).
8. Evaluate the BMI measurement program by assessing the process, intended outcomes, and unintended consequences of the program.
9. Ensure that resources are available for safe and effective follow-up.
10. Provide all parents with a clear and respectful explanation of the BMI results and a list of appropriate follow-up actions. (BMI Measurement Program Safeguards)

Contrary to the aforementioned articles, an article by Sandoval et al. (2012) stated the pros to collecting and measuring BMI data at the school level included the idea that “surveillance programs are intended to measure and track populations who are, or could be, at risk for obesity-related problems” (p. 239). This could identify individuals or

groups that would benefit from health interventions by monitoring the prevalence of obesity and evaluating trends over time (Sandoval et al., 2014). Additionally, an article by Moreno, Johnson-Shelton, and Boles (2013) argued that “school-based BMI assessment for both screening and surveillance is considered a potentially important part of a multifaceted strategy for reducing both child and adolescent overweight and obesity” (p. 158). These are all mostly social concerns, although there are legal and ethical obligations to act according to the standards of care and the Public Health Code of Ethics (Moreno et al., 2013).

My professional stance on the issue of performing BMI screenings on all elementary-aged children is that it is a necessary tool to identify, prevent, and manage childhood obesity. Because obesity risk can vary by race, ethnicity, and socioeconomic factors it is important to determine the distribution of overweight and obese students within a school district in order to formulate district-based health policies (Moreno, Johnson-Shelton, Boles, 2013). I believe BMI percentiles should be utilized in conjunction with educational and environmental approaches to decrease childhood obesity. According to Lytle (2012),

The school setting provides an important physical and social environment where youth are presented opportunities to make food choices and experience didactic lessons in the classroom and experiential lessons from school staff and peers on what are normative eating and activity behaviors for their peers and community. (p. 721)

Additionally, “childhood obesity screening programs...are defined by three elements: the age at which assessment begins, the frequency of assessment, and the threshold for referring individuals to treatment” (Wein, et al., 2012, p. 1437).

The AAP requires pediatricians to assess the height, weight, and BMI of infants and children according to their age, however, this is done annually at a minimum. I believe elementary schools should start tracking BMI upon entrance into kindergarten, and continue annually. In regards to the threshold for referring to treatment I agree with the guidelines established by the AAP. According to those guidelines, when children are identified with a BMI between the 85th and 94th percentiles the AAP “specifically encourage five servings of fruits and vegetables daily, 2 h or less of screen time, 1 h or more of physical activity and eliminating all sugared drinks” (Lytle, 2012, p. 721). The AAP also has also developed a “four stage approach to dealing with childhood obesity; Stages 1 and 2...can likely be done in a primary care setting but Stages 3 and 4...will require highly specialized pediatric centers” (Lytle, 2012, p.723).

Childhood obesity is a public and community health problem with real and serious consequences. Public health (school) nurses are in prime positions to advance change by promoting healthy food choices, encouraging an active and healthy lifestyle, and educating children, families, and communities as to the benefits of these choices. Our children are our future, and by making lifestyle changes together we can move forward toward a healthier future for all.

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