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Quick Screen to Intervene: Starting the Conversation About Pediatric Obesity

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ABSTRACT

The prevention and management of pediatric obesity are challenges for primary care providers. Screening tools that efficiently capture nutrition and exercise behaviors enhance opportunities for targeted education. This quality improvement study reports the results of using the Starting the Conversation 4-12 Screening and Counseling tool in a primary care setting. The most prevalent issues identified were children not getting the recommended amount of fruits and vegetables per day, eating in front of the TV/computer, and the belief that "healthy food costs too much." Starting the Conversation 4-12 Screening and Counseling proved to be an efficient and effective tool for prompting brief obesity management interventions.

Keywords: children, obesity, screening tool, STC 4-12, weight loss

Childhood obesity is a paramount health concern in the United States.[1] In 2011 to 2012, 31% of children ages 2 to 19 were classified as overweight or obese, placing them at risk for chronic conditions such as hypertension, type 2 diabetes, and depression.[2] Primary health care clinics are opportune settings for early identification and planned interventions for patients at high risk of obesity.[3] Pediatric obesity management guidelines include annual assessment of weight and body mass index (BMI), dietary patterns, levels of daily physical activity, and screen time. Patient education should include limiting sweetened drink and fast food consumption, increasing fruits and vegetables, moderating portion sizes, and aiming for 60 minutes of physical activity daily.[4]

Many barriers hinder the prevention and management of pediatric obesity. Discussing concerns about being overweight or obese is a delicate issue for both the parents and the child.[5] Primary care providers often feel inadequate in addressing childhood obesity because of insufficient time and resources, lack of effective interventions, perceived treatment futility,[6] lack of parental/caregiver involvement, low patient motivation,[7] and parents' inaccurate perception of their child's weight.[5] Further compounding the issue, parents often believe "healthy food" is too expensive,[8,9] they eat "out" frequently because of busy schedules,[10] and they lack confidence in tackling multiple recommendations.[11]

Using a tool that quickly screens dietary patterns and physical exercise may enhance the ability of the primary care provider to target counseling for children who are overweight or obese [6,8,9,12] The Starting the Conversation 4-12 tool (STC 4-12) consists of 20 nutrition and physical activity questions, each with 3 Likert-type responses that can be completed in about 5 minutes.[8,13] Assessment of nutrition includes 5 questions to identify barriers to healthy eating and 5 questions on nutrition behaviors; the physical activity portion also includes barrier and behavior questions. The questions capture important information to prompt discussion and counseling with families and patients. Based on the validated adult version of the STC tool,[3] the STC 4-12 has been shown to have a reliability coefficient of .75.[8] Spence et al[12] implemented the STC 4-12 in a rural obesity treatment setting and found the tool was helpful in initiating targeted counseling during the first visit. This article reports the results of implementing the STC 4-12 in a primary care setting.

METHODS

This quality improvement study used a convenience sample of children ages 3 to 16 being seen for routine

medical care at a school-based community health center located in rural North Carolina where childhood obesity rates are > 30%. After institutional review board approval, parents of qualified children were invited to complete the STC 4-12 tool during their child's intake process, providing information about typical eating behaviors, exercise, and perceived barriers to healthy living. After reviewing the STC 4-12 responses, the NP provided a brief education intervention with the parent and child and then helped them select 1 health behavior goal (nutrition or physical activity). Follow-up visits with each child were scheduled 3 to 6 months later to determine the child's BMI and if adoption of the healthy eating or physical activity behavior goal was achieved.

RESULTS

Sixty children and their parents participated in this study. All 60 (100%) had weight/BMI measured at the initial visit, were given the STC 4-12, and chose a behavioral goal. At intake, 29 of the 60 participants (48%) had a BMI greater than the 85th percentile. Demographic data showed a homogenous sample (93% of the respondents were white), 27 males and 33 females. Fifty percent of the children were Medicaid recipients, 35% had private insurance, and 15% were uninsured. Forty-one children (68%) completed the follow-up BMI and STC screening. The estimated sample size to achieve statistical significance was 34, based on an effect size of .50, alpha at .05, and power set to .80. Although none of the findings were statistically significant, the total STC score (a lower score indicates healthier behavior) decreased from preintervention (mean = 31.98, standard deviation [SD] = 5.87) to postintervention (mean = 30.93, SD = 5.06) ($P = .11$), indicating a positive change in dietary habits or physical activity. The BMI percentile decreased from preintervention (mean = 78.27, SD = 22.37) to postintervention (mean = 76.05, SD = 23.75) ($P = .14$).

The 3 most prevalent barriers to healthy weight reported on the STC 4-12 were getting less than the recommended amount of fruit and vegetables in a day (92%), eating in front of the TV or computer (63%), and a perception that healthy foods cost too much (60%). Forty-seven percent of the respondents reported greater than 3 hours of screen time per day, and 40% responded that their children get 2 hours or less of daily physical activity. Only 38% of respondents reported consuming 2 or more servings of snacks or sweets and consuming 2 or more sugary drinks a day. More than half the families (67%) chose nutrition as their goal for improvement, whereas 33% chose to increase daily physical activity. Several parents reported anecdotally that the discussion in clinic helped motivate their whole family to make healthier changes.

DISCUSSION

Implications for Practice

As previous studies have shown, the STC 4-12 proved to be a valuable tool in facilitating a nonthreatening discussion with pediatric patients and families regarding weight status. It prompted diet or exercise goal setting and family-centered problem solving in reducing barriers to healthy lifestyle, such as reducing the use of processed foods. Using the tool readily "opened the door" for the discussion of weight status at every clinical visit and triggered opportunities for teaching and reinforcement of healthy diet and lifestyle. The discussions also established a positive environment that promoted realistic goal setting and continued care. Prefacing the use of the screening tool with the statement "these questions will help identify what gets in the way of you being healthy" reduced the defensiveness of some patients and families previously demonstrated when asked about barriers to weight loss.

BMI measurement should be obtained at every visit for every child, especially in the early years when the BMI curve is at the nadir. This practice does require more intake time for measurements during acute visits but ensures children who are escalating on the BMI chart receive early identification and intervention. Screening all children regardless of physique and weight/BMI status is also valuable; the STC 4-12 tool identified unhealthy behaviors that increased the probability of obesity in the future among several children who appeared lean or had normal BMI.

Although the STC 4-12 provided helpful information, it was still slightly cumbersome, especially if patients had multiple screenings to complete. To