

Management of Child and Adolescent Obesity: Summary and Recommendations Based on Reports From Pediatricians, Pediatric Nurse Practitioners, and Registered Dietitians

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ABBREVIATIONS. MCHB, Maternal and Child Health Bureau; HRSA, Health Resources and Services Administration; DHHS, Department of Health and Human Services; NCEMCH, National Center for Education in Maternal and Child Health; RD, registered dietitian; PNP, pediatric nurse practitioner; BMI, body mass index.

Intensive, behavior-based weight loss programs for children have proved successful in clinical studies,¹ but these approaches have not yet been translated to effective office care. In 1996, the Maternal and Child Health Bureau (MCHB), Health Resources and Services Administration (HRSA), Department of Health and Human Services (DHHS), and the National Center for Education in Maternal and Child Health (NCEMCH) convened a committee of experts in childhood obesity to recommend the medical, emotional, and behavioral evaluations that should precede efforts to control weight, and appropriate intervention approaches shown to be successful in comprehensive behavior programs.² Although the effectiveness of the recommendations has not yet been tested, they represent the best available guide for practice.

Physicians, registered dietitians (RDs), and pediatric nurse practitioners (PNPs) care for more overweight patients now than they did several decades ago. Not all address the problem or evaluate and treat overweight children and adolescents in ways that are consistent with the expert recommendations. A review of current practices to identify those that commonly differ from recommendations will guide development of strategies to assist providers in following recommended practices. Potential interventions include education, removal of barriers in the health care system, and practical office aids such as body mass index (BMI) calculators or medical evaluation checklists. The assessment of needs to identify problem areas is the first step to improve provider practices.

Research about the attitudes and practices of pediatric health care providers when they address obesity is sparse. Price et al³ found a high level of con-

cern about obesity among members of the American Academy of Pediatrics. However, they focused primarily on treatment recommendations and did not seek information about medical, psychological, or emotional evaluation, or barriers to care. Other studies have assessed attitudes and practices of physicians of adult patients.⁴⁻⁶ We undertook the present study to identify the needs of pediatric clinicians when they care for overweight children. We included RDs, PNPs, and pediatricians in this assessment because, individually and collaboratively, these professionals frequently treat overweight children. The information from this study can guide efforts to improve the ability of providers to address childhood obesity problem effectively in day-to-day practice.

SAMPLE

Although the sampled members of each professional group received 2 questionnaires and 2 reminders, only 19% to 33% completed this assessment.⁷ The reasons for these low response rates are unclear. Possible barriers to completing the assessment include questionnaire length and lack of time in increasingly busy practices. Other studies of providers that used questionnaires have reported similar response rates.^{4,8} Therefore, the final sample should be considered a convenience rather than a representative sample. It is our opinion that providers who responded to this assessment were likely to be those most concerned about childhood obesity. We speculate that compared with those who responded to this assessment, pediatric providers as a whole may be less invested in obesity treatment, less thorough in their evaluation of associated medical conditions, and may institute appropriate treatment less often.

ATTITUDES OF PROVIDERS TO MANAGEMENT OF CHILDHOOD OBESITY

The overwhelming majority of responders expressed concern about obesity, recognized its medical and functional impact, and believed that the problem needed treatment.⁹ Pediatricians, PNPs, and (to a lesser extent) RDs usually recommended treatment in overweight school-aged children and adolescents.¹⁰ The level of interest in treatment that we found is much higher than that reported in a large study of adult patients.⁶ The higher level of concern may result from the different ages of the patient groups, inaccurate reports by either patients or pro-

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viders, or a bias of the providers who responded to our assessment.

Our respondents generally felt least proficient in behavioral counseling,⁹ but they expressed interest in additional training in all areas, even those in which they generally felt their proficiency was high, such as modification of patient eating practices. The mainstay of obesity treatment is behavior change, and providers who can use counseling techniques to motivate families, guide parents in consistent limit setting and reinforcement techniques, and identify and address family conflicts that interfere with change will likely be most successful in helping families.

We were concerned by the reluctance of many responders to initiate treatment in overweight children and adolescents with no associated medical condition.¹¹ The absence of an associated condition does not contraindicate treatment, because effective treatment may prevent future complications. The emerging epidemic of type 2 diabetes mellitus in children¹² is evidence that complications may arise in the near future rather than adulthood. Furthermore, because more severely overweight children are more difficult to treat, a delayed treatment will likely reduce the effectiveness of therapy. Many respondents, especially RDs, also refrained from treatment when children and adolescents did not want to control their weight.¹¹ This challenging area deserves study. A younger child with motivated parents may benefit from weight management instituted by the parents, regardless of the child's views. Conversely, institution of therapy in unmotivated adolescents may increase their resistance to efforts to modify eating and activity.

KNOWLEDGE OF APPROPRIATE EVALUATION AND TREATMENT PRACTICES

In a number of areas, RDs, pediatricians, and PNPs appeared knowledgeable and thorough in their approach to evaluation and treatment. Most respondents in each professional group described eating and activity interventions consistent with the Expert Committee recommendations.¹⁰ In addition, most appeared thorough in their evaluation of family and emotional issues.¹¹ However, many did not conduct a complete screening to exclude a number of complications associated with obesity.¹³ As the occurrence of obesity-related health conditions rises, pediatricians, PNPs and other primary care providers will encounter severe conditions such as sleep apnea and type 2 diabetes more frequently. Some health problems, such as glucose intolerance and dyslipidemias, are asymptomatic, and families will rely on their child's primary care provider to identify these problems. Respondents reported that they usually assessed family history of obesity, diabetes, and cardiovascular conditions,¹³ which suggests that they address some of the long-term risks of obesity but may need to pay more attention to the immediate health risks. If many pediatricians and PNPs reserve weight management advice for those with identified medical problems but do not routinely screen for

those problems, children with undiagnosed medical conditions may go untreated.

BARRIERS

Motivation, time available for counseling, self-efficacy, access to competent tertiary care providers for severe cases of obesity, and lack of reimbursement are important and interrelated potential barriers to the treatment of childhood obesity.⁹ For example, regardless of their knowledge about obesity and its complications, providers who have been frustrated by their patients' responses to their therapeutic efforts may not be motivated to attempt additional interventions. Likewise, providers who are concerned about childhood obesity may not feel that they have effective therapeutic strategies to help their patients control weight, or the time available to implement strategies that may be effective. Lack of reimbursement provides an additional disincentive. These barriers are likely to be as important to successful therapy as the areas of knowledge that we measured in this assessment, and they deserve additional attention.

FUTURE DIRECTIONS

A number of strategies may help health care providers improve their care of overweight children and adolescents. These strategies are as follows:

1. Educational Tools: To improve thoroughness of medical assessment, pediatricians and PNPs may require not only education about the risks of different obesity-related conditions and the best screening techniques, but also prompts to implement screening tests during office visits. Providers preferred continuing education sessions,⁹ but individuals may use a variety of educational methods, and use of computer-based training may increase over time. An example of a relevant program is the independent training module on the CDC Web site <http://www.cdc.gov/growthcharts> that teaches the use of BMI percentiles to assess excess weight in children. Some screening tests, such as fasting lipid profile, are well-defined and accepted even if they are not always used. Others, such as fasting serum glucose to identify diabetes,¹⁴ are provisionally promoted pending additional study. Some obesity-related health conditions, such as sleep apnea, require additional research to establish sensitive screening tests.
2. Best Practice Checklists: New knowledge does not automatically change practice. Checklists or forms for medical records, similar to those prepared for well-child visits (eg, *Bright Futures*¹⁵) could be developed and tested for their effectiveness in management of overweight children, and research on other strategies to change provider practices should be encouraged.
3. Motivational Techniques: Providers assess readiness to change behavior,¹¹ but if many overweight children are unmotivated, as these providers report,⁹ lack of patient motivation must be addressed. Health authorities promote "wellness"

behaviors, such as regular exercise, smoking cessation, and seatbelt use, and some of the techniques used to motivate these behaviors could also be applied to childhood weight control. For example, in the “stages of change” model, precontemplation, contemplation, and termination (or preparation) stages precede actual behavior change.¹⁶ Insights from this model may guide providers in helping families advance to the next stage, and ultimately, although not immediately, change behavior. Motivational interviewing used to change addictive behaviors¹⁷ may also have applications in weight control. Following this approach, a provider can help a family that is not ready to change to recognize excess weight as a problem and begin to consider potential eating and activity changes. RDs may be particularly well-suited to implement these techniques because they are experienced in counseling about diet and activity changes and less often report time as a barrier.⁹ RDs are also generally available for referrals from pediatricians and PNPs¹⁰ and are less expensive than physicians.

4. Reducing Sedentary Behavior: Several studies have demonstrated that control of television time in clinical or school-based programs positively affects children’s weight among those who are overweight or obese.^{18–21} Health care providers, schools, and communities should promote this strategy more aggressively and also encourage family members to creatively engage in collective recreational physical activities together to replace the sedentary behavior of television-watching.
5. Media Promotion: Media promotion of smoking cessation has been effective, and community initiatives to prevent smoking in public places have supported the health profession’s goals. Similar widespread promotion of healthy eating and regular physical activity could reinforce medical efforts at weight control. Health care professionals can play a key role in supporting national initiatives and have an even greater impact at a local level. For instance, pediatricians can urge local school boards to require daily physical education and healthy school meals, and to limit students’ access to high caloric-density a la carte foods in cafeterias and vending machines in schools.
6. Severe Obesity: Markedly obese children are more likely to have immediate health conditions, some of which may be life-threatening. These children require more intensive medical and psychological management. However, widely accepted criteria for severe obesity in childhood have not been established. If severe obesity in children and adolescents is defined, their health risks and medical and psychological needs can be established.

Many obstacles impede the management of childhood obesity. Health care providers alone cannot treat this epidemic, and school and community programs must also tackle society’s sedentary behavior

and unhealthy diet. However, the studies in this report help to target several areas in which training of health care providers can be improved. More adequate and consistent assessment of obesity and obesity-related health conditions will increase the identification of children at risk. Improved treatment will depend on the development of therapies that can be applied effectively and efficiently in primary care settings and on appropriate reimbursement for the care that is given.

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