

Pediatric Obesity Policy

The Danger of Skepticism

OBESITY-RELATED ILLNESSES are threatening the health of US children. It is now time to build a cohesive national policy that combats obesity in children and adolescents. In this article, we suggest principles for policy development based on barriers, precedents, knowledge available, and knowledge gaps.

Evidence repeatedly demonstrates the rising prevalence of obesity and obesity-related illnesses, with 30% of US children having a body mass index higher than the 85th percentile for their age.¹⁻⁵ Although comprehensive data are needed on the long-term effects of pediatric obesity on health, it is known that more than two thirds of obese children 10 years and older will become obese adults⁶ and that obesity in young adults causes on average 5 to 20 years of life lost.⁷ Obesity is also associated with a 36% increase in inpatient and outpatient spending and a 77% increase in medication use compared with expenditures for healthy-weight individuals.⁸ Some people have expressed reluctance to involve government or professional bodies in personal affairs pertaining to weight control.⁹ However, several facts combine to make pediatric obesity a public health priority that requires a concerted societal response. These include the magnitude of the problem, the fact that children cannot be fully responsible for their own health choices, and the recognition that obesity reflects a combination of genetic, behavioral, and environmental influences—together with society's special obligation to protect and care for children.

BARRIERS

Embedded environmental and cultural issues pose substantial barriers to the development of public policy concerning pediatric obesity. A major barrier is skepticism about the potential for policies to create substantive change. Obesity has increased despite past recommendations to encourage healthy eating and physical activity,^{10,11} so why should new recommendations have a greater effect? Many past recommendations have been limited by a primary focus on choices by individuals rather than on systematic change¹¹; comprehensive public policy changes may be more efficacious. Another barrier to successful policy is the widespread public perception that obesity is primarily due to personal weakness. According to Lee and Oliver, Americans need to agree that obesity is an epidemic and that the recent increase in obesity cannot be the result of a "sudden upsurge in moral failure among Americans."^{12(p26)} They further point out that public recognition of genetic and environmental factors as major contributors to obesity is an important underpinning to policy development and is "highly susceptible to change in the . . . public from elite

messages."^{12(p26)} Effective messages of this type would increase public support for obesity-related public policy. A separate report also underscores the importance of building public support for public policy.¹³

An additional barrier to effective obesity policy is the "toxic" environment^{11(p18)} in which advertising, super-sizing, and the availability of unhealthy foods are pervasive and increasingly tempting for children and families. A related barrier involves political and economic forces that result in several industries benefiting from food consumption and lobbying "to discourage governments from doing anything to inhibit overeating."^{14(p781)} The resulting imbalance between financial resources available to combat obesity compared with the resources that encourage food intake is staggering.¹⁴⁻¹⁶ Finally, a major barrier is the lack of knowledge about programs that are clearly effective for the prevention and/or treatment of pediatric obesity. Recognizing these barriers can shape the nature of policy and help us to develop realistic strategies and goals but should not preclude policy development and implementation.

PRECEDENTS

Programs designed to reduce the societal use of tobacco, increase the use of seat belts, and prevent and treat human immunodeficiency virus infection can provide lessons that inform the development of policy for pediatric obesity. These precedents are analogous to obesity because they involve the modification of behavior, environmental pressures counteracting healthy behavior, the perception of self-induced disease, and concern about interference with personal freedom. Each has been moderately or highly successful.¹⁷⁻¹⁹ In these precedents, progress has been achieved through strategies that promote active decisions (in which the individual chooses not to engage in risky behavior); enable passive decisions (in which circumstances make it difficult to engage in risky behavior, such as the prohibition of smoking in public areas, requirements for seat belts, or taxes on cigarettes); support the acquisition of knowledge through basic, clinical, and translational research (eg, human immunodeficiency virus); and use targeted, sophisticated social marketing. These public health success stories have involved well-funded, multi-pronged, coordinated, and sustained campaigns supported by a broad array of stakeholders.

KNOWLEDGE AVAILABLE AND KNOWLEDGE GAPS

Policy can (and should) target and prioritize the acquisition of knowledge about the prevention and treatment

of pediatric obesity. Policy for pediatric obesity can be thought of as a work in progress, based on best available knowledge and recognizing that regular reevaluation of policy will be necessary as more knowledge is gained. We can now build implementation and dissemination policy based on what we know, and we can target research policy by identifying critical issues that we need to understand.

For example, we know that pediatric obesity is highly prevalent and likely to lead to serious morbidity and loss of life. We know that the upswing in pediatric obesity must involve environmental and cultural pressures because it cannot be fully explained by a change in the genetic pool or in the moral fiber of America. We know that nearly half of individuals aged 12 to 21 years in the United States do not participate regularly in vigorous physical activity.²⁰ We know that US children and adolescents spend considerable time in sedentary activities such as watching television,²¹ that television advertising of food to children influences food choice,²² and that reducing the amount of time spent watching television can reduce weight gain.²³ We know that food portions in the marketplace have increased and now exceed federal standards.²⁴ We know that there is a concerted mass appeal of food advertising to even the youngest children, who cannot distinguish entertainment from advertising.²⁵ We know that attendance in school physical education classes has declined^{14,20} and that counseling by primary care physicians regarding the risks of obesity is often lacking.^{14,26} We know that third-party payers often do not provide reimbursement for obesity-related evaluation and counseling.²⁷ We know that there is a plethora of misleading claims for weight loss drugs, devices, and programs. We know that the National Institutes of Health has provided guidelines for the treatment of obesity in adults but not in children²⁸ and that available guidelines for the treatment of pediatric obesity by professional organizations are often nonspecific. We know that examples of successful programs exist but that rigorous evaluation and replication to assess effectiveness are needed.

We do not know specific prevention or treatment strategies that have sustained benefits in a broad spectrum of patient groups. We do not know how to translate pediatric obesity programs that appear efficacious into ones with broad effectiveness in a cost-effective manner. We do not know the appropriate role of intensive treatments (pharmacotherapy and bariatric surgery) in pediatric populations. We do not know whether there should be several strategies available to patient subgroups with different needs and/or beliefs, which meal plans are most effective for children, which exercise programs are best, or how to apply data on adult obesity to children. Moreover, despite great advances in recent years, the basic biological characteristics of appetite, weight control, genetic susceptibility, environmental triggers, and potential therapies remain elusive.

RECOMMENDATIONS

Therefore, on the basis of barriers, precedents, and available knowledge, we suggest the following principles for policy development regarding pediatric obesity:

- Focus on both prevention and treatment of pediatric obesity.
- Form a broad public and private partnership with a coalition of stakeholders (including government, third-party payers, professional organizations, industry, advocacy groups, schools, and families).²⁹
- Target and prioritize policy goals and the resulting public messages.
- Build programs on what we know while acknowledging the unknown factors and supporting research to address them in a prioritized manner.
- Ensure access to recommended programs regardless of ability to pay.
- Build flexibility for future changes into policy recommendations as knowledge is gained.

Several authors have offered policy recommendations for general or pediatric obesity.^{11,12,16,30,31} The following recommendations are consistent with the principles described and are feasible for action today:

1. *Shape active decisions made by individuals through increasing public awareness about pediatric obesity.* We suggest targeted messages that are evidence based and likely to be effective, such as the following: (1) Pediatric obesity is a disease that involves a genetic predisposition, toxic environment, and behavior; (2) Pediatric obesity puts your children at serious health risks; and (3) More appropriate portion sizes, healthy food choices, and moderate physical activity can prevent obesity. This recommendation is based on the concepts that “by identifying a looming evil . . . Americans often organize movements demanding a response” and “If supersizing a soft drink and fries begins to seem as dangerous as lighting up a cigarette, a movement may very well spring up.”^{13(p147)} It is also consistent with precedents for smoking and seat belts. Effective communication of these messages to shape active decisions requires a well-funded, sophisticated media campaign with a commitment of public and private resources.

2. *Shape passive decisions with legislation and community-based rules.* Such steps may be particularly effective because they do not require active decision making based on perceived health and because they change community norms.³¹ Examples include banning television advertisements for unhealthy foods targeted to young children,^{12,32} mandating healthy school lunch programs,¹² prohibiting fast-food vendors from advertising in schools,³³ requiring daily physical education classes in schools, and instituting incentive programs to encourage consumers to choose healthy foods.¹¹

3. *Designate obesity as a disease, in keeping with the guidelines of the National Institutes of Health and major organizations.* Require third-party payers to reimburse preventive-counseling and weight management programs for children, and convince third-party payers of the cost-effective nature of these decisions.

4. *Professional groups should incorporate obesity prevention and treatment into their curricula for medical and nursing schools, residencies, and postgraduate education.*

5. *Government groups should aggressively regulate fraudulent and misleading claims by food, drug, and device manufacturers regarding weight control.*

6. Develop concrete guidelines for obesity treatment in children, as a parallel to the National Institutes of Health guidelines for adults. Ensure that these guidelines address intensive obesity treatments (pharmacotherapy and bariatric surgery). Ad hoc initiatives involving intensive treatments for minors are springing up.³⁴⁻³⁶ Without guidelines and requirements for institutional review board–approved research protocols, practice is likely to evolve in a manner that is not evidence based.

7. Develop and fund a targeted research agenda for pediatric obesity, including basic research into the biological characteristics of appetite, weight control, and differential susceptibility; clinical research on the efficacy of specific prevention and treatment programs; translational research to move from efficacy to broad effectiveness; and health services research. Treatments considered effective and recommended in adults (eg, pharmacotherapy and bariatric surgery)^{28,37} should be studied in children and adolescents.

We further suggest the formation of a national pediatric obesity panel under the aegis of the National Institutes of Health (Bethesda, Md), Centers for Disease Control and Prevention (Atlanta, Ga), or Institute of Medicine (Washington, DC). Including representatives of major stakeholders, the panel would shape policy, analyze the best practices through rigorous evaluation, disseminate information accrued, revise policy at regular intervals as new knowledge is gained, and become a central trusted voice.

Several efforts have recently been made to develop programs and legislation that address pediatric obesity.^{33,38} However, a cohesive policy, legislative framework, coalition of stakeholders, and realistic funding are necessary to enable progress and optimize success.

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This work was supported by the National Institutes of Health, the Cleveland Foundation (Cleveland, Ohio), and the Greenwall Foundation (New York, NY).

REFERENCES

- Ogden CL, Flegal KM, Carroll MD, Johnson CL. Prevalence and trends in overweight among US children and adolescents, 1999-2000. *JAMA*. 2002;288:1728-1732.
- Ludwig DS, Ebbeling CB. Type 2 diabetes mellitus in children: primary care and public health considerations. *JAMA*. 2001;286:1427-1430.
- Dietz WH. Health consequences of obesity in youth: childhood predictors of adult disease. *Pediatrics*. 1998;101(suppl 3, pt 2):518-525.
- Sinha R, Fisch G, Teague B, et al. Prevalence of impaired glucose tolerance among children and adolescents with marked obesity. *N Engl J Med*. 2002;346:802-810.
- Uwaifo GI, Elberg J, Yanovski JA. Impaired glucose tolerance in obese children and adolescents. *N Engl J Med*. 2002;347:290-292.
- Whitaker RC, Wright JA, Pepe MS, Seidel KD, Dietz WH. Predicting obesity in young adulthood from childhood and parental obesity. *N Engl J Med*. 1997;337:869-873.
- Fontaine KR, Redden DT, Wang C, Westfall AO, Allison DB. Years of life lost due to obesity. *JAMA*. 2003;289:187-193.
- Sturm R. The effects of obesity, smoking, and drinking on medical problems and costs. *Health Aff (Millwood)*. 2002;21:245-253.
- Roberts R. No fat tax. *St Louis Post-Dispatch*. March 21, 2002:C17.
- Gifford KD. Dietary fats, eating guides, and public policy: history, critique, and recommendations. *Am J Med*. 2002;113(suppl 9B):89S-106S.
- Nestle M, Jacobson MF. Halting the obesity epidemic: a public health policy approach. *Public Health Rep*. 2000;115:12-24.
- Lee T, Oliver J. *Public Opinion and the Politics of America's Obesity Epidemic*. Cambridge, Mass: John F Kennedy School of Government; 2002. Harvard University Faculty Research Working Papers Series, No. RW02-017.
- Kersh R, Morone J. The politics of obesity: seven steps to government action. *Health Aff (Millwood)*. 2002;21:142-153.
- Nestle M. The ironic politics of obesity. *Science*. 2003;299:781.
- Welch G. Spending in the US on advertising for fast foods, sodas, and automobiles. *Diabetes Care*. 2003;26:546.
- Dietz WH, Bland MG, Gortmaker SL, Molloy M, Schmid TL. Policy tools for the childhood obesity epidemic. *J Law Med Ethics*. 2002;30(suppl 3):83-87.
- Centers for Disease Control and Prevention. Motor-vehicle safety: a 20th century public health achievement. *JAMA*. 1999;281:2080-2082.
- Siegel M. The effectiveness of state-level tobacco control interventions. *Annu Rev Public Health*. 2002;23:45-71.
- Hanfling MJ, Mangus LG, Gill AC, Bailey R. A multifaceted approach to improving motor vehicle restraint compliance. *Inj Prev*. 2000;6:125-129.
- US Department of Health and Human Services. *Physical Activity and Health: A Report of the Surgeon General*. Atlanta, Ga: US Dept of Health and Human Services, National Center for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion; 1996.
- Andersen RE, Crespo CJ, Bartlett SJ, Cheskin LJ, Pratt M. Relationship of physical activity and television watching with body weight and level of fatness among children: results from the Third National Health and Nutrition Examination Survey. *JAMA*. 1998;279:938-942.
- Kraak V, Pelletier D. The influence of commercialism on the food purchasing behavior of children and teenage youth. *Fam Econ Nutr Rev*. 1998;11:15-23.
- Gortmaker SL, Peterson K, Wiecha J, et al. Reducing obesity via a school-based interdisciplinary intervention among youth: Planet Health. *Arch Pediatr Adolesc Med*. 1999;153:409-418.
- Young LR, Nestle M. The contribution of expanding portion sizes to the US obesity epidemic. *Am J Public Health*. 2002;92:246-249.
- Kotz K, Story M. Food advertisements during children's Saturday morning television: are they consistent with dietary recommendations? *J Am Diet Assoc*. 1994;94:1296-1300.
- Galuska D, Will J, Serdula M, Ford E. Are health care professionals advising obese patients to lose weight? *JAMA*. 1999;282:1576-1578.
- Downey M. Results of expert meetings: obesity and cardiovascular disease: obesity as a disease entity. *Am Heart J*. 2001;142:1091-1094.
- National Institutes of Health. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report. *Obes Res*. 1998;6(suppl 2):51S-209S.
- US Department of Health and Human Services. The Surgeon General's call to action to prevent and decrease overweight and obesity. Available at: <http://www.surgeongeneral.gov/topics/obesity/>. Accessed April 2, 2003.
- American Dietetic Association. Public policy strategies to reduce prevalence of obesity/overweight. Available at: <http://www.eatright.com/gov/policyobesity.html>. Accessed April 4, 2003.
- Kumanyika SK. Minisymposium on obesity: overview and some strategic considerations. *Annu Rev Public Health*. 2001;22:293-308.
- Borzekowski DL, Robinson TN. The 30-second effect: an experiment revealing the impact of television commercials on food preferences of preschoolers. *J Am Diet Assoc*. 2001;101:42-46.
- Koplan JP, Dietz WH. Caloric imbalance and public health policy. *JAMA*. 1999;282:1579-1581.
- Associated Press. Obese youth resort to stomach stapling. *Associated Press*. November 4, 2002. Available at: http://www.channelnews.com/articles/2002/11/04/ap_obesity/. Accessed June 20, 2003.
- Tanner L. Bariatric surgery used on obese kids. *Associated Press*. November 4, 2002. Available at: http://www.medtech1.com/todays_news/todays_health_news.cfm/999. Accessed June 20, 2003.
- Associated Press. Surgery drastic remedy for children's growing obesity. *Associated Press*. October 12, 2002. Available at: http://www.abclocal.com/wls/news/101202_ns_surgery.html. Accessed June 20, 2003.
- Brolin RE. Bariatric surgery and long-term control of morbid obesity. *JAMA*. 2002;288:2793-2796.
- IMPACT Act (Improved Nutrition and Physical Activity Act): to establish grants to provide health services for improved nutrition, increased physical activity, obesity prevention, and for other purposes, HR 716 (2003).