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Childhood Obesity: The New Tobacco

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ABSTRACT Overcoming the childhood obesity epidemic will require changes on the scale of a social movement similar to the shift in attitudes and regulations toward smoking and tobacco. Tobacco control became a successful public health movement because of shifts in social norms and because cigarette companies came to be perceived by many as a common enemy. In contrast, obesity advocates have not identified a common threat or mobilized grass-roots change, nor have they identified strategies that resonate across diverse settings and constituencies. Framing obesity as a common threat can lead to consensus regarding the interventions needed to achieve healthier children and communities.

One in three U.S. youth are overweight or obese, and the rise in obesity prevalence has been associated with increased availability and consumption of high-calorie food, declines in physical activity, and increased media use.[1] Compared to children who are not obese, obese children (defined as being at the ninety-fifth percentile or higher of body mass index, or BMI) are at greater risk for asthma, sleep apnea, joint problems, diabetes, liver disease, and cardiovascular disease, and they are more likely to become obese adults. More than 25 percent of the rise in adult medical costs from 1987 to 2001[2] and almost 10 percent of all medical costs in 2008 were attributable to obesity.[3]

As recognized in the American Recovery and Reinvestment Act through set-aside funds, obesity prevention is seen as essential to controlling health care costs. Attention from the health care, industry, and policy sectors has been significant, but the breadth of policy and environmental changes necessary to address obesity requires changes on the scale of a social movement.

Successful public health social movements are characterized by perception of a common threat and by mobilization of grass-roots groups able to address that threat. Social movement theories describe successful change as a response to events and beliefs that threaten the status quo.[4] Successful framing of a threat or opportunity spreads and, over time, becomes the new, dominant belief.[4] For example, over the past fifty years, perceived responsibility for the quality of health care shifted from one governed by the profession, embodied by the American Medical Association, to our current frame of quality and availability of health care as a public responsibility.[4]

Parallels From Tobacco Control

Public health social movements include tobacco control, HIV/AIDS, and prevention of drunk driving. These movements were characterized by activists, scientists, and professionals framing new needs, followed by widespread recognition of threats requiring action.[5]

Tobacco control, generally regarded as a successful social movement, holds many parallels for the obesity epidemic. Most evident among those parallels is that influential corporate forces today seek to frame the problem as one of choice and individual responsibility, just as tobacco companies did for many years. For tobacco control, surveillance increased knowl-

edge, and efforts by communities and government led to increased public awareness of the adverse health effects of smoking.[6] Evidence of harm from exposure to others' smoke led to increasing stigmatization of the smoker, and smoking, as a threat to nonsmokers' health. The industry's efforts to addict adolescents, to hide the health effects of tobacco, and to vigorously resist control delayed regulatory changes. However, as evidence about the deceptive efforts of the tobacco companies became public, cigarette companies became the common enemy.

Reductions in smoking resulted from a variety of policy initiatives,[7] including restrictions on public smoking, the adoption of school antitobacco curricula, the use of tobacco countermarketing advertising campaigns, increased taxes, the prevention of sales to minors, and the promotion of smoking cessation programs.[8] The spread of local and state successes in implementing policy change generated the political will necessary for stronger and larger actions, such as the ban on airline[9] and public[10] smoking.

Successful tobacco control was fostered by shifts in social norms. Smoking restrictions in health care settings helped make smoking far less acceptable, and cessation counseling by physicians reinforced the message that tobacco control was important for health. Framing involuntary smoke exposure as victimization of others contributed to the shift. Government and foundation support increased resources and facilitated communication among community innovators, leading to mutual learning and the institutionalization of successful interventions.

Policy Initiatives To Prevent Or Control Obesity

Policy and environmental changes in multiple settings and sectors are needed for obesity prevention and control. The Centers for Disease Control and Prevention (CDC) has targeted several behaviors, including reductions in sugar-sweetened beverage use, fast-food consumption, and screen time (computers, TV, video games) as well as increased breastfeeding, physical activity, and consumption of fruits and vegetables.

The Institute of Medicine (IOM) and the CDC recently[11,12] outlined healthy eating and physical activity strategies to improve these behaviors and to emphasize the breadth of environmental changes necessary for obesity prevention. Recommendations included the following: making healthful food and beverages more widely available; providing access to healthier food by locating stores in underserved areas; and decreasing the availability of less healthful food and beverages. Implementation of these strategies will require adoption of new child care regulations and policies or ordinances to discourage consumption of sugar-sweetened beverages; increased support for breastfeeding; linkages between local farms and institutions to increase fruit and vegetable consumption; shifts in agricultural policy; and improved community infrastructure to promote biking, walking, and use of public transit.

The political will to achieve these goals will require substantial reframing of the obesity problem, however. Obesity prevention and control might not be powerful enough threats to motivate the implementation of these strategies.

Framing Obesity As A Threat

Federal data showing the rising prevalence of obesity[13,14] led to characterizations of obesity as an epidemic[15] and to rising awareness among professionals of obesity's impact on health.[16] Despite the rapid rise in media coverage, the general public—including many parents of obese children—has been slower to recognize the issue.[17] A majority of parents do not perceive childhood obesity as important,[18] nor do most parents of obese children think their children are obese.[19,20]

The pejorative connotation of "obesity"[21] and its application only to the severely or morbidly obese may contribute to the perception that obesity is not an immediate threat. The disjunction between public concern and personalization of the threat poses a major barrier to acceptance of policy and environmental initiatives necessary to control obesity.

Changing attitudes and perceptions of key behaviors related to obesity presents challenges. Sugar-sweetened beverages and fast food provide excessive calories, but they are heavily promoted, inexpensive, widely available, taste good, and not generally perceived as threats to health. Similarly, although television viewing is associated with obesity, it is entertaining for children and adults and is not perceived as a threat to health. Thus, lack of public support for the strategies necessary to address these issues hinders the development of a broad alliance to address obesity. Advocacy to promote breastfeeding, to encourage physical activity, or to promote more fruit and vegetable consumption is often not coordinated, and advocates for these (and other) intervention strategies often do not cooperate in or support each other's efforts. Widespread support for changes in nutrition and physical activity requires alternative framing—that is, engaging interest groups not traditionally focused on childhood obesity—to achieve the critical mass necessary for a social movement.

Alternative Frames For Obesity

Linking groups that support obesity-related policy changes may help mobilize popular support and political will. For example, strategies to promote physical activity and reduce vehicle use share goals with efforts to improve air quality, reduce fossil fuel use, and reverse global climate change. Farm-to-market strategies promote local, sustainable agriculture and increase the availability of fruit and vegetables.

Examples of linking groups to address childhood obesity in inner-city poor communities include programs supporting supermarket access in Pennsylvania and nearby states and efforts to limit the locations of fast-food outlets.[22–25] Because disparities exist in access to parks, recreation, and fresh food access,[26,27] some communities have included social justice themes in promoting opportunities for nutritional and activity change.

OBESITY AND CHRONIC DISEASE The contribution of obesity to chronic disease has led to recognition that nutrition and physical activity are important components of health. Obesity-related health care costs account for almost $147 billion annually,[4] impairing the competitiveness of our manufacturing sector.[28] A recent report from the Trust for America's Health suggested that an annual investment of $10 per person toward obesity prevention could save $16 billion annually within five years.[29] New taxes to reduce the consumption of high-calorie food and beverages and invest in prevention are also thought to be effective strategies to reduce both health care spending and rates of obesity.[30,31]

QUESTIONING FOOD MARKETING Like the tobacco industry, the food industry is under attack for marketing products perceived to be harmful and is facing legal, regulatory, and legislative threats. The predominant strategy of the food industry has been to argue that physical inactivity plays a greater role in obesity than does overeating. Some of the industry's responses resemble the deception and misinformation of the tobacco industry, rather than good-faith efforts.

For example, the Center for Consumer Freedom[32] has challenged the validity of the BMI (a tool widely used to measure obesity and overweight) and disputed the impact of obesity on health and its costs. However, in contrast to tobacco, many within the food industry believe that the industry should play a role in reframing obesity messages, such as by limiting advertising to children, providing lower-calorie food options, and reducing serving sizes.

Like the tobacco industry, the food industry is under attack for marketing products perceived to be harmful.

Building A Broad Movement For Obesity Prevention

Framing a public message about obesity using metaphors that do not primarily blame individuals for unhealthy choices may result in effective policy actions.[33] Two themes are competing for dominance in the public square: (1) personal responsibility is the root of the problem; and (2) an obesity-promoting toxic food environment is to blame.[34]

METAPHORS FOR OBESITY A recent report described ways in which representative metaphors for obesity influence support for different policy interventions.[35] The metaphors varied with regard to individual blame or responsibility: for example, from sinful behavior to toxic food environments. The report found associations between the obesity metaphors and policy options that people supported and their political ideology, geography, sex, and personal BMI score.

For those policies directly affecting children, belief that toxic food environments fuel obesity was associated with greater support for food policy changes. Belief that industry manipulation underlies obesity trends was associated with support for advertising restrictions. In contrast, among those who believed that obesity is sinful behavior, there was less support for subsidized summer camps.

PERCEIVED IMPACT Efforts to prevent and control obesity in some schools[36] and communities[37] have begun to have an impact. Like early efforts in tobacco control, these vary in which behaviors and policies are targeted. The recent plateau in obesity rates among children provides encouraging evidence for the effect of these early gains and suggests that we may be approaching a turning point in the epidemic.[37] Widespread press coverage of obesity and its complications has likely increased awareness of diet and physical activity and focused support for and sharing of

early successes within groups devoted to obesity prevention.

These gains may help accelerate change, facilitated by the faster and broader communication and information exchange possible today through the Internet. However, although obesity has been recognized as a problem by clinicians and by public health practitioners, as well as philanthropic, business, and government leaders, the public has not yet mobilized broadly around strategies to improve nutrition and physical activity for children and youth. The rapid growth and shared communication of early coalition formation does not always lead to resource sharing by community stakeholders, to the linking of community innovations to state or local public health infrastructure, or to other sustainable efforts.[38]

SPECIFIC BEHAVIORAL CHANGES The specific behavioral changes that account for the plateau in childhood obesity remain uncertain. Regardless, there is a need for sustained community innovations to improve nutrition and increase physical activity in medical, child care, school, and community settings. Coordinated, comprehensive, and complementary efforts at multiple levels are likely to be required. True cooperation and change by the food industry is needed, rather than delays and diversionary actions.[39] The broad impact of agricultural policies such as farm subsidies on the production and costs of food, child nutrition policies in schools and for underserved populations, and transportation policies on physical activity represent important federal opportunities to improve health.

Regulation of advertising, menu labeling in fast-food establishments and restaurants, and food pricing policies can be put in place at the federal, state, or local level. In contrast, clinical counseling interventions, access to food and fitness programs, and interventions to change physical education and food in schools also require specific attention and action in local community settings.

Conclusion

Establishing a common frame that enables grassroots engagement and unites all stakeholders remains a high priority. Regardless of whether this movement is about obesity, healthy communities, environmental health, social justice, or health care reform, several of these sustained and broad efforts will be needed to reverse the current epidemic and to nurture healthier children and adults now and in future generations. Leveraging lessons from past social movements can help us achieve these goals. ■

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NOTES

1 Braveman P. A health disparities perspective on obesity research. Prev Chronic Dis. 2009;6(3):A91.
2 Thorpe KE, Florence CS, Howard DH, Joski P. The impact of obesity on rising medical spending. Health Aff (Millwood). 2004;23:W4-480–6.
3 Finkelstein EA, Trogdon JG, Cohen JW, Dietz W. Annual medical spending attributable to obesity: payer- and service-specific estimates. Health Aff (Millwood). 2009;28 (5):822–31.
4 Adams M, Scott WR. Organizations and movements. In: Davis GF, McAdam D, Scott WR, Zald MN, editors. Social movements and organization theory. New York (NY): Cambridge University Press; 2005. p. 4–40.
5 Brown P, Zavestoski SM, McCormick SB, Mayer BM, Morello-Frosch R, Gasior RJ. Embodied health movements: a new conceptual framework for social movement research [Internet]. Paper presented at the Annual Meeting of the American Sociological Association. Atlanta (GA); 2003 Aug 16 [cited 2010 Jan 25]. Available from: http://www.allacademic.com/meta/p106488_index.html
6 Wolfson M. The fight against big tobacco. Hawthorne (NY): Aldine de Gruyter; 2001.
7 Brandt AM. The cigarette century. Cambridge (MA): Basic Books; 2008.
8 Tobacco use—United States, 1900–1999. MMWR. 1999;48:986–93.
9 Kress B. Flight Attendant Medical Research Institute. Tob Control. 2004;13(Suppl 1):i67–9.
10 U.S. Department of Health and Human Services. Smoking and tobacco use: 2000 surgeon general's report—reducing tobacco use [Internet]. Washington (DC). DHHS; 2000 [cited 2010 Jan 25]. Available from: http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2000
11 Parker L, Burns AC, Sanchez E. Local government actions to prevent childhood obesity. Washington (DC): National Academies Press; 2009.
12 Kettel Khan L, Sobush K, Keener D, Goodman K, et al. Recommended community strategies and measurements to prevent obesity in the United States. MMWR. 2009;58: RR-7.
13 Troiano RP, Flegal KM. Overweight children and adolescents: description, epidemiology, and demographics. Pediatrics. 1998;101: 497–504.
14 Ogden CL, Carroll MD, Curtin LR, et al. Prevalence of overweight and obesity in the United States, 1999–2004. JAMA. 2006;295:1549–55.
15 Koplan JP, Dietz WH. Caloric imbalance and public health policy. JAMA. 1999;282:1579–81.
16 Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States. JAMA. 2004;291:1238–45.
17 C.S. Mott Children's Hospital. Public concern rising about childhood obesity. National poll on children's health [serial on the Internet]. 2009 Aug 10;7(2) [cited 2010 Feb 10]. Available from: http://www.med.umich.edu/mott/npch/pdf/20090819_Top10Report.pdf
18 Charlton Research Company for Research!America. Endocrine poll 2006 [Internet]. Chevy Chase (MD): Endocrine Society; [cited 2010 Feb

6]. Available from: http://www.endo-society.org/media/press/2007/upload/TES_R_A_Obesity_Public_Opinion_Poll_Results.pdf
19 Mamun AA, McDermott BM, O'Callaghan MJ, Najman JM, Williams GM. Predictors of maternal misclassifications of their offspring's weight status: a longitudinal study. Int J Obesity. 2008;32:48–54.
20 Maynard LM, Galuska DA, Blanck HM, Serdula MK. Maternal perceptions of weight status of children. Pediatrics. 2003;111:1226–31.
21 Cohen ML, Tanofsky-Kraff M, Young-Hyman D, Yanovski JA. Weight and its relationship to adolescent perceptions of their providers (WRAP): a qualitative and quantitative assessment of teen weight-related preferences and concerns. J Adol Health. 2005;37:163e9–16.
22 Giang T, Karpyn A, Laurison HB, Hillier A, Perry RD. Closing the grocery gap in underserved communities: the creation of the Pennsylvania Fresh Food Financing Initiative. J Public Health Manag Pract. 2008;14(3):272–9.
23 Baker EA, Kelly C, Barnidge E, Strayhorn J, Schootman M, Struthers J, et al. The Garden of Eden: acknowledging the impact of race and class in efforts to decrease obesity rates. Am J Public Health. 2006;96(7):1170–4.
24 Creighton R. Cheeseburgers, race, and paternalism: Los Angeles' ban on fast food restaurants. J Leg Med. 2009;30(2):249–67.
25 Cradock AL, Kawachi I, Colditz GA, et al. Playground safety and access in Boston neighborhoods. Am J Prev Med. 2005;28:357–63.
26 Task Force on Community Preventive Services. Recommendations to increase physical activity in communities. Am J Prev Med. 2002;22 (4S):67–102.
27 Moore LV, Diez Roux AV, Nettleton JA, Jacobs DR Jr. Associations of the local food environment with diet quality—a comparison of assessments based on surveys and geographic information systems. Am J Epidemiol. 2008;167:917–24.
28 Connolly C. U.S. firms losing health care battle, GM chairman says. Washington Post. 2005 Feb 11. p. E01.
29 Trust for America's Health. Prevention for a healthy America [Internet]. Washington (DC): Trust for America's Health; 2008 Jul [cited 2010 Jan 25]. Available from: http://healthyamericans.org/reports/prevention08/
30 Davis K. Slowing the growth of health care costs—learning from international experience. N Engl J Med. 2008;359:1751–5.
31 Brownell KD, Frieden TR. Ounces of prevention—the public policy case for taxes on sugared beverages. N Engl J Med. 2009;360(18):1805–8.
32 Center for Consumer Freedom [home page on the Internet]. Washington (DC): Center for Consumer Freedom; [cited 2010 Jan 25]. Available from: http://consumerfreedom.com
33 Armstrong EA. From struggle to settlement. Milbank Q. 2009;87 (1):161–87.
34 Kersch R. The politics of obesity: a current assessment and look ahead. Milbank Q. 2009;87(1):295–316.
35 Barry CL, Brescoll VL, Brownell KD, Schlesinger M. Obesity metaphors: how beliefs about the causes of obesity affect support for public policy. Milbank Q. 2009;87(1):7–47.
36 Kann L, Brener ND, Wechsler H. Overview and summary: school health policies and programs study 2006. J School Health. 2007;77: 385–97.
37 Raczynski JM, Thompson JW, Phillips MM, Ryan KW, Cleveland HW. Arkansas Act 1220 of 2003 to reduce childhood obesity: its implementation and impact on child and adolescent body mass index. J Public Health Policy. 2009;30(Suppl 1): S124–40.
38 Newacheck PW, Hughes DC, Brindis C, Halfon N. Decategorizing health services: interim findings from the RWJF Child Health Initiative. Health Aff (Millwood). 1995;14(3):232–42.
39 Brownell KD, Warner KE. The perils of ignoring history: Big Tobacco played dirty and millions died. How similar is Big Food? Milbank Q. 2009;87(1):259–94.