Virtual Mentor
American Medical Association Journal of Ethics
April 2013, Volume 15, Number 4: 339-346.

POLICY FORUM

Unintended Consequences of Obesity-Targeted Health Policy

Andrew W. Brown, PhD, and David B. Allison, PhD

L'enfer est plein de bonnes volontés et désirs. [Hell is full of good wishes and desires.]
Saint Bernard of Clairvaux [1]

The conflict between individual freedom of choice and a government's obligation to protect its citizenry from threats to public health is often at the center of health policy debates. This has played out in New York City, for instance, with freedom of choice being the rallying cry of those opposed to a citywide ban on large containers of beverages [2], while saving lives through health-motivated policies is offered as the justification for the regulations [3]. However, several other ethical concerns exist related to the creation or implementation of public policy. Herein, we will discuss a catalog of ethical concerns identified by M. ten Have et al. [4] related to policies intended to prevent or treat obesity.

We discuss these ethical concerns in light of two key issues: (1) Under which circumstances does obesity merit being considered a *public*, as opposed to simply a common, health concern? Whether or not obesity is considered a public health concern is important in deciding whether impinging on individuals' rights may be warranted. (2) How plausible is it that a given policy or program will have negative unintended consequences? These consequences are important to consider when deciding if a policy should be implemented. We then suggest strategies for minimizing ethical and other unintended adverse consequences of obesity-targeted health policies.

Ethical Concerns in Obesity-Targeted Health Policies

In "Ethics and Prevention of Overweight and Obesity: An Inventory," Marieke ten Have and colleagues identify ethical concerns posed by 60 actual or proposed public policies, corporate initiatives, and behavior recommendations intended to prevent or treat obesity [4]. One group of ethical concerns comprises direct negative consequences of a program, including physical and psychosocial harm, dissemination of inadequate information, and creation or exacerbation of inequalities. The other group of ethical concerns encompasses disrespect for individuals and their rights and values, including transgressing personal and cultural values of eating, invading privacy, assigning fault for obesity, and abridging freedom of choice. Typically, more than one of these concerns exist with varying degrees of severity for any proposed policy or recommendation, but often the debate is

dichotomized as a desire to promote health versus a desire to preserve individual liberty.

The complexity of ethical considerations in obesity policymaking can be demonstrated by a policy that would allow the government to remove an obese child from his or her home (see table 1). Note that the pros and cons listed in the table are not necessarily weighted by importance because importance is dependent on individual perspectives and specific situations. Here, the assumed benefit of the policy is that removing the child from the home will improve his or her weight and therefore health, though that assumption is itself contentious [5]. As the table shows, the ethical considerations are far more complex than health vs. freedom of choice. To add to the complexity, a given individual may consider one specific ethical concern more important than all others: for health advocates the physical health implications may outweigh all other concerns, while for the parents the sanctity of the parent-child relationship may be paramount [6].

Table 1. Ethical concerns of an example policy in which the government is allowed to remove obese children from homes. The ethical concerns are not necessarily equally prevalent and do not necessarily carry equal weight.

Ethical concern [4]	**Pro-policy view**	**Anti-policy view**
Physical health	Improved health if professionals can affect weight.	There may not be the resources or knowledge to improve the health of the removed child in the long term.
Psychosocial well-being	Obesity is associated with psychological disorders.	Removing children from parents may be more traumatic than the obesity.
Equality	All children have the right to a healthy childhood and life.	Obesity affects the poor and minorities to a greater extent, so this policy will disproportionately target these groups.
Informed choice		Parents are no longer able to make decisions for their child.
Social/cultural values	The social value placed on fitness and health is upheld.	The social value placed on parent-child relationships is violated.
Privacy		The family's and child's privacy may be compromised.
Attribution of responsibility	Responsibility for the child's obesity is shared among society and medical professionals.	The parents are directly or indirectly blamed for the obesity and stigmatized.
Liberty		The parent's and child's liberties are violated.

Under Which Circumstances Should Obesity Be Considered a Public Health Concern?

The example in table 1 has ramifications for specific individuals in specific circumstances and particularly focuses on minors, who are broadly considered not

fully responsible for their own actions. The justifications and ramifications of broad health-targeted policies affecting ordinary adults are quite different.

Before proceeding, we must distinguish between two distinct uses of the phrase "public health" as a prefix to terms such as "problem," "concern," or "issue." The phrase is often used merely to convey that the problem affects a large number of people. The term "population health" is emerging to express this idea [7]. But in debates about policies that may impinge on individual rights and values, the phrase is used more specifically to denote health problems in which individuals' actions may not be sufficient to protect them from ill health and collective action may offer such protection. Examples of the latter definition include certain infectious diseases from which protection can be afforded by mass vaccination and toxins in public drinking water supplies, which can be minimized by a variety of government policies.

Using the more specific definition, it is not clear that obesity qualifies as a public health concern in all circumstances [8]. When considering some putative contributors to obesity, such as adenovirus 36 or environmental endocrine disruptors [9], the definition does seem to apply: individuals generally cannot fully detect and protect themselves from exposure to these factors by their own action, and collective action at a societal level mandated by government policies might do so. However, when considering some other putative contributors to obesity such as ingesting excess energy or being insufficiently active, there generally are not external unavoidable *constraints*, as opposed to *influences*, on individuals. Thus, collective action to protect individuals from undetectable or unavoidable contributing factors is not required in such cases.

At this point, we should address a related argument. This is perhaps the most commonly used argument to justify policies about obesity: obesity is costly to society, largely through the healthcare system, and this justifies collectively infringing upon individual liberty to decrease obesity. We do not agree with this argument. Regardless of the cost of obesity, that cost itself does not necessarily justify society's imposing such policies. The fact that one party (society in this case) voluntarily takes on an obligation to cover some costly benefit to a second party (individual citizens in this case) does not necessarily give the first party the right to dictate the behaviors of the second party. There are several alternatives which include society's not volunteering to take on the obligation, society's taking on the obligation but distributing the costs equitably to its members (e.g., charging obese persons more for health coverage), or society's voluntarily accepting the obligation and then simply agreeing to be "magnanimous" and bear the additional expense of costly behaviors in the interests of preserving individual liberty.

This is not to say that obesity is not a problem. Obesity is associated with many chronic diseases, decreased productivity, and psychosocial difficulties. But if a health policy targeting a putative cause of obesity does not address an issue in which individuals' actions are insufficient to protect themselves from obesity, then the policy may be unwarranted regardless of cost.

Good Intentions, Unintended Consequences

Various policy advocates insist that obesity needs to be addressed by public policy, either because they reject the definition of public health provided above or because they believe action must be taken despite obesity's not specifically being a public health concern. Innumerable policy recommendations have been proposed or enacted in an effort to reduce obesity, from "sin" taxes [10] and "psychic" taxes [11] to information campaigns [12] and alterations to the built environment [13]. In some cases, the scientific evidence demonstrates fairly clearly that the recommendation will not substantially reduce obesity, which means these policies not only raise ethical concerns but may have no beneficial outcome; other recommendations are simply equivocal—the potential exists for benefits and harms—and the balance between ethical consequences and health benefits is thus uncertain [14].

When the outcomes of a particular proposal are uncertain, especially for interventions grounded in "common sense," one could ask, "How could it hurt to try?" Some ways various policies could hurt, despite good intentions, were previously highlighted [15]. Such negative consequences include direct negative effects and encroachment on individual freedom like the list from ten Have et al. but also include direct costs of resources, damage to scientific and political credibility, and distraction from more promising efforts and policies. In fact, direct, unintended negative consequences of some policy proposals have been demonstrated (table 2).

Table 2. Unintended consequences of actions intended to affect obesity

Action	**Good intention**	**Documented unintended consequence**
Tax sugar-sweetened beverages (SSBs).	Decrease energy intake to decrease weight.	Increased consumption of beer beyond the decrease in sugar-sweetened beverages [17].
Alert patients to their heavy weight status.	Make the patient aware of a problem as a first step in addressing it.	Patients may feel stigmatized, become depressed and eat more, and avoid future appointments [16].
Labeling calories on vending machine beverages.	Awareness of calories will result in decreased consumption.	Purchases of SSBs increased in some settings [18].
Label "unhealthful" foods with messages that encourage consuming fruits and vegetables.	Increase "healthful" behaviors and decrease "unhealthful" behaviors.	Increased selection of an "unhealthful" snack [19].
Describe certain restaurants and foods as more "healthful" and "low-calorie."	Decrease caloric consumption and shift consumption toward "healthful" foods.	Consumers consumed more calories in side dishes and beverages, and underestimated total meal calories when choosing "healthy" restaurants or main dishes [20].

Labeling calories and removing value pricing on menu items.	Awareness of calories and eliminating value pricing will decrease energy consumption.	Men ate more calories [21].
Discourage chocolate consumption.	Decrease caloric consumption.	Chocolate consumption increased for some women in some circumstances [22].
Encourage children to consume fruits by incorporating them into games.	Children prompted to eat fruits will increase consumption of "healthful" foods and decrease caloric consumption overall.	Children ate as many calories when prompted by fruit games as when prompted by energy-dense-snack games, did not increase fruit consumption, and ate more overall than when not prompted by food [23].

For instance, the "common sense" impetus behind informing patients that they are obese may be the old maxim, "the first step in solving a problem is admitting you have one." Yet, there is evidence that clinically relevant words to describe a patient's weight (e.g., morbidly obese and obese) are considered stigmatizing, which patients state may make them avoid future appointments [16].

It is important to note that the good intentions and unintended consequences in the table represent hand-picked examples and these interventions may not be negative in all circumstances. For instance, there is some evidence that the effects of menu labeling on consumer choice can be inconsistent or even positive if delivered in specific ways, including whether or not educational information is included and whether the participants are male or female [21, 24, 25]. Thus, the selected examples in table 2 bring up yet another ethical concern: if a policy intervention benefits one subset of the population but harms another, what action should be taken? One could argue against implementing a policy so as to do no harm to one group, while another could argue that failing to act is tantamount to harming the group that stands to benefit [26, 27].

Minimizing Negative Ethical Consequences in Reversing Obesity

Marieke ten Have and colleagues raise an important complementary point to ethical concerns over policy recommendations: "The fact that objections are raised does not automatically imply that a programme should not be implemented" [4]. When considering an obesity-targeted public health policy, we propose six recommendations:

1. Evaluate whether the proposed policy addresses an exposure that can truly be considered a public health concern [8].
2. Be honest about the quality and quantity of evidence about the policy [14].
3. Generate sufficient, high-quality evidence before implementing the policy and have plans in place to generate quality evidence about the effectiveness of the policy once instated [28].
4. Do not assume there is negligible or no harm from the policy (see table 2).

5. Do not assume that achieving a health benefit overrides respect for other values and ethical principles [4, 29].
6. Given a choice between two or more plausible policies, choose the policy that least compromises ethical values [29].

These guidelines should help prevent us from paving the roads to health with good wishes but unintended consequences.

References

1. Shapiro FR, ed. *The Yale Book of Quotations*. New Haven, CT: Yale University Press; 2006: 319.
2. Grynbaum MM. New York plans to ban sale of big sizes of sugary drinks. *New York Times.* May 30, 2012. http://www.nytimes.com/2012/05/31/nyregion/bloomberg-plans-a-ban-on-large-sugared-drinks.html?pagewanted=all&_r=0. Accessed January 3, 2013.
3. Levine S. Supporters of Mayor Bloomberg's anti-obesity initiative [news release]. New York: City of New York; September 13, 2012. http://www.nyc.gov/html/om/html/2012b/support_for_soda_limits.html. Accessed January 8, 2013.
4. ten Have M, de Beaufort ID, Teixeira PJ, Mackenbach JP, van der Heide A. Ethics and prevention of overweight and obesity: an inventory. *Obes Rev*. 2011;12(9):669-679.
5. Summar P. Anamarie 4 years later: weight gain, size of child, 7, remain unexplained. *Albuquerque Journal.* March 13, 2005. http://www.abqjournal.com/news/metro/320825metro03-13-05.htm. Accessed January 4, 2013.
6. Parents visit overweight child. *ABC News.* August 31, 2000. http://abcnews.go.com/US/story?id=95940&page=1. Accessed January 4, 2013.
7. Kindig D, Stoddart G. What is population health? *Am J Public Health*. 2003;93(3):380-383.
8. Anomaly J. Is obesity a public health problem? *Public Health Ethics*. 2012;5(3):216-221.
9. McAllister EJ, Dhurandhar NV, Keith SW, et al. Ten putative contributors to the obesity epidemic. *Crit Rev Food Sci Nutr*. 2009;49(10):868-913.
10. Chaufan C, Hong GH, Fox P. Taxing "sin foods" - obesity prevention and public health policy. *N Engl J Med*. 2009;361(24):e113.
11. Lucas Jr G. Paternalism and psychic taxes: the government's use of negative emotions to save us from ourselves. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2150402. Accessed March 20, 2013.
12. Puhl R, Peterson JL, Luedicke J. Fighting obesity or obese persons? Public perceptions of obesity-related health messages. *Int J Obes (Lond)*. 2012. [Epub ahead of print]
13. White House Task Force on Childhood Obesity. *Solving the Problem of Obesity Within a Generation: White House Task Force on Childhood Obesity Report to the President*. 2010:78-82.

http://www.letsmove.gov/sites/letsmove.gov/files/TaskForce_on_Childhood_Obesity_May2010_FullReport.pdf. Accessed March 20, 2013.
14. Casazza K, Fontaine KR, Astrup A, et al. Myths, presumptions, and facts about obesity. *N Engl J Med.* 2013;368(5):446-454.
15. Allison DB. Evidence, discourse and values in obesity-oriented policy: menu labeling as a conversation starter. *Int J Obes (Lond)*. 2011;35(4):464-471.
16. Puhl R, Peterson JL, Luedicke J. Motivating or stigmatizing? Public perceptions of weight-related language used by health providers. *Int J Obes (Lond)*. 2012. [Epub ahead of print]
17. Wansink B, Just DR, Cawley J, et al. From Coke to Coors: a field study of a sugar-sweetened beverage tax and its unintended consequences. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2079840. Accessed March 20, 2013.
18. Jue JJ, Press MJ, McDonald D, et al. The impact of price discounts and calorie messaging on beverage consumption: A multi-site field study. *Prev Med.* 2012;55(6):629-633.
19. Werle COC, Cuny C. The boomerang effect of mandatory sanitary messages to prevent obesity. *Marketing Letters*. 2012;23(3):883-891.
20. Chandon P, Wansink B. The biasing health halos of fast-food restaurant health claims: lower calorie estimates and higher side-dish consumption intentions. *J Consumer Res*. 2007;34(3):301-314.
21. Harnack LJ, French SA, Oakes JM, Story MT, Jeffery RW, Rydell SA. Effects of calorie labeling and value size pricing on fast food meal choices: results from an experimental trial. *Int J Behav Nutr Phys Act*. 2008;5:63.
22. Durkin K, Hendry A, Stritzke WG. Mixed selection. Effects of body images, dietary restraint, and persuasive messages on females' orientations towards chocolate. *Appetite*. 2013;60(1):95-102.
23. Folkvord F, Anschutz DJ, Buijzen M, Valkenburg PM. The effect of playing advergames that promote energy-dense snacks or fruit on actual food intake among children. *Am J Clin Nutr*. 2012;97(2):239-245.
24. Girz L, Polivy J, Herman CP, Lee H. The effects of calorie information on food selection and intake. *Int J Obes (Lond)*. 2012;36(10):1340-1345.
25. Roberto CA, Larsen PD, Agnew H, Baik J, Brownell KD. Evaluating the impact of menu labeling on food choices and intake. *Am J Public Health*. 2010;100(2):312-318.
26. Vartanian LR, Smyth JM. Primum non nocere: obesity stigma and public health. *J Bioeth Inq*. 2013;10(1):49-57.
27. Gill TP. Key issues in the prevention of obesity. *Br Med Bull*. 1997;53(2):359-388.
28. Landefeld CS, Shojania KG, Auerbach AD. Should we use large scale healthcare interventions without clear evidence that benefits outweigh costs and harms? No. *BMJ*. 2008;336(7656):1277.
29. Have MT, van der Heide A, Mackenbach JP, de Beaufort ID. An ethical framework for the prevention of overweight and obesity: a tool for thinking through a programme's ethical aspects. *Eur J Public Health*. 2012. [Epub ahead of print]

Andrew W. Brown, PhD, is a postdoctoral trainee in the Office of Energetics and Nutrition Obesity Research Center at the University of Alabama at Birmingham. Trained in nutritional biochemistry and statistics, Dr. Brown's research focuses on establishing an evidence base for common assumptions about nutrition and health on such topics as organic agriculture, artificial sweeteners, and dietary supplements. His recent work relates to research reporting fidelity and its implications for science and policy.

David B. Allison, PhD, is distinguished professor, Quetelet Endowed Professor of Public Health, associate dean for science, director of the Office of Energetics, and director of the NIH-funded Nutrition Obesity Research Center at the University of Alabama at Birmingham. He has authored more than 450 scientific publications, received many awards for his research and mentoring, is an elected fellow of many academic societies, and in 2012 was elected to the Institute of Medicine of the National Academies.

Disclosure

Dr. Brown receives grant support from the Coca-Cola Foundation through his institution.

Dr. Allison has served as an unpaid board member for the International Life Sciences Institute of North America. He has received: payment for board membership from Kraft Foods; consulting fees from Vivus, Ulmer and Berne, Paul, Weiss, Rifkind, Wharton, Garrison, Chandler Chicco, Arena Pharmaceuticals, Pfizer, National Cattlemen's Association, Mead Johnson Nutrition, Frontiers Foundation, Orexigen Therapeutics, and Jason Pharmaceuticals; lecture fees from Porter Novelli and the Almond Board of California; payment for manuscript preparation from Vivus; travel reimbursement from International Life Sciences Institute of North America; other support from the United Soybean Board and the Northarvest Bean Growers Association; grant support through his institution from Wrigley, Kraft Foods, Coca-Cola, Vivus, Jason Pharmaceuticals, Aetna Foundation, and McNeil Nutritionals; and other funding through his institution from the Coca-Cola Foundation, Coca-Cola, PepsiCo, Red Bull, World Sugar Research Organisation, Archer Daniels Midland, Mars, Eli Lilly and Company, and Merck. Dr. Allison has no financial interests in any of these companies.

Acknowledgments

We would like to thank Michelle M. Bohan Brown, PhD (University of Alabama at Birmingham), for her valuable input.

The viewpoints expressed on this site are those of the authors and do not necessarily reflect the views and policies of the AMA.