

Government Overreach on Obesity Control

Michael L. Marlow, Ph.D.

It is not surprising that public health advocates propose policies aimed at stemming obesity. Obesity prevalence has doubled in the United States during the past three decades, with more than one-third of adults considered obese.¹

Obesity is a major health concern, given its association with chronic conditions that include diabetes, hypertension, hypercholesterolemia, stroke, heart disease, certain cancers, and arthritis.² Obesity is routinely defined as a body mass index (BMI) greater than or equal to 30. To calculate BMI, divide 703 times the individual's weight in pounds by the square of his height in inches. Or divide weight in kilograms by the square of the height in meters. A six-foot-tall man, for example, is obese if he weighs at least 221 pounds.

This commentary argues that lack of knowledge in both the scientific community and popular press regarding possible solutions carries over to public health advocates engaged in proposing government policies attempting to lower population weight. Market-based solutions are argued to be imperfect, but continued experimentation and scrutiny from paying customers interested in weight loss ensures progress toward developing effective solutions.

The Poor State of Scientific Understanding

Despite decades of research, it has been recently argued that we are no nearer to a solution now than when the rise in body weights was first chronicled decades ago.³ While conceding that obesity may not be simply the result of overeating, researchers point to a long list of obstacles that impede our clear understanding of the nature of the problem. These include problems in defining obesity, lax application of scientific standards, tenuous assumptions, flawed measurement, and limited examination of alternative explanations of cause. Lack of due diligence in maintaining rigorous research standards is believed to be the root of the problem.

A recent study concludes that false and scientifically unsupported beliefs about obesity are pervasive in both scientific literature and the popular press.⁴

Beliefs persisting despite clear contradicting evidence were labeled by the authors as "myths" and include the beliefs that: (1) small sustained changes in energy intake or expenditure produce large, long-term weight changes; (2) setting realistic goals in obesity treatment is important because otherwise patients become frustrated and lose less weight; and (3) large, rapid weight loss is associated with poorer long-term weight outcomes than is slow, gradual weight loss.

Labeled as "presumptions" were beliefs about obesity that persist in the absence of supporting scientific evidence. These

include: beliefs that (1) regularly eating (vs. skipping) breakfast is protective against obesity; (2) eating more fruits and vegetables will result in weight loss or less weight gain, regardless of whether one intentionally makes any other behavioral or environmental changes; and (3) snacking contributes to weight gain and obesity. Even the common prescription to eat more fruits and vegetables to promote weight loss is not fully supported by the evidence.⁵

Policies meant to steer individuals toward weight loss often incorporate these myths and presumptions. Such recommendations are included in the Department of Agriculture's "Choose My Plate" food guidance system. This prescription apparently only works to lower weight as long as individuals combine this recommendation with reduced intake of other energy sources. Fruit and vegetable consumption has demonstrable health benefits, but apparently weight loss is not one of them as long as individuals do not also reduce intake of other foods.

The Light Hand of Government

Requiring restaurants to post calorie counts was an early policy predicted to steer consumers away from unhealthy eating. Various local jurisdictions have legislated calorie counts, with New York City fast-food restaurants being among the first in 2008. The theory is that consumers choose healthier foods upon learning how much they underestimate calories, fats, or other attributes described on labels. Most studies supporting this theory were based on laboratory experiments.⁶ One study⁷ found that labeling improved calorie estimates, while another⁸ reported that consumers who use labels often choose lower-calorie meals than those who ignore them.

Studies based on actual market decisions, however, find little effect. A study of New York City's 2008 law requiring restaurant chains to post calorie counts examined how labeling influenced fast-food choices.⁹ Information provided by patrons of fast-food restaurants in New York City was compared with information provided by patrons in Newark, N.J., a city without labeling laws. While 28 percent of New York patrons said the information influenced their choices, researchers found no change in calories purchased after the law. Another study reached a similar conclusion in a study of menu-labeling regulation requiring all restaurant chains with 15 or more locations to disclose calorie information in King County, Wash.¹⁰ No effect on purchasing, measured by transaction trends and calories per transaction, was found.

Over-generalizing results of laboratory experiments probably explains policy advocates' overconfidence. There are

well-known problems in extrapolating results from experiments to the real world.^{11,12} Results are influenced by factors that include financial incentives, the way choices are framed, the nature of others' scrutiny, and participant selection. Real-world decisions are made under circumstances not easily mimicked in laboratories.

Overconfident advocates may also believe the myth that small reductions in calories usually add up to significant weight loss. For example, if an experiment concludes that adding calorie labels leads to 25 fewer calories per meal, researchers might simply estimate annual weight loss by multiplying 25 calories by three (meals per day) by 365 (days per year). But, 27,375 fewer calories per year remains most unlikely. Businesses making such false promises would eventually find few customers.

Consumers understand that cheeseburgers with large sodas and fries contain many more calories than simple salads with low-calorie dressing and an apple. It is not surprising that stating known information to consumers on mandated labels is not a successful formula for weight loss.

Heavy Hand of Government

Taxes on sugared drinks have also proven ineffective.¹³ One study by Fletcher et al. finds that increases in soda tax rates decrease soda consumption among children, but do not influence total caloric intake, as children increase their consumption of other high-calorie beverages.¹⁴ A recent study examined how taxes steer consumers into consumption of a wide array (23 categories) of other food and beverages.¹⁵ A price increase of one half-cent per ounce for sugared drinks reduced caloric intake of those beverages, but subjects quickly compensated by consuming almost half of those calories in substitutes often laden with sodium and fat. Another recent study examined the effects of sugared drink taxes on consumption and showed little to no effect of current sales tax rates on consumption or obesity.¹⁶

One problem is that tax policies are designed to steer all individuals, fat or not, toward healthier choices. Interventions predictably exert less influence on those being targeted for behavioral changes than on persons with healthier habits. Research demonstrates that tax hikes on alcohol and tobacco serve primarily to decrease consumption by light, not heavy, users.¹⁷ There is little reason to suspect that taxes aimed at reducing caloric intake work any differently. Tax hikes might lower consumption by those without weight problems, but exert little to no effect on the overweight.

Tax advocates presume that the primary reasons for obesity are well known and that policy solutions are clearly evident. This view predicts that advocates will be comfortable with continually raising taxes until the evidence showing weight loss appears. This is a recipe for expanding government with promises of benefits that are unlikely to occur. This prediction is also consistent with previously discussed studies concluding that tenuous assumptions, linked to limited examination of

alternate explanations of obesity's causes, explain why so little progress has been made on the obesity problem.^{3,4}

Heavier Hand of Government

Former New York City Mayor Michael Bloomberg's proposal to ban sugared beverages in restaurant portions larger than 16 ounces was to be applied to food-service establishments selling large-size drinks of more than 25 calories per eight-ounce serving. The proposed ban also excluded sales of large-size drinks in groceries or convenience stores such as 7-Elevens, but not in delis, fast-food restaurants, and movie theaters.¹⁸ Consumers could still buy the drinks, but the ban was designed to steer consumers from overindulgence. It remains unclear what effects, if any, such regulation of food environment would exert on population weight when it is not imposed on all businesses, and when consumers may simply substitute calories from other products.

A recent book proposes a broad template for regulation of our food environments that mirrors regulation of the environment, food safety, alcohol, tobacco, and building codes.¹⁹ Proposals include: (1) standardized portion sizes with only single-portion units allowed; (2) banning certain foods in locations not dedicated to food (e.g., sodas sold in hardware stores) and allowing drive-up windows to be open only during designated meal periods (i.e., breakfast, lunch and dinner); and (3) running government advertising to counter industry marketing of "unhealthy" foods. Cohen speculates our future will have encoded ID cards for citizens, personalized with unique energy requirements informing restaurants what citizens may consume.

This view is consistent with that of a recent paper in the *New England Journal of Medicine* calling for bans on placing candy near cash registers at stores.²⁰ These authors argue that food regulation should not place additional cognitive demands on the population, and suggest limiting the types of foods that can be displayed in prominent end-of-aisle locations, and restricting foods associated with chronic diseases to locations that require a deliberate search to find.

One critical concern of many who believe individuals bear personal responsibility for their behavior is that experience is vital. Regulating the food environment assumes that individuals are incapable of learning by experience that overeating causes weight gain. This view also encourages overweight individuals to believe that self-regulatory efforts are futile. The "obesity is a disease" message, as formally recognized by the AMA in June 2013,²¹ provides a recent example. Defining obesity as a disease has been shown to be beneficial for body image, but it also that it lowers self-regulation by the obese.²² The disease label may also reinforce policy advocates' belief that they should assume primary responsibility for ordinary citizens' weight control.

Misplaced Blame

Policy advocates appear to accept simplistic views that profit-seeking sellers ignore health attributes of their products,

or even knowingly take advantage of consumers who cannot control their eating. Mandated calorie labels, taxes, bans of large-size drinks, and heavy-handed food regulation are believed to protect consumers from profit-seeking sellers with no interest in helping overweight consumers.

This view squarely places blame on sellers, but is not supported by the evidence. A more thoughtful view is that sellers can systematically profit when marketing “healthier” products to customers interested in controlling their weight. Businesses have incentives to meet customers’ weight concerns. There is an ample consumer market for weight control, as indicated by a recent Gallup poll that finds that 51% of adult Americans want to lose weight.²³

Consumers have also taken steps to lower consumption of high-calorie products. For example, U.S. per-capita soda consumption has fallen since peaking in 1998, with calories from soda decreasing by 23% between 2000 and 2013, according to *Beverage Digest*.²⁴ A U.S. Department of Agriculture study shows rapid growth of new products appealing to weight-conscious consumers.²⁵ Displays featuring health claims are considered evidence of growing awareness of obesity-related problems.²⁶ Health and nutrition-related claims per product increased, from 2.2 in 2001 to 2.6 in 2010. The study suggested that growing demand for food products that contribute to general health beyond basic nutrition provided incentives to manufacturers to supply and promote these products.

Conclusion

Market-based solutions will evolve if given a chance, based on continued experimentation.²⁷ This is fortunate, given the myths surrounding weight loss.⁴ Products and services designed around myths are eventually rejected by unhappy customers. Consumers signal to businesses which products are effective through their purchases, and which products are harmful through lawsuits. Businesses routinely monitor these signals.

Government, however, is not subject to a market test, thus allowing regulators great latitude in promoting myth-based policies. Only government has the ability to maintain ineffective policies because it does not have to please paying customers in order to remain financially secure. Lacking a market test, government cannot easily distinguish effective from ineffective policies. Feedback is scarce in an environment in which ineffective policies do not directly jeopardize government jobs. Harmful policies may also never be discarded in an environment that has so little scrutiny of programs’ effectiveness.

Government overreach on obesity control is a recipe for expanding government with inflated promises unlikely to be fulfilled. Meanwhile, taxpayer resources are allocated to poorly informed theories based on myths that are often developed within laboratories insulated from real-world interactions of profit-minded suppliers and weight-conscious consumers. This view is consistent with studies concluding that tenuous assumptions, linked to limited examination of alternate explanations of obesity’s causes, explain why so little progress has been made on the obesity front.^{3,4}

Michael L. Marlow, Ph.D., is professor of economics and distinguished scholar at California Polytechnic State University, San Luis Obispo, Calif. He is also an affiliated senior scholar of the Mercatus Center at George Mason University. Contact: mmarlow@calpoly.edu.

REFERENCES

1. Flegal KM, Carroll MD, Kit BK, et al. Prevalence of obesity and trends in the distribution of body mass index among U.S. adults, 1999–2010. *JAMA* 2012;307:E1–E7.
2. Dixon JB. The effect of obesity on health outcomes. *Mol Cell Endocrinol* 2010;316:104–108.
3. Hebert JR, Allison DB, Archer E, et al. Scientific decision making, policy decisions, and the obesity pandemic. *Mayo Clin Proc* 2013;88:593–604.
4. Casazza K, Fontaine KR, Astrup A, et al. Myths, presumptions, and facts about obesity. *N Engl J Med* 2013;368:446–454.
5. Kaiser KA, Brown AW, Brown MM, et al. Increased fruit and vegetable intake has no discernible effect on weight loss: a systematic review and meta-analysis. *Am J Clin Nutr* 2014;100(2):567–576.
6. Harnack LJ, French SA. Effect of point-of-purchase calorie labeling on restaurant and cafeteria food choices: a review of the literature. *Int J Behav Nutr Phys Act* 2008;5:51.
7. Elbel B. Consumer estimation of recommended and actual calories at fast food restaurants. *Obesity* 2011;19:1971–1978.
8. Bassett MT, Dumanovsky T, Huang C, et al. Purchasing behavior and calorie information at fast-food chains in New York City, 2007. *Am J Public Health* 2008;98:1457–1459.
9. Elbel B, Kersh R, Brescoll VL, et al. Calorie labeling and food choices: a first look at the effects on low-income people in New York City. *Health Aff* 2009;28:w1110–w1121.
10. Finkelstein EA, Strombotne KL, Chan NL, et al. Mandatory menu labeling in one fast-food chain in King County, Washington. *Am J Prev Med* 2011;40:122–127.
11. Harrison GW, List JA. Field experiments. *J Econ Lit* 2004;42:1009–1055.
12. Levitt SD, List JA. What do laboratory experiments measuring social preferences reveal about the real world? *J Econ Perspec* 2007;21:153–174.
13. Marlow ML. Soda regulation is not the solution. *J Am Phys Surg* 2009;18:14–16.
14. Fletcher JM, Frisvold DE, Tefft N. The effects of soft drink taxes on child and adolescent consumption and weight outcomes. *J Public Econ* 2010; 94:967–974.
15. Zhen C, Finkelstein EA, Nonnemaker JM, et al. Predicting the effects of sugar-sweetened beverage taxes on food and beverage demand in a large demand system. *Am J Agr Econ* 2014;96:1–25.
16. Fletcher JM, Frisvold DE, Tefft N. Non-linear effects of soda taxes on consumption and weight outcomes [published online ahead of print Mar 10, 2014]. *Health Econ*. doi: 10.1002/hec.3045.
17. Ayyagari P, Deb P, Fletcher J, et al. Sin taxes: do heterogeneous responses undercut their value? NBER Working Paper No. 15124; 2009. <http://www.nber.org/papers/w15124>. Accessed Oct 24, 2014.
18. Edwards A. At 7-Eleven the Big Gulps elude a ban by the city. *New York Times*, Jun 7, 2012.
19. Cohen DA. *A Big Fat Crisis: the Hidden Forces behind the Obesity Epidemic—and How We Can End It*. Nation Books; 2014.
20. Cohen DA, Babey SH. Candy at the cash register—a risk factor for obesity and chronic disease. *N Engl J Med* 2012;367:1381–1383.
21. Pollack A. A.M.A. recognizes obesity as a disease. *New York Times*, Jun 18, 2013.
22. Hoyt CL, Burnette JL, Auster-Gussman L. Obesity is a disease: examining the self-regulatory impact of this public-health message. *Psychol Sci* 2014;25(4):997–1002. doi: 10.1177/0956797613516981.
23. Brown A. Americans’ desire to shed pounds outweighs effort. Gallup, Nov 29, 2013. Available at: www.gallup.com/poll/166082/americans-desire-shed-pounds-outweighs-effort.aspx?version=print. Accessed Oct 25, 2014.
24. Esterl M. Soda producers set goals on cutting U.S. beverage calories. *Wall Street Journal*, Sept 24, 2014.
25. Todd JE. Changes in eating patterns and diet quality among working-age adults, 2005–2010. Economic Research Report Number 161, U.S. Department of Agriculture, January 2014.
26. Martinez SW. Introduction of new food products with voluntary health- and nutrition-related claims, 1989–2010. EIB-108 Economic Research Service/USDA, February 2013.
27. Marlow ML. Weight loss nudges: market test or government guess. Working Paper, Mercatus Center at George Mason University, Arlington, VA, Sep 3, 2014. Available at: <http://mercatus.org/publication/weight-loss-nudges-market-test-or-government-guess>. Accessed Feb 6, 2015.

PREFACE TO THE FOURTH EDITION

From the day when the first members of councils placed exterior authority higher than interior, that is to say, recognized the decisions of men united in councils as more important and more sacred than reason and conscience; on that day began lies that caused the loss of millions of human beings and which continue their unhappy work to the present day.

—LEO TOLSTOY

Since the first edition went to press, the revolution has proceeded apace. At hospital committee meetings these days, the disconnection between medicine as once taught by prerevolutionary physicians and medicine as now codified by compliance-minded, MBA-qualified “medical directors” is startling; the author feels as though she arrived at such meetings by time machine.

In the new “integrated delivery systems,” the organizational chart reigns. Physicians are boxed into defined categories, next to the bottom of the chart, just above the patients; together with the patients (now known as “covered lives”), they form the “medical loss ratio.”

It is a world of paradox. Talk of “ethics” generally means talk of “resource allocation,” often by means once called unethical. One drowns in information, but the key of knowledge is lost. Facilities and personnel are present in excess, and yet they are scarce.

The scarcest item of all appears to be the clinician’s time. Thirty seconds may be too long to spend searching for a reference. In some settings, there may be no time to look in the left ear if only the right one hurts, much less to listen to the patient’s grief or despair. And when can today’s managed provider stop and reflect?

Concepts are imported from industry, such as “six sigma quality”—the goal to reduce errors below 6 standard deviations from the mean of a normal distribution. This means that all but 3.4 out of 1 million patients are supposed to meet a certain indicator, such as timely Pap smears or mammograms, regardless of individual needs and desires.

Quality experts in industry do recognize that one cannot control outputs without controlling inputs—a fact that health policy experts seldom acknowledge. But even if we could control the

behavior of patients and physicians, there remains the problem that human beings are not stamped from an industrial die. Even if not totally unique in genetic endowment, each human being has had a different interaction with the world.

As the art of medicine is being lost, the science is also threatened. “Evidence-based” medicine is coming to mean based on the consensus of a committee of experts: the Prussian *Geheim Rath* with many heads (and no heart). Clinical reasoning is replaced by following a practice “guideline” from one prescribed information bit to another, and a diagnosis means a number with five significant digits (never mind that the first one is dubious) attached to an appropriate procedure code. The very altar of truth—the autopsy table—is being dismantled.

It is telling that bureaucratic quality assessment is almost always based on process (read compliance) measures such as number of blood pressure determinations or prescriptions for the medication *du jour*, not outcome measures such as all-cause mortality or ability to function independently. Regardless of the reading on the “continuous quality improvement” dashboard, almost everyone on the front lines of patient care believes that American medicine and health are in decline.

Why, then, another edition of this book?

Medicine is a living thing that will survive and flourish, despite the dinosaurs of “health care delivery,” and long after inhuman systems fail. There are still students who aspire to be physicians, not providers, gatekeepers, resource managers, or box-checkers. There are still those who consider medicine to be a human and a humane endeavor, not an industry. This book is to provide them a compass, a road map, and, perhaps, a little entertainment as they embark on an exciting journey of exploration, together with their most important teachers: their patients.

As students begin their foray into physical diagnosis, frequently feeling overwhelmed by the vast amount of data they must absorb, the most helpful piece of advice might be that offered in 1957 by neurologist Robert Wartenberg: “Mistakes in neurologic diagnosis are more likely to result from not *looking* enough than from not *knowing* enough.”

—Jane M. Orient, M.D., 2009

Order your copy of Sapira's Art and Science Bedside Diagnosis, Fourth Edition today!

Visit www.lww.com, Call 1-800-638-3030, or ask your local health science representative.

ISBN: 978-1-60547-411-3

\$110