Obama

We will implement the law and work together to improve where we can. But our country simply can't afford to refight old political battles, reopen old wounds, and return to the way things were. We are a nation that does what is hard and what is necessary and what is right. And we will be better off 5, 10, 20 years from now because we had the courage and foresight to keep moving forward.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

This article was published on September 26, 2012, at NEJM.org.

DOI: 10.1056/NEJMp1211514 Copyright © 2012 Massachusetts Medical Society.

Romney

this option regardless of what the law requires . . . because they are responding to consumer demands in the market.

President Obama believes the answer lies in a bigger government that decides what care Americans should receive and how much providers should be paid for it. But his plan has already failed to deliver on virtually every promise he made, and its components are failing as quickly as they go into effect. It must be repealed. I believe the answer lies with patients and families, with reformed insurance markets and fair competition, with strong consumer protections and real entitlement reform. My plan tackles our health care challenges without a federal takeover of the entire system. Instead, it relies on markets over regulations, doctors and patients over bureaucrats, and tailored state programs over a 2700-page "solution" from Washington.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

This article was published on September 26, 2012, at NEJM.org.

DOI: 10.1056/NEJMp1211516 Copyright © 2012 Massachusetts Medical Society.

Candy at the Cash Register — A Risk Factor for Obesity and Chronic Disease

Deborah A. Cohen, M.D., M.P.H., and Susan H. Babey, Ph.D.

basic misconception has sty-A mied our response to the obesity epidemic: the belief that food-related decisions are consciously and deliberately made. Our reluctance to interfere with or regulate the food environment is a direct consequence of the belief that people's food choices reflect their true desires. However, given the large proportion of people who claim that they want to lose weight and the small proportion who are actually able to do so, we must concede that human behavior doesn't always conform with professed goals.

The reality is that food choices are often automatic and made without full conscious awareness. In many cases, they may even be the opposite of what the person deciding would consciously prefer. What and how much people eat are highly influenced by contextual factors that they may not recognize and therefore cannot easily resist. A clear example of this influence is the placement of candy at the cash register, which is widely acknowledged to be a promotional strategy called "impulse marketing." Impulse marketing encourages spur-of-the-moment,

emotion-related purchases that are triggered by seeing the product or a related message.

Impulse marketing works through the placement and display of products in retail outlets. In fact, the arrangement of products in stores is the most important malleable determinant of sales. For example, goods placed in prominent end-of-aisle locations account for about 30% of all supermarket sales.¹ Indeed, vendors pay a slotting fee to retail markets to guarantee that their products will be placed in these locations. Placing products in

The New England Journal of Medicine

Downloaded from nejm.org at RAND CORPORATION LIBRARY on October 11, 2012. For personal use only. No other uses without permission.

Copyright © 2012 Massachusetts Medical Society. All rights reserved.

prominent locations or spots where consumers will see them at the end of their shopping journey can increase their sales by as much as a factor of five.² Much of marketing research concerns itself with how products are displayed and placed in stores.

Placement of foods in prominent locations increases the rate particularly on the ends of aisles, has more to do with the display characteristics than with the goals and capacities of individual people.³ Something about the arrangements and the edges of such displays compels a response. Marketers carefully pretest their promotional displays and often use the same sophisticated eye-



at which they're purchased; purchase leads to consumption; and consumption of foods high in sugar, fat, and salt increases the risks of chronic diseases. Because of this chain of causation, we would argue that the prominent placement of foods associated with chronic diseases should be treated as a risk factor for those diseases. And in light of the public health implications, steps should be taken to mitigate that risk.

Even if many people acknowledge that food placement can attract attention, they think that those who respond to impulse marketing simply lack self-control and should learn how to resist such marketing strategies. Yet research using eye-tracking equipment has shown that the attention drawn by special displays, tracking equipment to make sure that customers cannot ignore them. People lack the capacity to fully control their eye gaze, and what they look at the longest is the strongest predictor of what they will buy. Furthermore, most purchasing decisions are made very quickly and automatically without substantial cognitive input, usually in less than a second.4 And choices of foods high in fat and sugar are made more quickly than are choices of healthful foods such as fruits and vegetables.4 For all these reasons, promotional displays of low-nutrient foods are both particularly influential and difficult to resist.

Moreover, most people don't even recognize that the placement of products in retail outlets influences their purchases or their eating behavior. In fact, they typically deny the existence of contextual influences, even when those influences are pointed out to them. Yet multiple controlled studies as well as market research have shown that placement matters.

Even when people are consciously trying to make healthful choices, their ability to resist palatable foods in convenient locations wanes when they are distracted, are under stress, are tired, or have just made other decisions that deplete their cognitive capacity. Once cognitive capacity is depleted, automatic processing that relies on heuristics and other shortcuts dominates, and under these circumstances people are more likely to choose foods high in sugar and fat.5 Often people regret their purchases of candies, sodas, chips, and cookies. They may recognize that they were impulsive but have no way of avoiding being confronted with these goods, even if they initially went into the store seeking other products.

Although placement is a factor that is right in front of our noses, we should consider treating it as a hidden risk factor, like carcinogens in water, because placement influences our food choices in a way that is largely automatic and out of our conscious control and that subsequently affects our risk of diet-related chronic diseases.

In general, buildings, cars, toys, and other products are designed to account for limits of human capacity. Although people could certainly stay away from the edges of balconies and not lean out of windows, mandatory railings and window guards protect them from falling in cases in which they may otherwise wan-

N ENGLJ MED 367;15 NEJM.ORG OCTOBER 11, 2012

The New England Journal of Medicine

Downloaded from nejm.org at RAND CORPORATION LIBRARY on October 11, 2012. For personal use only. No other uses without permission.

Copyright © 2012 Massachusetts Medical Society. All rights reserved.

der too close. With strong empirical research, it should be possible to identify which marketing strategies place people at risk or undermine their health, as well as to quantify the magnitude of risk. This kind of knowledge should be applied in informing regulations that could govern the design and placement of foods in retail outlets to protect consumers.

We need to test new approaches to risk reduction that do not place additional cognitive demands on the population, such as 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. Harnessing marketing research to control obesity could help millions of people who desperately want to reduce their risks of chronic diseases.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

From RAND Health, Santa Monica, CA (D.A.C.); and the UCLA Center for Health Policy Research, Los Angeles (S.H.B.).

1. Sorenson H. Inside the mind of the shopper. Upper Saddle River, NJ: Pearson Education, 2009.

2. Curhan RC. The effects of merchandising and temporary promotional activities on the sales of fresh fruits and vegetables in supermarkets. J Mark Res 1974;11:286-94.

3. Wedel M, Pieters R. Visual marketing: from attention to action. New York: Taylor & Francis Group/Lawrence Erlbaum Associates, 2008.

4. Thomas M, Desai KK, Seenivasan S. How credit card payments increase unhealthy food purchases: visceral regulation of vices. J Consumer Res 2011;38:126-39.

5. Shiv B, Fedorikhin A. Heart and mind in conflict: the interplay of affect and cognition in consumer decision making. J Consumer Res 1999;26:278-92.

DOI: 10.1056/NEJMp1209443 Copyright © 2012 Massachusetts Medical Society.

Portion Sizes and Beyond — Government's Legal Authority to Regulate Food-Industry Practices

Jennifer L. Pomeranz, J.D., M.P.H., and Kelly D. Brownell, Ph.D.

The importance of obesity as L a public health problem has led to a number of proposed policy solutions, some of which ---such as taxes on sugar-sweetened beverages - are highly controversial and have been opposed strongly by the food industry. One such measure is the proposal by the New York City Department of Health, supported by Mayor Michael Bloomberg, to prohibit sugar-sweetened beverages from being sold in containers larger than 16 oz by restaurants, movie theaters, and mobile food vendors (venues where the health department has jurisdiction).

This action and others that affect business practices of the food industry are likely to be challenged in the courts in cases that raise an important question. Does government have the legal authority to regulate the conduct of the food industry in this way? This question of authority applies to many policies that might be considered in the future — policies regarding, for example, the placement of items in supermarkets, children's access to certain foods, and the banning of harmful products (e.g., caffeinated alcohol drinks).

Whether government belongs in this arena is a political question. Whether government has the authority to be involved is a legal matter that should be considered carefully, given what is at stake for both public health and business interests.

States and their political subdivisions, such as cities, as distinct from the federal government, have the power to enact laws to protect the public health, safety, and welfare and may use this "police power" to regulate the sale of products that have public health effects.¹ Still, the question remains how broadly such power can be applied to the practices of food sellers.

City and state governments,

generally through health departments, have clear authority over matters concerning the short-term consequences of food intake. Mechanisms are in place for preventing or swiftly containing problems regarding food safety. Of more recent concern are the longterm consequences of food intake related to chronic health problems such as obesity, diabetes, heart disease, and cancer. Beginning with the ban on trans fats in restaurants in New York City and the requirement that chain restaurants post calorie counts for their menu items, cities and states have taken to considering the food environment as a chief way of protecting the long-term health of citizens.

Regulations that affect "ordinary commercial transactions" (such as the sale of a product) are presumed to be constitutional if they have a rational basis and if the government body enacting them has the appropriate knowl-

The New England Journal of Medicine

Downloaded from nejm.org at RAND CORPORATION LIBRARY on October 11, 2012. For personal use only. No other uses without permission.

Copyright © 2012 Massachusetts Medical Society. All rights reserved.