Changing Health Behaviors: Reducing Obesity by Applying Lessons Learned from the Campaign to Control Tobacco Use

Can the same strategies that succeeded in reducing the incidence of smoking in the United States also work to help reduce obesity? Approaches that hold promise include excise taxes, junk food–free zones, counteradvertising, advertising bans, menu labeling requirements, and warning labels.

Introduction

Researchers, policymakers, and public health officials are seeking strategies to combat the growing obesity trend and its accompanying cost and disease burdens, including the potential for skyrocketing Medicare and Medicaid costs. They are studying lessons learned from efforts to control the use of tobacco in this country and abroad to determine whether those strategies can be successfully applied to control obesity.

As with the efforts to reduce tobacco use, reducing obesity rates will require multiple approaches. Some of the most promising strategies, adapted from similar approaches in the effort to control tobacco use, include the following:

- Imposing excise taxes on non-nutritious foods and beverages
- Creating junk food–free zones
- Using counteradvertising
- Banning certain advertisements, such as those for sugary cereals aimed at children
- Requiring menu labeling
- Mandating warning labels

In November 2008, the AARP Public Policy Institute held an Innovation Roundtable, bringing together public health experts to discuss a range of issues related to the value of prevention. The discussion addressed efforts to control tobacco use and their applicability to reducing obesity.

This Insight on the Issues expands on that discussion. Specifically, it discusses the growing problem of obesity, some lessons learned from the experience of the campaign to reduce smoking, some promising strategies for applying these lessons to the effort to reduce obesity and their success so far, and policy recommendations.

The Problem of Obesity

Obesity is a major risk factor for cardiovascular disease, certain types of cancer, and type 2 diabetes (Centers for Disease Control and Prevention [CDC] 2008). Despite these health risks, obesity is a growing problem for Americans of all ages:

- More than 30 percent of adults and approximately 16 percent of children and young adults (ages 2 to 18) are...
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Among children and adolescents, obesity prevalence has increased dramatically. During the period between 1976 and 1980, 5 percent of children ages 2–5 were obese. During the period between 2003 and 2006, 12.4 percent of similar aged children were obese: a two and a half-fold increase. During similar time periods, obesity rates rose from 6.5 percent to 17 percent for those ages 6–11, and from 5 percent to 17.6 percent for those ages 12–19 (see figure 1) (CDC n.d.).

From 1979–81 to 1997–99, annual hospital costs related to obesity among children and adolescents rose from $35 million to $127 million (CDC 2009).

The picture is just as bleak for adults, whose rates of obesity are steadily rising. Between 1976–80 and 2005–06, the prevalence of obesity among U.S. adults ages 20–74 more than doubled, from 15 percent during the 1976–80 time period to 35.1 percent by 2005–06 (National Center for Health Statistics 2008) (see figure 2).

Obesity rates among all groups in society—irrespective of age, sex, race, ethnicity, socioeconomic status, education level, or geographic region—have increased markedly (CDC 2009).

Obesity Defined

Among adults, obesity is defined as having a body mass index (BMI) of 30 or greater. BMI is calculated from a person’s weight and height and provides a reasonable indicator of body fatness and weight categories that may lead to health problems.

The CDC defines obesity for children and adolescents based on their weight

Figure 1
Prevalence of Obesity Among U.S. Children and Adolescents (Aged 2–19 Years)

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Relative to the weight of others in their age and sex group. For children and adolescents (ages 2–19 years), the BMI value is plotted on growth charts developed by the CDC to determine the corresponding BMI-for-age percentile. For this group, overweight is defined as a BMI between the 85th and 95th percentile for the same age and sex; obesity is defined as a BMI above the 95th percentile for the same age and sex (CDC n.d.).

Obesity is associated with a number of costly chronic health conditions at all ages. According to some researchers, obesity may have contributed more than one-quarter of the increase in U.S. health care costs between 1987 and 2001 (Thorpe et al. 2004).

These skyrocketing costs have significant implications for Medicare and Medicaid. Public health insurance programs like Medicare and Medicaid paid half of the health costs attributable to obesity between 1987 and 2002; the private insurance industry experienced a tenfold increase—from $3.6 billion to $36.5 billion—in obesity-related costs (Dietz, Benken, and Hunter 2009).

Recognizing the health and cost burden associated with obesity among older Americans, the Medicare program revised its coverage policy to allow obesity to be classified as a disease (Wall Street Journal 2004). In 2006, Medicare began covering bariatric surgery for the treatment of obesity (Centers for Medicare & Medicaid Services [CMS] 2005; 2006).

Other significant costs associated with being overweight or obese are indirect and intangible (personal) costs. Examples of indirect costs include lost wages and their associated tax revenues (Caterson, Franklin, and Colditz 2004), decreased productivity, higher disability pension...
payouts, and lost productivity associated with premature death (Thompson et al. 1998). Examples of the intangible costs include missed employment and social opportunities (Caterson, Franklin, and Colditz 1999, 2004).

Healthy People 2010, a set of national health goals adopted by the U.S. Department of Health and Human Services (DHHS 2004), seeks to reduce obesity among children and adolescents by 6 percentage points (from 11 percent to 5 percent) and among adults by 8 percentage points (from 23 percent to 15 percent) by 2010. However, recent estimates project that by 2015, 41 percent of adults and 24 percent of children and adolescents will be overweight or obese (Rutkow et al. 2008), making it unlikely that the Healthy People goals will be met.

Lessons Learned from Tobacco Control Policies

Efforts to decrease tobacco use in this country have been very successful. Adult per capita cigarette consumption (defined as total cigarettes consumed divided by the population above age 17) has steadily declined from 4,143 a year in 1964 to 2,000 by 2006 (see figure 3) (Warner 2006). These results are largely attributable to the combined impact of the following actions:

- Tobacco taxes
- Smoke-free air laws and policies
- Counteradvertising
- Advertising bans

The four strategies, taken together, have changed behavioral norms: no longer is it as socially acceptable to be a smoker, as it once was. Public education, which

Figure 3
Yearly Cigarette Consumption among Adults in U.S. (1900-2000)

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has helped to increase awareness of the harmful effects of smoking, is also credited with bringing down smoking rates, but there is little empirical evidence demonstrating the impact of education campaigns (Warner 2006).

Based on the success of a multipronged approach to reducing tobacco use, it makes sense to explore whether these same strategies can be applied to abate unhealthy food behaviors linked to obesity.

Promising Strategies for Applying Lessons Learned from Tobacco Control to Obesity Control

Strategies used in the tobacco context might be applied to address the growing problem of obesity, and this paper discusses the pros and cons of their use to combat obesity. We do not discuss every strategy used in the war on tobacco; rather, we focus on those antismoking efforts that have been shown to have (or in the case of warning labels, could have) the most impact, and how they might be adapted to combat obesity:

- Imposing excise taxes on sugar-sweetened beverages and other junk foods
- Creating junk food–free zones
- Using counteradvertising
- Imposing advertising bans
- Requiring menu labeling
- Mandating warning labels on certain foods and beverages

There are many contributors to the problem of obesity that cannot be addressed by strategies used to control tobacco. Among them are inadequate amounts of physical activity, barriers to physical activity posed by the built environment, perverse incentives associated with farm subsidies, and the unavailability of affordable nutritious foods in certain neighborhoods. Certainly there are promising policy strategies to address these problems. However, we discuss only strategies that are most analogous to those successfully used in the war on tobacco.

Imposing Excise Taxes on Sugar-Sweetened Beverages and Other Junk Foods

The impact of price increases on smoking rates is well documented (Powell and Chaloupka 2009; Warner 2006). Smoking declines in response to price increases; a 10 percent increase in price decreases demand by 3 to 5 percent (Warner 2006). Because tobacco taxes raise revenue while simultaneously decreasing smoking rates and reducing smoking-related deaths, tobacco taxes enjoy strong political and public support (Warner 2006). State taxes on cigarettes, which increased 160 percent between 1982 and 2007, are credited with driving most of the recent declines in the prevalence of adult smoking (Powell and Chaloupka 2009).

Taxing Sugary Drinks

Consumption of carbonated soft drinks (regular and diet) among young people rose from 37 percent in 1977–78 to 56 percent between 1994 and 1998, “accounting for approximately 14 percent of the daily caloric intake for adolescents between ages twelve and nineteen” (Dietz, Benken, and Hunter 2009). The dramatic increase in consumption of energy-dense carbonated beverages among adolescents has resulted in their need to consume more and more calories in order to feel satiated (Stang 2000), and is an important contributor to the problem of obesity. Among adults, there was a 100 percent increase in consumption of carbonated soda (regular and diet) and fruit juices (not 100 percent juice) between 1977–79 and 1994–95. This increase may be an important contributor
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to excessive caloric intake among all ages (Dietz, Benken, and Hunter 2009).

Imposing excise taxes on sugar-sweetened beverages—those with high-calorie sweeteners like sucrose (table sugar), high-fructose corn syrup, or concentrated fruit juices—holds promise for helping reduce rates of obesity and raising revenues. This is especially true if the tax is substantial (Brownell et al. 2009).

In 2008, 29 states imposed a sales tax on soft drinks ranging from 1 percent to 7 percent (Kaiser Family Foundation 2008). These rates are generally viewed as insufficient to produce significant changes in consumption (Jacobson 2009). Taxing sugary drinks could be an important obesity-reduction strategy because they contribute significantly to the problem of obesity and its associated chronic conditions in both children and adults (Brownell et al. 2009).

Researchers at the Rudd Center for Food Policy at Yale University found that “for every 10 percent rise in the price of sugary drinks, consumption falls by 7.8 percent” (Brownell and Frieden 2009, 1806).

In terms of generating revenue that could be used to finance anti-obesity advertising, one estimate is that a national tax of 1 cent per 12-ounce soda would generate an estimated $1.5 billion annually. Similar amounts could be generated from taxes on other types of junk food like potato chips, candy bars, and other snacks with little or no nutritional value (Gostin 2007).

Efforts to tax sugary drinks meet with stiff resistance. Recently the Senate Finance Committee considered a proposal to tax soda and other sugar-sweetened drinks as a way to finance health reform (Wall Street Journal 2009). The proposal faced strong opposition from the beverage industry and was ultimately dropped.

Arguments For and Against Taxes

Those who favor taxing sugary drinks argue that there is sufficient science linking their consumption to obesity and certain chronic illnesses such as type 2 diabetes and coronary artery disease (Brownell et al. 2009). They also claim consumption of these drinks is linked to tooth decay and dental erosion (Jacobson 2009).

Those who oppose the tax argue that it is regressive (i.e., it has a larger impact on low-income people); that it is too difficult to determine which foods to tax; and that it is an oversimplified, blunt-instrument approach to a complex problem that has multiple contributing factors (Brownell et al. 2009). It is not surprising that representatives of the sugary beverage industry do not attempt to argue that their products are healthy.

In response to the argument that the tax is regressive, studies show that in the face of such taxes, the purchase of staples like milk, bread, and flour holds steady while the purchase of the unnecessary, non-nutritious food items declines (Raloff 2009). While this response does not negate the regressive nature of the tax, it does help demonstrate that the tax would likely not impact the ability of lower-income households to purchase needed nutritional foods.

The same regressivity argument was made against tobacco taxes and successfully countered by proponents of the tax who argued that the poor were inordinately affected by the burden of disease associated with smoking; that the tax revenues could be used to promote programs to help smokers; and that even “blunt instruments,” when used in concert with other approaches, can be very successful in changing behavior (Brownell et al. 2009).

These same counterarguments could apply to obesity. One proposed remedy
to address the unfair burden of taxes on low-income households is to provide those families with subsidies to purchase healthy foods. Revenues from the tax could be used to finance the subsidies (Powell and Chaloupka 2009).

Sugary drinks are the current focus of attention. However, myriad non-nutritious products on the market also contribute to obesity. They should also be considered as potential targets for increased taxation.

**What to Tax and How to Tax It**

Which, among the many sugar-sweetened beverages and junk food products on the market today, should be subject to a beverage and junk-food tax? Categorizing foods in a valid yet simple way will require some thought. A starting point might be to identify a minimum nutrient standard that considers energy density, and tax all foods that do not meet the standard.\(^4\)

Before such taxes could be levied, good evidence would be needed that the specific product does not meet the minimum requirement. The amount of the tax could vary so that a product that does not meet the minimum nutrition requirement but does have some nutritional value could be taxed less.

A federally sponsored task force could be established to evaluate evidence for and against taxing specific food items based on lack of or minimal nutritional value. This task force would work much like the United States Preventive Services Task Force (USPSTF), which considers evidence for preventive services and makes recommendations that are ultimately used to determine insurance coverage. The food industry would be compelled to assist the task force by providing required evidence.\(^5\)

The USPSTF would be able to revise its recommendations based on changes in nutrition science.

David Katz, a researcher at the Yale Prevention Research Center, worked with a team of nutrition experts to develop a nutrition index—called NuVal—that produces a composite score to rate food based on its overall nutritional value. NuVal determines the nutritional value of food by weighing favorable food properties (such as iron, fiber, and vitamins) against unfavorable food properties (such as sugar, sodium, and cholesterol content). The NuVal system scores food on a scale of 1 to 100. The higher the score, the higher the nutritional value of the food (NuVal 2009). The index may prove useful for developing nutritional standards in this country (AARP 2008).

As with tobacco taxes, the public shows strong support for taxes on sugar-sweetened beverage and junk food, especially if these revenues will be directed at funding strategies to combat obesity (Brownell et al. 2009; Robert Wood Johnson Foundation [RWJ] 2009; Warner 2006).

**Creating Junk Food–Free Zones**

**Defining Junk Food–Free Zones**

Junk food–free zones are the counterpart to banning smoking in certain environments such as workplaces and restaurants. Although smoking bans are designed principally to protect people from the effects of secondhand smoke, a secondary benefit is that they also help curtail the ability of smokers to indulge their habits in certain venues. Studies have shown that smoke-free requirements limit exposure to secondhand smoke and reduce smoking among those who already smoke (Fichtenberg and Glantz 2006).

Like smoke-free places, junk food–free zones would be designed to remove or limit the availability of unhealthy food items in the environment, helping to reduce obesity by making high-calorie food choices unavailable. For example,
junk food–free zones could be created in school cafeterias and workplace lunchrooms. While some believe that there is no food-related equivalent to secondhand smoke (Mello, Studdert, and Brennan 2006), others have found that unhealthy eating habits can have a profound “secondhand” impact among friends or close associates, increasing a person’s chances of becoming obese by 57 percent if the person has a friend who becomes obese (Christakis and Fowler 2007).

Eating junk food in social settings can be contagious (Christakis and Fowler 2007). For example, one might have that bag of chips while on a work break simply because a colleague is doing so. Although one worker might not suffer harm from consuming the non-nutritious snack, another worker who is overweight would.

Eliminating such food choices from the environment is a protective, albeit paternalistic, approach to help both workers avoid unhealthy foods. Paternalism in this context may be justified by other concerns, such as an employer’s interest in keeping health insurance costs in check for all employees or reducing absenteeism associated with obesity-related disease by creating an environment that makes it easier to make healthy food choices.

Intervening in Schools

The growing epidemic of obesity among children and teens in this country has led elementary and secondary school districts to impose measures that reduce the availability of certain non-nutritious competitive food items.

Competitive foods are those that are sold outside of federally regulated school meal programs, do not conform to federal nutrition guidelines, and are unlikely to be consistent with recommendations for nutrient intake (see the text box) (Food Research and Action Center [FRAC] n.d.; Institute of Medicine [IOM] 2007).

Examples of non-nutritious competitive foods are soda and potato chips sold in school vending machines, and brownies and cupcakes sold at school bake sales. While some competitive foods (for example, fruit) can have high nutritional value, school limits and bans tend to focus on those that do not (Levi et al. 2009).

Schools are the ideal setting for intervening in food choices because young people consume up to 50 percent of their daily dietary intake in school, and there is clear evidence that dietary habits established early in life persist over a lifetime. Obese adolescents tend to remain

What Are Competitive Foods?

The phrase “competitive foods” refers to foods and drinks that are available for sale at schools, other than meals and snacks served through the federally sponsored school lunch, breakfast, and after-school snack programs.

Competitive foods are sold in a variety of school venues: extra foods and beverages sold through a la carte lines (which sell food items alongside federally reimbursed school meals), snack bars, student stores, vending machines, and fundraisers (where school organizations sell baked goods or candy to raise money).

Competitive foods can be healthy or unhealthy. Healthy competitive foods, like fruits or other nutritious snacks, are more often sold in a la carte lines in cafeterias. Less healthy foods, like soda and chips, are more often sold through vending machines, school stores, canteens, and snack bars.

Sources: Government Accountability Office 2004; FRAC n.d.
overweight as adults, and those who develop obesity-related chronic illnesses at early ages tend to be affected by them into adulthood (IOM 2007). Imposing limits or outright banning access to junk food in schools may promote improved eating habits that could result in lifelong health improvements and significant cost savings.

**Federal Initiatives**
Federal and state governments have enacted measures designed to limit students’ access to junk food. For example, Congress has delegated sole authority to regulate the sale of competitive foods in schools to the United States Department of Agriculture (USDA) (IOM 2007). The USDA, in turn, bars the sale of foods with minimal nutritional value (FMNV) around food service areas during meal periods; specifies four categories of FMNV (soft drinks, water ices, chewing gum, and certain candies); defines FMNV as a food providing less than 5 percent of the U.S. Reference Daily Intake per serving of any one of eight key nutrients; and gives states and localities discretion to impose additional restrictions. The USDA had sought to go farther by barring the sale of FMNV throughout the entire school environment from the start of the school day until after the last lunch period, but this provision was successfully challenged in court (IOM 2007).

**State Initiatives**
States are increasingly limiting the sale of junk food in school settings. For example, 27 states have nutritional standards for competitive foods that may be sold through a variety of school venues. Five years ago, only six states had such standards in place. Twenty-nine states go beyond federal requirements by limiting when and where competitive foods may be sold on school campuses. This is an increase from 17 states just five years ago. For example, California recently passed a law banning the sale of soda during school hours and limiting the fat and sugar content of foods sold on school grounds (Landsberg and Morin 2005). Colorado recently went well beyond USDA requirements by banning the sale of certain beverages on school grounds during the entire school day (Levi et al. 2009).

**Criticisms of Food Bans**
One criticism of restricting access to or banning non-nutritious food items from schools is that these measures will not necessarily reduce obesity since young people have access to unlimited food choices in other venues. This observation is true, but there is clear evidence that “school environments can have a significant influence on children’s diets and play an important role in teaching and modeling appropriate eating behaviors” (IOM 2007, 1). Families and communities that work together with schools to improve dietary habits of children and adolescents have the potential to change behavioral norms that persist for generations.

Another criticism of food bans is that they unfairly vilify certain foods when the real cause of overweight and obesity is lack of physical activity and poor impulse control. These critics maintain that while calorie consumption has remained constant among children, there has been a significant reduction in rates of physical activity among young people (Casino 2009). Therefore, policymakers should focus on strategies that increase exercise.

While it is certainly true that physical activity plays an important role in maintaining energy balance and thus weight control, and that promoting increased physical activity is an important and legitimate policy goal, the fact that foods with minimal or no nutritional value contribute to obesity must also be addressed. Efforts to restrain consumption
of FMNV have significant value in combating growing rates of obesity.

Industry vigorously opposes food bans on the grounds that they are an unwarranted intrusion on free trade and commerce and undermine competition (Gostin 2007). While these arguments may be true, the countervailing consideration is whether food bans, whatever their impacts on industry, are a legitimate government action that promotes the general public welfare.

**Applying Food Bans in Adult Settings**

Intervening at younger ages to alter food habits can have a powerful impact on reducing obesity over a lifetime; however, the high prevalence of obesity among adults highlights the need for interventions targeting every age group. In fact, the Medicare program, which pays for health care for persons age 65 and older and people with disabilities, shoulders much of the cost burden associated with obesity. Persons who are overweight or obese when entering the program incur substantially higher annual costs than their normal-weight counterparts (Finkelstein et al. 2008).

To address the problem of obesity among adults, there may be no better place to start than in the workplace, where in 2008, three-quarters of vending machines offered junk foods such as candy bars, sugary soda, and potato chips (Marlin Company 2008). As employers seek to improve the health of workers and reduce insurance costs, addressing obesity by eliminating junk food in the workplace should be considered in concert with other workplace wellness interventions.

Employers are already adopting policies to get their workers to stop smoking and lose weight—policies such as prohibiting smoking on and off the job, providing cash incentives to adopt healthy behaviors, and providing discounts on insurance (Hand 2009). These private efforts combined with federal tax incentives for employers—especially small businesses—to take proactive measures like subsidized gym memberships and counseling might make significant contributions to combating the problem of obesity (Finkelstein et al. 2008). Employers can augment these efforts by banning non-nutritious foods in the work environment.

**Using Counteradvertising**

Counteradvertising, or social marketing, as it is sometimes called, offers “the opportunity to provide consumers with constructive information to compete” with harmful or less constructive messages (Warner 2006, 31). Research supports the use of counteradvertising as an effective strategy to reduce smoking. In the context of tobacco control, counteradvertising has taken one of three approaches: public service announcements (PSAs), donated airtime under the mandates of the Fairness Doctrine, and paid airtime for commercial use (Warner 2006).

**Public Service Announcements**

PSAs—noncommercial television and radio advertising—are often used to sway public attitudes by increasing awareness about a specific issue. Research suggests that antismoking PSAs are effective in helping to change attitudes and behavior (Kean and Albada 2004).

Broadcasters use PSAs to fill open time slots they are unable to fill with station promotions. Although effective, PSAs have their limitations because the media are not legally obligated to make such time available, PSA airtime is limited, and the number of requests for PSAs far exceeds available slots (U.S. Department of Justice n.d.).

Despite their limitations, PSAs were used in the war on tobacco, and they are now
being used to combat obesity. For example, in March 2004, the Ad Council—a private, nonprofit organization that marshals volunteer talent from the advertising and communications industries—partnered with DHHS to launch a nationwide multimedia campaign called Small Steps to change Americans’ attitudes regarding obesity and to acquaint them with the little things they can do to control weight.10 The campaign initially included three PSAs for television and five for radio that aired nationwide. The ads have been refreshed with new ones several times and are still airing. The initial ads were targeted primarily at adults, although it was hoped that adults would also use the information to address problems of obesity in their children. A companion campaign directly targeting children was launched in 2005.

The Ad Council is committed to the obesity-prevention campaign with DHHS until March 2010 (Ad Counsel n.d.; Signorelli 2009).11 A survey of 467 people suggests that the ads did influence lifestyle adjustments (Stein 2008).12 A more definitive assessment of the impact of the PSAs remains to be done.

**Mandated Donated Airtime**

The Fairness Doctrine was adopted by the Federal Communications Commission in 1949 to create fair and balanced discussions in broadcast media. The rationale behind the doctrine was that station licensees are public trustees and, as such, have a responsibility to provide reasonable opportunity for discussion of contrasting points of view on controversial issues of public importance.

The doctrine was successfully used to influence tobacco advertising; at its peak, broadcasters donated one minute of airtime for every three minutes of cigarette advertising time to antismoking media campaigns, resulting in approximately $350 million annually (2006 dollars) in donated airtime (Warner 2006).

The antismoking campaigns had their desired effect and are credited with contributing to declines in cigarette use.

With the passage of the Public Health Cigarette Smoking Act of 1969, which prohibited broadcast advertising of cigarettes as of January 2, 1971, use of the Fairness Doctrine to counteract such advertising came to an end. Interestingly, the tobacco industry was reported to be enthusiastic about the law because it was persuaded that the counteradvertising was hurting cigarette sales more than industry advertising was promoting sales (Warner 2006). Although not depicted in figure 3, right after the Fairness Doctrine ceased to be used for cigarette advertising, per capita consumption of cigarettes rose for three consecutive years, but tapered thereafter (Warner 2006).

The Fairness Doctrine was dissolved under the Reagan administration in 1987 on the grounds that it was no longer having its desired effect and that it might be limiting free speech in violation of the First Amendment (Pomeranz et al. 2009). Although there has been some interest over the years in resurrecting the doctrine (Rendell 2005), it is unlikely that it will return and questionable whether it has relevance in today’s society, where a variety of media outlets (Internet and cable) have lessened the need for it.

**Paid Airtime**

Paid airtime for commercial use has proven an effective strategy in reducing smoking. For example, a youth-oriented antismoking media campaign, dubbed the Truth Campaign, was financed with funds from the Master Settlement Agreement (MSA) reached between states and tobacco companies in 1998.13
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As part of the MSA, the American Legacy Foundation was created and funded to conduct the media campaign. Financed by $100 million annually from MSA funds, the campaign was found to have “effectively grabbed the attention of its target audience and altered attitudes towards future smoking” (Warner 2006, 33).

The question about what type of advertising is most effective—ads that attack industry, those that deliver health-oriented messages, or a combination of both—is unanswered. What is known is that ad campaigns must be significant in size and duration to be effective (Warner 2006) and are, therefore, expensive undertakings.

Paid advertising can be effective as an obesity reduction strategy if adequately financed.

Given the current fiscal realities, it is unlikely that states will be able to provide much funding for paid airtime to combat obesity. One idea to obtain the needed resources would be to levy a tax on non-nutritious products known to contribute to obesity, like sugar-sweetened drinks, and dedicate the funds to antiobesity advertising.

In the face of shrinking state budgets, considerable restraint will be needed to ensure that funds generated by such a tax are actually used to fund antiobesity strategies and not redirected to other state priorities.

**Imposing Advertising Bans**

**Purpose of Advertising Bans**

Strong evidence supports the conclusion that advertising increases tobacco use (Saffer and Chaloupka 2000). Advertising bans on tobacco products “represent an important component of a comprehensive tobacco control program” (Warner 2006, 31). Such bans are most effective when they are comprehensive, meaning that they are applied to all outlets—television ads, print ads, outdoor ads, point-of-purchase ads, movie ads, and sponsorship ads (Saffer and Chaloupka 2000).

Researchers estimate that a 1997 law enacted by the European Commission (EC) ending all tobacco advertising in EC countries by October 2006 will reduce overall tobacco use by 6.3 percent and will decrease cigarette smoking by 7.9 percent (Warner 2006).

The same rationale should be applied to support certain food and beverage advertising bans, such as ads for high-sugar breakfast cereals targeted toward children and high-calorie soft drinks marketed to both adults and children. Advertising for sugary and other high-calorie, non-nutritious foods typically seeks to extol their gratifying aspects, while neglecting to point out that these foods could lead to or exacerbate obesity, that they lack any significant nutritional value, and that any nutritional value they may have is outweighed by their potential harmful effects on weight.

The explosion of advertising of non-nutritious foods targeting children in the 1980s was driven by efforts to increase present consumption, while at the same time generating brand loyalty that will yield a lifetime of future consumption (Munger 2004).

**Young People Are at High Risk**

It is estimated that more than $10 billion per year is spent on food and beverage marketing to children and adolescents in smoking by “distorting smokers’ understanding of the consequences of smoking” (Warner 2006, 25).
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the United States (IOM 2006). Approximately 72 percent of food advertisements aimed at American youth are for candy, cereal, and fast food. Children, particularly those under age 8, are especially vulnerable to fast food advertising because they lack the ability to critically evaluate it (Mello, Studdert, and Breenan 2006).

Children who view such television advertising were found to be 50 percent more likely to eat fast food (Connor 2006). Such consumption has the potential to develop habits that result in lifelong chronic health problems and the astronomical health costs associated with them.

Bans on advertising targeting children are very popular in Europe. For example, Ireland bans TV advertising for sweets and fast food and prohibits celebrities and sports stars from promoting junk food. Both Sweden and Norway have total bans on junk food advertising aimed at children under age 12 (European Public Health Alliance [EPHA] 2007).

Policy Alternatives for Imposing Advertising Bans

According to a recent study, a complete ban on fast food advertising in the United States could reduce the number of overweight children by as much as 18 percent and the number of overweight teens by 14 percent (Chou, Rashad, and Grossman 2008).

Although the study did not discuss the impact of such bans on adults, in light of strong evidence that eating habits are shaped early and persist over a lifetime, this approach holds promise for having a long-term impact on obesity reduction and reduced costs to public insurers that pay for obesity-related diseases.

An alternative policy option would be to eliminate the corporate tax exclusion for advertisement of unhealthy foods. It is estimated that this approach would result in a 40 percent reduction in fast food messages seen on television by children and a 33 reduction in ads seen by adolescents, leading to a reduction in the number of overweight children and adolescents by 7 percent and 5 percent, respectively (Chou, Rashad, and Grossman 2008).

Constitutionality of Advertising Bans

The First Amendment protects commercial speech—messages that propose a commercial transaction—like that used in advertising. In 1971, a congressional ban on all television and radio advertising of cigarettes went into effect. Lawmakers were able to institute the ban because at that time, the U.S. Supreme Court had ruled that commercial speech was not protected by the First Amendment. It was not until 1975 that the Court, for the first time, determined that commercial speech is protected by the Constitution (Gostin and Brandt 1993).

In spite of the 1975 ruling extending First Amendment protections to commercial speech, bans on cigarette advertising over the airwaves remain in place. A likely explanation of why tobacco companies do not seek to have the bans lifted has to do with the implication of the Fairness Doctrine.

Before the 1971 ban on cigarette ads, advertising by tobacco companies was met with donated airtime for counteradvertising under the Fairness Doctrine. When the advertising ban went into effect in 1971, the need to invoke the Fairness Doctrine went away. According to some, the tobacco companies secretly supported the law that banned cigarette ads because they “had come to believe that antismoking ads were hurting sales more than pro-smoking sales were helping them” (Warner 2006, 32).
In 1980, the U.S. Supreme Court decided the landmark case of *Central Hudson Gas & Electric Corp. v. Public Service Commission* (447 U.S. 557), which established a four-part test for determining when restrictions on commercial speech violate the First Amendment. The test asks the following questions:

- Is the commercial speech protected by the First Amendment? (For speech to be protected it must concern lawful activity and not be misleading.)
- Does the government have a substantial interest in limiting the commercial speech?
- Do the limitations on speech clearly advance the government’s stated interest?
- Is the regulation more extensive than it needs to be to advance the government’s legitimate interest?

In determining whether the test is met, a more recent U.S. Supreme Court case, *Lorillard Tobacco Co. v. Reilly* (533 U.S. 525, 2001), has to be considered. In *Lorillard*, the Court struck down parts of a Massachusetts regulation that banned outdoor tobacco advertising and placed height restrictions on point-of-sale advertising of tobacco products within 1,000 feet of any school or playground.

Specifically, the *Lorillard* Court found the breadth and scope of the regulation banning outdoor advertising within 1,000 feet of schools or playgrounds to be an “unreasonable fit” between a legitimate regulatory goal and the means sought to achieve the goal and, consequently, it did not satisfy the fourth step of the *Central Hudson* analysis.

Regarding the height requirement on point-of-sale tobacco advertising, the Court ruled that there was very little chance that the requirement would advance the state’s goal of keeping children from seeing the ads, and that the height restriction was not a “reasonable fit” for helping the government achieve its legitimate goal. Thus, the height requirement on point-of-sale advertising failed both the third and fourth steps of *Central Hudson*.

Legal scholars have suggested that narrowly tailored laws (i.e., those affecting only legitimately targeted groups) that are designed to advance an important government purpose might overcome challenges to food bans on First Amendment grounds (Engelhard, Garson, and Dorn 2009; Gostin and Brandt 1993; Mello, Studdert, and Brennan 2006; Pomeranz et al. 2009).

### Requiring Menu Labeling

#### The Need for Labeling

Americans are eating out now more than ever, spending nearly half of their food budgets and consuming one-third of their calories in restaurants (Center for Science in the Public Interest [CSPI] 2009; Guthrie, Lin, and Frazao 2002). There is strong evidence that calories consumed away from home lead to excessive weight gain, and that most people significantly underestimate the number of calories in their dining-out choices (CSPI 2009; RWJ 2009).
Some Americans are increasingly looking to the food and restaurant industry to provide them with healthier food choices (National Restaurant Association 2008). Making point-of-service calorie and nutrition information available to consumers will increase awareness and could influence healthier food choices. Language in recent federal health reform legislation passed in the House and the Senate would require nutrition labeling for foods and beverages sold in chain restaurants and from vending machines (H.R. 3962, 2009; H.R. 3590, 2009).

Menu labeling is related to the idea of providing warnings on cigarette packages. The theory is that when confronted with accurate information, consumers will choose the healthier food option, much as they might be influenced by prominent and graphic warnings on cigarette packages to consider smoking cessation.

Some research has shown that menu labeling has only modest impacts on consumer choice. However, menu labeling requirements are relatively new, and their long-term effects are not yet known. Moreover, menu labeling may have secondary impacts on reducing obesity by creating incentives for restaurants to introduce healthier, less fattening menu items (RWJ 2009).

Is Menu Labeling Effective?
Experience with nutritional labeling requirements is heartening. Surveys have demonstrated that after the passage of the Nutrition Labeling and Education Act in 1990, which required packaged foods to carry nutrition facts labels, nearly three-quarters of the U.S. population ages 18 and older reported reading the labels.

Another survey found that 30 percent of respondents reported changing their minds about buying food products after reading the nutrition label (Crane, Hubbard, and Lewis 1999); in another survey, 61 percent of respondents reported doing so (Guthrie, Derby, and Levy 1999). After food labeling requirements went into effect in New York City, 82 percent of respondents in a survey of the city’s residents indicated that having such information influenced their food choices (CSPI 2009). It will be important to better understand whether the impacts of menu labeling last over time.

State Legislation on Menu Labeling
Menu-labeling legislation is an approach that is gaining traction in this country. As of July 2009, three states—California (SB 1420), Maine (LD 1259), and Oregon (H 2726)—had enacted comprehensive statewide legislation requiring menu labeling (including posting calorie content of foods and beverages) for chain restaurants (National Conference of State Legislatures 2009).

Such measures have also been enacted in New York City; Westchester County, New York; Philadelphia; and King County, Washington. Many more states have considered mandated menu labeling (CSPI 2009; Frumpkin 2008). Much like attempts to ban smoking in the workplace and other public places, lack of action at the federal level to develop national menu-labeling standards has prompted aggressive state and local action, leading to an inconsistent patchwork quilt of requirements.

Pros, Cons, and Opposition to Menu Labeling
Those who have opposed menu labeling—primarily representatives of the food and beverage industry—argue that conducting nutritional analysis and reprinting menus would be cost prohibitive. Rarely do they acknowledge
that people might be less inclined to purchase many food items if they knew exactly how many calories they contained (American Society for Nutrition 2009). However, as these measures gain momentum at the state level, industry has responded by seeking to compromise with lawmakers.

Seeing the handwriting on the wall and desiring consistency in labeling requirements across states, food industry representatives have recently thrown their support behind federal legislation mandating menu-labeling requirements (CSPI 2009; H.R. 3962, 2009). If enacted, national labeling standards would preempt states’ legislation, creating a national standard, much like the Family Smoking Prevention Act of 2009, which preempts states’ ability to prescribe health warning labels on tobacco product packaging (Tobacco Control Legal Consortium 2009). Although manufacturers are acquiescing to more oversight for the sake of uniformity, public health goals might be better served if states are allowed to exceed federal requirements.

Mandating Warning Labels on Certain Foods and Beverages

Warning labels, another strategy used to decrease tobacco use, have not been very successful in the United States because the warnings are hard to read, not prominently placed on packages, and have become so familiar that they have little to no impact (Hammond et al. 2007; Warner 2006).

With some changes, these warning labels might be a more effective strategy for reducing smoking rates, as they appear to be in other countries such as the United Kingdom.

Recent Federal Legislation
The Family Smoking Prevention Act (P.L. 111-31, 2009), which gives the Food and Drug Administration (FDA) authority to regulate the tobacco industry, may change things. Under the new law, the FDA can require tobacco companies to place larger, more varied, and more prominent warning labels on tobacco products (e.g., the warning label must cover at least 50 percent of the front and rear of each package of cigarettes). The New York Public Health Department is already placing graphic warnings on matches. The impact of this initiative is not known at this time. Under the new federal law, more prominent labeling requirements may have more influence on smokers.

The Impact of Graphic Labels
Studies have shown that more prominent and graphic labeling—like that used in Australia, Brazil, Canada, and the United Kingdom—is more likely to be noticed and rated effective by smokers (Hammond et al. 2007; Warner 2006). In fact, after the United Kingdom enhanced its warnings to meet the minimum international standards issued by the World Health Organization Framework Convention on Tobacco Control (WHO FCTC 2009), smokers were “significantly more likely” to notice and read them than they were the previous set of warnings. In the UK, the new, more prominent warnings have led to a significant increase in the number of monthly calls to the public health helpline (Hammond et al. 2007).

Arguments against the Use of Warning Labels
Opponents of using warning labels on tobacco products assert that smokers already know the risks of smoking. A large body of evidence demonstrates that, in fact, smokers have inadequate knowledge of the health effects of smoking and woefully underestimate the severity of its health impacts (Tobacco Free Center 2009).
Opponents also argue that there is no evidence that labeling tobacco products will have the desired effect. Again, the evidence clearly demonstrates that large, graphic warning labels increase knowledge about the health risks associated with smoking and can persuade smokers to quit (Tobacco Free Center 2009).

One final argument is that it is too costly for manufacturers to label their tobacco products. This argument has little credibility when one considers that it is being advanced by an industry that frequently changes product labeling to promote its product by giving it a “fresh” look (Tobacco Free Center 2009).

Many of the same arguments used to overcome opposition to warning labels on tobacco products can be advanced to promote the labeling of food products.

**Using Warnings in the Context of Foods and Drinks**

Manufacturers could be required to place warning labels on unhealthy food and beverage products or in grocery stores to let people know that their consumption could contribute to obesity. Other types of warnings could alert people to the fact that the product has little or no known nutritional value, or that it could cause or contribute to certain chronic illnesses like diabetes and high cholesterol.

This approach could influence consumers to make alternative food choices, and is very similar to a requirement in effect in France that requires all advertisements for unhealthy food and beverages to carry health messages. Violators are fined 1.5 percent of the cost of the advertisement (EPHA 2007).

The City of New York is already experimenting with warnings about sugary drinks. In August 2009, the city’s Health Department began posting billboards in subways that show streams of sugary drinks turning into yellow globs of human fat and mottled with blood vessels as a soft drink is poured over ice into a glass. The ad’s caption reads, “Are You Pouring on the Pounds?” (Lisberg 2009).

While it is too early to determine the impact of New York’s antiobesity effort, it is not unreasonable to think that the combination of a mass media campaign coupled with requirements to place warning labels on non-nutritious foods could increase awareness about obesity and its connection to unhealthy foods—and may even lead some to alter their eating habits.

**AARP Public Policy Institute Innovation Roundtable**

In November 2008, AARP brought together leading experts to explore the health and economic benefits of health promotion and disease prevention for American seniors. Participants discussed the applicability of efforts similar to those used for tobacco control to obesity reduction. Participants agreed that the problem of obesity exacerbates an already growing problem of chronic disease and its associated costs. Therefore, efforts to further explore how tobacco control strategies translate in the obesity area would be very useful (AARP 2008).

Participants agreed that based on what we know about the success of a multipronged approach to reducing tobacco use, it would make sense to apply these lessons to other unhealthy behaviors, like poor eating habits. According to one participant, the tobacco experience suggests that using incentives to discourage unhealthy
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eating could be a successful strategy. Further, the tobacco control experience suggests that public campaigns to raise awareness about the importance of diet and exercise and to highlight the negative effects of obesity on health and chronic illness might be valuable (AARP 2008).

A challenge in constructing such campaigns is that messages like “eat healthy food” and “lose weight” do not necessarily translate into behavioral changes at the individual level for a variety of reasons (e.g., economics, psychological needs, and cultural barriers). These barriers highlight the need for a variety of interventions, including targeted messaging and one-on-one counseling (AARP 2008).

Meeting participants agreed that the transferability of some lessons learned from the tobacco experience, like taxes and food bans, is more controversial, and the impacts of these lessons are not well understood. Nevertheless, these efforts still merit continued exploration.

**Policy Recommendations**

A number of policies can and should be advanced to address the problem of obesity. Examples are policies that promote increased physical activity, promote healthier food choices, create incentives for making the built environment more conducive to exercise, and change farming and manufacturing incentives. The policies advanced here are those that are most closely aligned with those used to combat tobacco use.

- The federal government should invest in research that leads to a better understanding of the impacts of excise taxes and food bans on obesity. Such research should explore how taxes and bans would be developed and administered, and their impacts on low-income communities.

- The Federal Trade Commission (FTC)—the federal agency responsible for, among other things, protecting the American public from unfair and deceptive marketing practices—should adopt a rulemaking approach that sets industry-wide standards of behavior for unfair and deceptive trade practices related to advertising energy-dense foods of questionable nutritional value. Congress should allow the FTC to exercise its full authority to ban unfair and deceptive advertising practices.

- Public and private sector employers should examine their work environments and eliminate foods and beverages that are known contributors to obesity.

- The federal and state governments should support menu labeling and warning labels as strategies to educate consumers about risk factors associated with certain food products.

**Conclusion**

Although impulse control plays an important role in how much food people consume, for a variety of reasons—environmental, social, behavioral, and genetic—some people are not able to balance their caloric intake with physical activity to maintain normal weight. The increase in obesity—and its associated disease and cost burdens—is persuading the public health community and policymakers that more has to be done to combat the health problem and that government intervention can be an appropriate tool (Dietz, Benken, and Hunter 2009; Mello, Studdert, and Brennan 2006).
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In the face of mounting evidence demonstrating the health effects of obesity throughout the life cycle, it would be irresponsible to leave individuals to solve the problem themselves. This is especially the case where there are so many environmental contributors to the problem of obesity that are beyond individuals’ control.

Tobacco control strategies have worked together to significantly reduce smoking in this country. While some strategies have been more effective than others, all have made some contribution. Compared with the war on tobacco, the fight against obesity in the United States is in its infancy, but it is employing many of the lessons learned from tobacco. Some of the tactics used to control tobacco use may not directly transfer to obesity control, but it is useful to begin to identify ways to modify them so that they can be used to help reduce the prevalence of obesity and its associated toll on health status and health care costs.

Many other useful strategies were combined with those discussed in this paper to bring down smoking rates. They include the availability of quitlines, counseling, and nicotine replacement therapy. These types of approaches should also be considered and adapted as part of a comprehensive strategy to combat obesity.

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1 Data are from the National Health and Nutrition Examination Survey (NHANES), which measures height and weight.

2 Three significant limitations associated with BMI measurement are that it may overestimate body fat in athletes and others who have a muscular build (Kuczmarski and Flegal 2000); it may underestimate body fat in older persons and others who have lost muscle mass and bone density (National Institutes of Health 2006); and it may underestimate body fat in persons who self-report height and weight (Stewart et al. 1987). For these reasons, BMI should be regarded as a rough, rather than precise, measure of body fatness, health status, or medical risk.

3 Taxes are much higher in Europe. For example, the United Kingdom applies a 17.5 percent value-added tax (VAT) to “treats” like ice cream, candy, and sugared drinks. Other foods are not taxed at this rate. France imposes a 19.6 percent VAT for these types of foods, while other foods carry a 5.5 percent tax (Engelhard, Garson, and Dorn 2009).

4 Energy-dense foods have fewer nutrients and more calories for the given food volume.

5 One such panel already exists in the United Kingdom. The panel—consisting of industry representatives, nutritionists, consumers, and policymakers—defines healthy and unhealthy foods for children using a model called the Rayner model. The Rayner model evaluates the nutritional risks and benefits of foods and drinks and rates them in three categories: healthier, less healthy, and intermediate. Ratings are used to determine which foods are appropriate for advertising to children. The model has been adapted for use in Australia and New Zealand (Engelhard, Garson, and Dorn 2009). The Rayner model could be adapted for use in this country to develop a system to tax unhealthy foods and beverages. The British panel operates under the jurisdiction of the Food Standards Agency, an independent government department set up by an act of Parliament in 2000 to protect the public’s health and consumer interests in relation to food (Food Standards Agency 2009).

6 These nutrients are protein, vitamin A, vitamin C, niacin, riboflavin, thiamin, calcium, and iron (CFR 2009).

7 These states are Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Hawaii, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Mississippi, Nevada, New Jersey, New Mexico, North Carolina, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, and West Virginia.

8 These states are Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Hawaii, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Mississippi, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, South Carolina, Texas, Vermont, and West Virginia.

9 Energy balance is defined as the effect of the interaction between diet, physical activity, and genetics on weight (National Cancer Institute 2004).

10 The objectives of the Small Steps Campaign, also known as the Healthy Lifestyles and Disease Prevention Media Campaign, are to increase awareness, change behavior, and promote healthier lifestyles among overweight and obese Americans (DHHS and Ad Council 2004). The humorous ads focus on people “losing” their overweight body parts—for instance, one of the original ads had a man posting a “missing” ad for his lost love handles around his neighborhood—and encourage people to visit smallsteps.gov (a Web site that lists easy things people can do to lose weight, such as taking the stairs instead of the escalator).

11 Since 2005, the ads targeting children have been running nationwide with the tagline “Have You Played Today?” to encourage physical activity as a healthy habit for children to avoid childhood and adult obesity. Most recently, the ads and the tagline have been used alongside commercials for the film Where the Wild Things Are to encourage children to play.

12 Some groups have criticized the ads for not having a large enough vision and for not directly criticizing poor eating habits (Stein 2008).

13 In agreeing to the settlement, the tobacco companies placed many restrictions on the
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marketing and advertising of their products. Some of these self-imposed advertising restrictions include not using cartoon characters, such as Joe Camel, to advertise their products; not targeting youth in the advertising, promotion, or marketing of tobacco products; not sponsoring concerts or other events with significant youth audiences, including team sporting events such as football games; and not advertising tobacco brand names at stadiums and arenas (Hudson 2009).

14 The law also authorizes the FDA to require disclosure of the contents of tobacco products; to require tobacco companies to conduct research on the impact of its products on consumers; and to ban marketing terms such as light, mild, and low-tar. The law prohibits tobacco companies from sponsoring sporting events and prohibits outdoor cigarette advertising within 1,000 feet of a school. It remains to be seen whether these last two prohibitions will stand up to First Amendment freedom of speech challenges.

Five tobacco manufacturers (the plaintiffs) have joined together to sue the FDA, contending that the prohibitions associated with the Family Smoking Prevention Act fail to pass the test for constitutionality of restrictions on commercial speech set forth in Central Hudson Gas & Electric Corp. vs. Public Service Commission because they (a) are not supported by a compelling government interest, (b) do not advance the government’s interest, and (c) are more extensive than necessary.

15 The WHO FCTC was developed in response to the globalization of the tobacco epidemic and is an evidence-based treaty that reaffirms the right of all people to the highest standard of health. The Convention represents a milestone for the promotion of public health and provides new legal dimensions for international health cooperation. Among its many provisions, which became effective in 2005, the WHO FCTC mandates large, clear, visible, and legible warnings that cover at least 30 percent of the package surface.