

NEW FRONTIERS IN OBESITY CONTROL: INNOVATIVE PUBLIC HEALTH LEGAL INTERVENTIONS

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I. INTRODUCTION

Obesity is the epitome of a global pandemic. Like cancer, obesity is prevalent among all populations. Like influenza, it respects no borders. Like HIV/AIDS, it is readily diagnosed and stigmatizing. Like West Nile Virus, it impacts individuals across all socioeconomic groups. Like heart disease, it is a chronic, disabling condition with well-known risk factors. And like its notable companion condition, type 2 diabetes, obesity contributes significantly to societal morbidity and mortality. The product of manifold causes, obesity is a global killer. It strikes the young and old. It kills gradually over time or suddenly. It significantly reduces life expectancy across populations. It directly lowers persons' quality of life and productivity. Obesity is a pandemic of the masses. Its spread is slow and evolving. Like tobacco-related diseases, however, obesity is largely preventable in most cases, especially in industrialized countries with adequate resources, such as the United States.

Nationwide increases in the prevalence of obesity among Americans over the last three decades have led to major efforts to better understand the condition, assess its root causes and negative impacts, and address them through medical, public health, and legal/policy reforms. Federal, state, and local governments have (1) considered and levied new "sin" taxes to counteract sales of select sugary or caffeinated products;¹ (2) altered the built environment

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1. HEALTHY EATING RESEARCH & BRIDGING THE GAP, ROBERT WOOD JOHNSON FOUND., SUGAR-SWEETENED BEVERAGE TAXES AND PUBLIC HEALTH 3 (2009), available at http://www.bridgingthegapresearch.org/_asset/rc7kd6/HER_BTG_Brief_SSBtaxes-2009.pdf.

through zoning laws to encourage healthier living;² (3) designed and implemented new reporting measures to track obesity rates;³ (4) encouraged snack and soda manufacturers to self-police their sales to children in schools;⁴ (5) instituted regional (and soon national) menu labeling requirements to vest consumers with caloric information about foods they eat out;⁵ (6) proposed portion-size restrictions on sugar-sweetened beverage sales;⁶ and (7) legislatively authorized billions of dollars in obesity-related prevention and research.⁷ These and other well-intended law and policy interventions have had positive effects.

Still, Americans are gaining weight, especially children and adolescents. In 1966, when the federal Centers for Disease Control and Prevention (CDC) began in earnest to measure national obesity rates, approximately 13% of adults were considered obese and only 4% of kids were considered overweight.⁸ Under similar criteria in 2010, nearly 36% of American adults are obese, and 33% of children and adolescents are obese or overweight.⁹ The Department of Health

2. See *Public Health Law: Zoning to Encourage Physical Activity*, CENTERS FOR DISEASE CONTROL & PREVENTION, http://www.cdc.gov/phlp/winnable/zoning_physical_activity.html (last visited Apr. 13, 2012) (“From a public health perspective, zoning can be used to promote physical activity, increase safety and promote good nutrition.”).

3. State and local reporting initiatives include requiring body mass index (BMI) tracking and reporting at schools and tracking cases of type 2 diabetes. CENTERS FOR DISEASE CONTROL & PREVENTION, *BODY MASS INDEX MEASUREMENT IN SCHOOLS 1* (2007), http://www.cdc.gov/healthyyouth/obesity/BMI/pdf/BMI_execsumm.pdf; Allison J. Nihiser et al., *Body Mass Index Measurement in Schools*, 77 J. SCHOOL HEALTH 651, 652 (2007); N.Y. STATE DEP’T OF HEALTH, NEW YORK STATE STRATEGIC PLAN FOR THE PREVENTION AND CONTROL OF DIABETES, available at <http://www.health.ny.gov/diseases/conditions/diabetes/docs/stateplandiabetes.pdf>.

4. See Memorandum of Understanding between the Alliance for a Healthier Generation, Am. Heart Assoc., William J. Clinton Found., Am. Beverage Assoc., Cadbury Schweppes, Coca-Cola Co. & PepsiCo, Inc. 1 (May 3, 2006), available at http://www.healthiergeneration.org/uploadedFiles/For_Schools/School_Beverage_Guidelines/Beverage%20MOU.pdf.

5. *Overview of FDA Proposed Labeling Requirements for Restaurants, Similar Retail Food Establishments and Vending Machines*, U.S. FOOD & DRUG ADMIN., <http://www.fda.gov/Food/LabelingNutrition/ucm248732.htm> (last visited Apr. 6, 2011); Food Labeling, Nutrition Labeling of Standard Menu Items in Restaurants and Similar Retail Food Establishments, 76 Fed. Reg. 19,192 (Apr. 6, 2011) (to be codified at 21 C.F.R. pt. 11 & 101).

6. See Press Release, Dep’t of Health & Mental Hygiene Bd. of Health, Notice of Adoption of Amendment (§ 81.53) to Article 81 of the New York City Health Code, available at <http://www.nyc.gov/html/doh/downloads/pdf/notice/2012/notice-adoption-amend-article81.pdf>.

7. *Prevention and Public Health Fund: FY 2012 Allocation of Funds*, U.S. DEP’T OF HEALTH & HUMAN SERVS., <http://www.hhs.gov/open/recordsandreports/prevention/index.html> (last visited Aug. 9, 2012) (indicating that for the 2012 fiscal year \$20 billion has been allocated to obesity and diabetes activities and prevention).

8. *Adult Obesity Facts*, CENTERS FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/obesity/data/adult.html> (last updated Apr. 27, 2012). Accurate statistics for childhood obesity rates are not available. Instead, “overweight” is used to include all children over a certain BMI. While adult obesity rates (defined as those with a BMI over 30) have increased exponentially over the past forty-five years, rates of overweight adults (defined as those with a BMI of 25-29.9) have increased only gradually. U.S. DEP’T OF HEALTH & HUMAN SERVS., *HEALTH, UNITED STATES 2004 WITH CHARTBOOK ON TRENDS IN THE HEALTH OF AMERICANS 36* (2004), available at <http://www.cdc.gov/nchs/data/hus/hus04.pdf>.

9. Cynthia L. Ogden et al., *Prevalence of Obesity and Trends in Body Mass Index Among US Children and Adolescents, 1999–2010*, 307 JAMA 483, 485 (2012) [hereinafter Ogden et al., *Prevalence 1999–2010*]; Katherine M. Flegal et al., *Prevalence and Trends in Obesity Among US Adults, 1999–2008*, 303 JAMA 235, 236 (2010); Cynthia L. Ogden et al., *Prevalence of Obesity in the United States, 2009–2010*,

and Human Services' (DHHS) 2010 goal of lowering obesity prevalence among children to 5% nationally was not only unmet, childhood obesity has actually worsened.¹⁰ Over the last decade, the national prevalence of obesity among boys and girls age two to nineteen increased nearly 33% and 9% respectively.¹¹ Future trends intimate a slowing of the escalation of obesity rates,¹² but still suggest continued spread of obesity domestically. In 2012, one authoritative report projected that adult obesity rates would climb to 44% by 2030, costing up to \$66 billion in direct healthcare costs and \$580 billion in lost economic productivity per year.¹³

Against this backdrop, additional resources and devotion to efficacious public health and policy interventions to curb national obesity are essential. Even if existing proposals are more extensively implemented, they may not adequately address national obesity. Aggressive, innovative law and policy approaches must be considered. We propose five law and policy ideas to curb obesity in the United States that are not yet, or at least not commonly, in effect. Briefly stated, these reforms include: (1) "obesity laden pricing" of all "junk foods" that is tied to societal costs underlying their mass consumption; (2) "healthy food savings accounts" (HFSAs) to facilitate healthier food purchases; (3) restaurant tax incentives to encourage sales of healthier menu offerings; (4) federal tax credits to promote individual weight loss and physical activity; and (5) bans on the sale and possession of sugar-sweetened beverages (SSBs) among minors in all public places.

From the outset, we recognize that each of these ideas may be contentious, especially within an American culture that often disdains governmental efforts to regulate behaviors in the interests of public health.¹⁴ Unpopular obesity-driven policies to ban school bake sales,¹⁵ limit donations of high-fat food to homeless shelters,¹⁶ or require warning labels on potato chips,¹⁷ all of which have been

82 NCHS Data Brief, Jan. 2012, at 1, 6 [hereinafter Ogden et al., *Prevalence 2009–2010*].

10. Ogden et al., *Prevalence 2009–2010*, *supra* note 9, at 6.

11. The national prevalence of obesity among boys age two to nineteen increased from 14% in 2000 to 18.6% in 2010, and from 13.8% to 15% among girls age two to nineteen. Obesity rates among adults also increased over the last decade. The national prevalence of obesity among men increased 29% [from 27.5% to 35.5%] and increased among women by 7% [from 33.4% to 35.8%]. *Id.* at 4–5. One study also reveals an increase in type 2 diabetes in children from 9% in 1999 to 23% in 2007. Roni Caryn Rabin, *Study Finds Sharp Rise of Diabetes in Youths*, N.Y. TIMES, May 21, 2012, at A12.

12. Nanci Hellmich, *Obesity May Be Declining in Kids*, ARIZONA REPUBLIC, Oct. 28, 2012, at A16 (some jurisdictions imposing new, healthier standards for school lunches are seeing initial declines in the rates of childhood obesity).

13. *F as in Fat: How Obesity Threatens America's Future 2012*, TRUST FOR AMERICA'S HEALTH (Sept. 2012), <http://healthyamericans.org/report/100/>.

14. See LAWRENCE O. GOSTIN, PUBLIC HEALTH LAW: POWER, DUTY, RESTRAINT 497 (2008) ("[A] person's decision about what to eat or whether to exercise affects only him- or herself, so many do not see government intervention as justifiable.").

15. Laurel J. Sweet & Chris Cassidy, *Parents: Rule's Half-Baked – State's Junk Food Ban Could Take a Bite out of School Fundraisers*, BOS. HERALD, May 7, 2012.

16. *Bloomberg Bans Food Donations to NYC Homeless Shelters*, HUFFINGTON POST (Mar. 20, 2012, 12:35 PM), http://www.huffingtonpost.com/2012/03/20/bloomberg-bans-food-donat_n_1367542.html.

17. See *The Tax Code Diet*, WALL ST. J., May 11, 2012, at A12 ("Some of the policy suggestions are by now obligatory, like potato-chip warning labels . . .").

advanced in recent years, are virtually “dead on arrival” politically. Facets of our ideas may be equally scorned. Amassing social support for our law and policy reforms is daunting in the face of political objections¹⁸ and national apathy over the seriousness of obesity as a public health crisis (notwithstanding initiatives at the White House,¹⁹ DHHS,²⁰ and within many states²¹). In response, we describe pathways to effectuate our ideas in ways that are legally defensible and politically palatable. To be sure, this can be a “tough sell.” Spreading obesity across populations is easy; reversing and preventing it are not.

II. OBESITY LADEN PRICING

Multiple researchers suggest that a primary driver in the burgeoning obesity epidemic in the United States is the wide availability of relatively inexpensive, high-calorie, and low-nutrition “junk foods” for mass consumption.²² Whether purchased through an estimated 200,000 fast food establishments²³ or through thousands of other outlets, Americans love junk

18. New York City’s recent proposal to ban the sale of SSBs in containers larger than sixteen ounces at certain venues has been met with outrage by some. Others, however, have seen it as a tempered, necessary measure to decrease obesity. Michael M. Grynbaum, *New York Plans to Ban Sale of Big Sizes of Sugary Drinks*, N.Y. TIMES (May 30, 2012), http://www.nytimes.com/2012/05/31/nyregion/bloomberg-plans-a-ban-on-large-sugared-drinks.html?_r=2&nl=todaysheadlines&emc=edit_th_20120531; Editorial, *A Ban Too Far*, N.Y. TIMES (May 31, 2012), <http://www.nytimes.com/2012/06/01/opinion/a-soda-ban-too-far.html>; Frank Bruni, Editorial, *Trimming a Fat City*, NY TIMES, June 3, 2012, at SR3.

19. See Press Release, The White House: Office of the First Lady, First Lady Michelle Obama Launches Let’s Move: America’s Move to Raise a Healthier Generation of Kids (Feb. 9, 2010), available at <http://www.whitehouse.gov/the-press-office/first-lady-michelle-obama-launches-lets-move-americas-move-raise-a-healthier-genera>.

20. DHHS, in conjunction with the U.S. Department of Agriculture (USDA), has issued new dietary guidelines designed to increase healthy eating choices together with \$298 million towards community prevention initiatives designed to increase nutritional eating and physical activity. Press Release, U.S. Dep’t of Health & Human Servs., USDA and HHS Announce New Dietary Guidelines to Help Americans Make Healthier Food Choices and Confront Obesity Epidemic (Jan. 31, 2011), available at <http://www.hhs.gov/news/press/2011pres/01/20110131a.html>; Press Release, U.S. Dep’t of Health & Human Servs., HHS Announces \$750 Million Investment in Prevention (Feb. 9, 2011), available at <http://www.hhs.gov/news/press/2011pres/02/20110209b.html>.

21. Many states have launched their own obesity initiatives including (1) menu labeling requirements, see KING CNTY., WASH., BD. OF HEALTH CODE § 5.10.016 (2010), available at <http://www.kingcounty.gov/healthservices/health/BOH/code.aspx> (requiring nutrition labeling for standard food items at chain restaurants); N.Y. COMP. CODES R. & REGS. tit. 24, § 81.50 (2008) (requiring the posting of calorie information); CAL. HEALTH & SAFETY CODE § 114094 (West 2012); and (2) “obesity taxes” that charge Medicaid patients as much as \$50 a year for having diabetes or being overweight. Paul Davenport, *Arizona Considering \$50 Tax for Smoker, Obese*, MSN (April 1, 2011), http://www.msnbc.msn.com/id/42379077/ns/health-health_care/t/arizona-considering-tax-smokers-obese/#.T7EcZO19nww.

22. Shanthy Bowman et al., *Effects of Fast-Food Consumption on Energy Intake and Diet Quality Among Children in a National Household Survey*, 113 PEDIATRICS 112, 112–18 (2004); see DAVID KESSLER, THE END OF OVEREATING: TAKING CONTROL OF THE INSATIABLE AMERICAN APPETITE 46–49 (2009) (noting that sugar and fat increase dopamine levels, making unhealthy food feel like a reward); Claudia Dreifus, *A Conversation with Carson Chow: A Mathematical Challenge to Obesity*, N.Y. TIMES (May 14, 2012), http://www.nytimes.com/2012/05/15/science/a-mathematical-challenge-to-obesity.html?_r=1&nl=todaysheadlines&emc=edit_th_20120515.

23. Melanie Hicken, *Interactive Map Shows Exactly How Many Fast Food Restaurants There Are in*

foods.²⁴ Hamburgers, hot dogs, tacos, fried foods, chips, chocolates, candies, ice cream, sodas and other SSBs—the list goes on and on. When consumed in moderation and counter-balanced with nutritional offerings and adequate exercise, few health hazards may underlie the occasional indulgence in these foods. However, Americans’ increasing habitual ingestion of these foods, which are largely devoid of nutritional content and full of “empty calories,”²⁵ contributes to the prevalence of obesity nationally.²⁶

Not all of the blame falls on consumers for their food choices. Food engineering and national marketing steer people toward junk foods. Armed with scientifically validated evidence, food manufacturers have created junk foods to appeal to consumers’ tastes.²⁷ Former Food and Drug Administration (FDA) Commissioner David Kessler alleges that junk foods filled with sugars, salts, and fats have addictive qualities.²⁸ Some consumers’ need for sugar has been compared with the craving evoked by cocaine.²⁹ Endless advertisements in electronic, print, and other media portray consuming junk foods as part of the good life, akin to how tobacco advertisements depicted smoking in the last

Every State, BUSINESS INSIDER (Jan. 28, 2012), http://articles.businessinsider.com/2012-01-28/strategy/30669674_1_fast-food-food-chains-food-restaurants; *Food Environment Atlas*, U.S. DEP’T OF AGRIC. (June 2012), <http://ers.usda.gov/data-products/food-environment-atlas/go-to-the-atlas.aspx> (illustrating geographically population access to grocery stores, restaurants, food assistance and food prices).

24. Traditionally, U.S. governmental entities have resisted defining and categorizing “junk foods” on grounds that “there are no widely accepted standards to judge the ‘healthfulness’ of individual foods” and a lack of clear criteria for determining when a particular food product sufficiently lacks desirable nutrients so as to be considered “junk.” FOOD & NUTRITION SERV., U.S. DEP’T OF AGRIC., IMPLICATIONS OF RESTRICTING THE USE OF FOOD STAMP BENEFITS-SUMMARY (Mar. 1, 2007), available at <http://www.fns.usda.gov/ora/menu/Published/snap/FILES/ProgramOperations/FSPFoodRestrictions.pdf>.

25. Merriam-Webster defines “empty calories” as “calories from food that supplies energy but is not nutritionally balanced.” *Empty Calories Definition*, MERRIAM-WEBSTER, <http://www.merriam-webster.com/dictionary/empty%20calories> (last visited Aug. 9, 2012). In children and adolescents aged two to eighteen, empty calories from fats and added sugars make up forty percent of their daily calories. *Nutrition Facts*, CENTERS FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/healthyyouth/nutrition/facts.htm> (last updated Jan. 20, 2012).

26. U.S. DEP’T OF AGRIC., AGRICULTURE FACT BOOK 2001–2002, at 14–21, available at <http://www.usda.gov/factbook/2002factbook.pdf> (indicating that increases in consumption of fast food have led to an increase of soft drink consumption, and is linked to a 287% increase in consumption of manufactured cheeses, 63% increase in consumption of frozen potatoes, and a 22% increase in consumption of refined grains).

27. See Daniel E. Lieberman, *Evolution’s Sweet Tooth*, N.Y. TIMES (June 5, 2012), http://www.nytimes.com/2012/06/06/opinion/evolutions-sweet-tooth.html?_r=2&nl=todays-headlines&emc=edit_th_20120606 (noting that food manufacturers can gear food to taste profiles validated by evolutionary evidence).

28. See KESSLER, *supra* note 22, at 61–62 (noting that highly rewarding food is habit-forming). See also Laura Beil, *Addicted to Food? The New Research Suggests It’s Possible*, NEWSWEEK, Oct. 29, 2012, available at <http://www.thedailybeast.com/newsweek/2012/10/28/addicted-to-food-the-new-research-suggests-it-s-possible.html> (“the theory that the brain responds to high-fat, high-calorie foods similarly to how it responds to drugs is now gaining scientific muscle . . .”).

29. *60 Minutes: Is Sugar Toxic?* (CBS television broadcast Apr. 1, 2012), available at <http://www.cbsnews.com/video/watch/?id=7403942n&tag=contentBody;storyMediaBox>; Nicole M. Avena, Pedro Rada, & Bartley G. Hoebel, *Evidence for Sugar Addiction: Behavioral and Neurochemical Effects of Intermittent, Excessive Sugar Intake*, 32 NEUROSCIENCE & BIOBEHAVIORAL REVS. 20 (2008).

century.³⁰ McDonald's® customers are "lovin' it."³¹ Arby's® promotes its "good mood food."³² Taco Bell® offers a new, daily "fourthmeal®" (of tacos, burritos, and other menu items).³³ Oreo® cookies are "milk's favorite."³⁴ People all across the nation "run[] on Dunkin [Donuts]®."³⁵ The constitutional right of these and other junk food sellers to creatively market their products is firmly entrenched in First Amendment commercial speech protections so long as they avoid making false or misleading claims.³⁶ Food manufacturers and sellers that stick to promoting whimsical notions of their foods' qualities instead of specific facts about their healthfulness consistently survive constitutional scrutiny.³⁷

Lacking the legal ability to stymie or deter most advertisements, policy makers have relied on industry self-policing³⁸ or other targeted efforts to limit consumption of junk foods.³⁹ Public health campaigns have been launched to educate people and their health providers on the harms of exceeding recommended calorie intake on a daily basis.⁴⁰ Packaging and labeling have been improved to better reflect calorie, fat, salt, and sugar content.⁴¹ National nutritional guidance has been recast from a food pyramid to a new food plate.⁴² Vending machines and sales of some junk foods have been prohibited in many elementary and high schools.⁴³ School lunches have been improved to eliminate some junk foods (with more work still needed).⁴⁴ Menu boards at fast food and

30. See GOSTIN, *supra* note 14, at 359 ("Cigarette advertisements are replete with imagery that associates tobacco use with healthy, adventuresome, glamorous lifestyles.").

31. MCDONALD'S, <http://www.mcdonalds.com/us/en/home.html> (last visited Aug. 9, 2012).

32. ARBY'S, <http://www.arbys.com/good-mood-food.html> (last visited Aug. 9, 2012).

33. *FourthMeal Late Night Food*, TACOBELL, <http://www.tacobell.com/food/menu/fourth-meal> (last visited Aug. 9, 2012).

34. OREO, <http://www.nabiscoworld.com/oreo/> (last visited Aug. 9, 2012).

35. DUNKIN' DONUTS, <http://www.dunkindonuts.com/content/dunkindonuts/en.html> (last visited Aug. 9, 2012).

36. *Pelman v. McDonald's Corp.*, 396 F. 3d 508, 511 (2d Cir. 2005); James G. Hodge et al., *Alternative Models to Supplement Menu Labeling*, 17 NEXUS J. OP. 79, 92 (2012).

37. *Id.* at 93.

38. Brooks Barnes, *Promoting Nutrition, Disney to Restrict Junk-Food Ads*, N.Y. TIMES (June 5, 2012), <http://www.nytimes.com/2012/06/05/business/media/in-nutrition-initiative-disney-to-restrict-advertising.html?pagewanted=all>.

39. Winnie Hu, *Obesity Ills That Won't Budge Fuel Soda Battle by Bloomberg*, N.Y. TIMES (June 12, 2012), http://www.nytimes.com/2012/06/12/nyregion/persistent-obesity-fuels-soda-ban-by-bloomberg.html?_r=1&pagewanted=all.

40. Press Release, N.Y.C. Dep't of Health & Mental Hygiene, Health Dep't Launches New Ad Campaign Spotting Increasing Portion Sizes and Their Devastating Consequences (Jan. 9, 2012), available at <http://www.nyc.gov/html/doh/html/pr2012/pr001-12.shtml>.

41. See Fair Packaging and Labeling Program, 15 U.S.C. §§ 1451-61 (1966); Nutrition Labeling and Education Act of 1990, Pub. L. No. 101-535, 104 Stat. 2353; Federal Food, Drug & Cosmetic Act, 21 U.S.C. § 343(q) (2010) (requiring all food packaged for sale in the United States to contain information regarding calories and specific nutrients).

42. *Choose My Plate*, U.S. DEP'T OF AGRIC., <http://www.choosemyplate.gov/food-groups/> (last visited Aug. 9, 2012).

43. *Vending Machines in Schools 2005*, NAT'L CONF. OF ST. LEGISLATURES, <http://www.ncsl.org/issues-research/health/vending-machines-in-schools-2005.aspx> (last visited Aug. 9, 2012).

44. See Nutrition Standards in the National School Lunch and School Breakfast Programs, 77 Fed. Reg. 4088 (Jan. 26, 2012) (to be codified at 7 C.F.R. pt. 210, 220) (requiring schools in the National

other restaurants nationally will soon post calories for each item and combination meal because of the Patient Protection and Affordable Care Act (PPACA).⁴⁵

These and other reforms are well intended. Yet they dance around a quintessential problem. Many people buy junk foods not only because they taste good and are marketed heavily, but also because they cost less than healthier foods on a price-per-calorie basis.⁴⁶ Manufactured from less expensive and sometimes federally subsidized ingredients (e.g., corn syrup), packaged junk foods are portable and have longer shelf-lives (as compared to fresh fruits and vegetables or baked breads). Junk foods seem tailor-made for consumers on the go. They are available almost everywhere from urban to rural settings. They can be purchased in many cases anytime, whether day or night. They can be eaten quickly, even during transit.

Not only are junk foods tasty, fast, accessible, and portable, they are also cheap initially. While the costs of junk food relative to healthier foods are contested,⁴⁷ most people, especially those with less income, choose food primarily based on taste.⁴⁸ In the United States the tastiest food—junk food—is seemingly also the least expensive.⁴⁹ In reality, the actual costs of consuming junk foods are deferred, arising later through heightened obesity rates and concomitant health and other related costs across the population.

School Lunch Program to adhere to new specific guidelines for nutritional content of school meals). Since the promulgation of the proposed rule, additional efforts have been made to ban lean finely textured beef in school lunches (also known as pink slime), limit the use of potatoes and starches, and limit outside food offerings such as vending machines and “a la carte” lines not governed by the school lunch program which feature branded, fatty junk foods. See *Tell USDA to Stop Using Pink Slime in School Food*, CHANGE.ORG (Mar. 27, 2012), <http://www.change.org/petitions/tell-usda-to-stop-using-pink-slime-in-school-food>; Jess Bidgood, ‘Pink Slime’ is Vanishing from School Cafeterias, N.Y. TIMES (March 24, 2012), http://www.nytimes.com/2012/03/25/education/schools-drop-pink-slime-beef-filler-like-a-hot-potato.html?_r=1; Robert Pear, *Senate Saves the Potato on School Lunch Menus*, N.Y. TIMES (Oct. 18, 2011), <http://www.nytimes.com/2011/10/19/us/politics/potatoes-get-senate-protection-on-school-lunch-menus.html>.

45. See Food Labeling; Nutrition Labeling of Standard Menu Items in Restaurants and Similar Retail Food Establishments, 76 Fed. Reg. 19,192 (April 6, 2011) (to be codified at 21 C.F.R. pt. 11, 101) (requiring all restaurants with twenty or more locations operating under the same name to provide clearly visible information to customers on all menus regarding the calorie content of food items).

46. ANDREA CARLSON & ELIZABETH FRAZÃO, U.S. DEP’T OF AGRIC., ARE HEALTHY FOODS REALLY MORE EXPENSIVE? IT DEPENDS ON HOW YOU MEASURE THE PRICE 1 (2012), available at <http://www.ers.usda.gov/Publications/EIB96/EIB96.pdf> (finding that foods high in calories tend to have a lower price per calorie than those low in calories).

47. A recent study shows that the prices of nutrient dense foods such as fruits and vegetables are rising at a higher rate than less nutrient dense foods, widening the gap between the cost of healthy food and junk food. Pablo Monsivais, Julia Mclain & Adam Drewnowski, *The Rising Disparity in the Price of Healthful Foods: 2004-2008*, 35 FOOD POL’Y 514, 518 (2010). However, some are beginning to suggest it is not the cost of fast food that draws consumers, but rather the time saved, the ease of access, and the food’s addictive qualities. Mark Bittman, *Is Junk Food Really Cheaper?*, N.Y. TIMES (Sept. 24, 2011), http://www.nytimes.com/2011/09/25/opinion/sunday/is-junk-food-really-cheaper.html?_r=2.

48. ABHIJIT BANERJEE & ESTHER DUFLO, POOR ECONOMICS: A RADICAL RETHINKING OF THE WAY TO FIGHT GLOBAL POVERTY 23 (2011).

49. See David Bornstein, Op-Ed., *Time to Revisit Food Deserts*. N.Y. TIMES BLOG (Apr. 25, 2012, 7:00 AM), <http://opinionator.blogs.nytimes.com/2012/04/25/time-to-revisit-food-deserts/>.

To the extent that empirical evidence clearly illustrates the direct, negative impact of ingesting junk foods (instead of healthier options) on obesity rates in the United States, “obesity laden pricing” of these foods should be considered. Under this proposal, junk foods should be priced not merely based on their actual costs of production, distribution, and sale. Rather, their point of sale price should also include additional costs related to future negative impacts on individual and population health that are related directly to these products’ contribution to national obesity rates. Stated as an equation:

$$\begin{aligned} \text{Obesity Laden Price} &= [\text{Current Costs to Produce, Distribute, and Sell Junk Foods}] \\ &+ [\text{Future Costs to Abate Known Impacts of Obesity Related to Product Consumption}]. \end{aligned}$$

Using this formula, suppose that the actual cost of manufacturing, distributing, and retailing a popular candy bar is \$1.00. The obesity laden price, or what the consumer actually pays, might actually be \$1.35. If the actual cost of producing and selling a fast food meal at a popular chain restaurant is \$3.99, the obesity laden price may be \$5.39. In each case, the difference collected between the actual cost and obesity laden price would be funneled to federal or state public health coffers to address known deleterious health impacts of ingesting these foods over time. Billions of additional dollars of revenue devoted to obesity prevention and control efforts would be generated annually.

Jacking up the price of junk foods through what amounts to an across-the-board obesity tax to fund anti-obesity initiatives offers another benefit: *Americans will consume less of these products*. As consistently shown through public health efforts to curb the use of tobacco,⁵⁰ alcohol,⁵¹ and other products, the higher the price of the product, the less of it people will purchase.⁵² Even highly addictive, habitually consumed tobacco products fall subject to this economic principle. Not surprisingly, public health authorities globally have worked to significantly raise tobacco taxes consistent with the World Health Organization’s Tobacco Free Initiative.⁵³ Similarly, research has shown modest reductions in consumption of SSBs when these products are taxed specifically.⁵⁴ Provided the price of non-junk

50. See M.C. Farelly & J.W. Bray, *Response to Increases in Cigarette Prices by Race/Ethnicity, Income and Age Groups – United States, 1976-1993*, 47 MORBIDITY & MORTALITY WKLY. REP. 605 (1998) (finding that increases in cigarette prices reduced consumption).

51. See Frank J. Chaloupka, Michael Grossman, & Henry Saffer, *The Effects of Price on Alcohol Consumption and Alcohol-Related Problems*, 26 ALCOHOL RES. & HEALTH 22, 27 (2002) (finding that increased alcohol prices reduced alcohol consumption in young adults).

52. PAUL A. SAMUELSON, *ECONOMICS* 59 (10th ed. 1976) (noting the basic principle of supply and demand).

53. *Tobacco Free Initiative: Taxation*, WORLD HEALTH ORG., <http://www.who.int/tobacco/economics/taxation/en/index.html> (last visited Aug. 9, 2012).

54. Eric A. Finkelstein et al., *Impact of Targeted Beverage Taxes on Higher- and Lower-Income Households*, 170 ARCHIVES INTERNAL MED. 2028, 2031 (2010) (concluding that a twenty to forty percent tax on carbonated SSBs would significantly reduce consumption and could generate substantial revenue); see Roland Sturm et al., *Soda Taxes, Soft Drink Consumption, and Children’s Body Mass Index*, 29 HEALTH AFFAIRS 1052, 1057 (2010) (stating that, while small taxes around four percent do not substantially affect overall consumption of soda, they do impact consumption for children who were already overweight, came from a low-income household, were African American, or watched significant amounts of television).

foods does not simultaneously increase⁵⁵ at the same rate, many consumers will choose healthier options that are comparably less expensive in the greater marketplace of goods after imposition of obesity laden pricing.

Though simple in concept, several factors must be addressed for this pricing scheme to work. First, increased ingestion of junk foods and heightened obesity rates must be correlated. Multiple studies demonstrate how nutrient-poor, high-calorie foods significantly contribute to national obesity.⁵⁶ Second, junk foods must be distinguishable categorically as a food group from other foods. Failure to accurately classify junk foods may lead to over- or under-imposition of pricing policies. Though commonly used, the term “junk food” defies simple definition. While it has not categorized “healthy” and “non-healthy” foods,⁵⁷ the U.S. Department of Agriculture (USDA) has defined what it calls “foods of minimal nutritional value.” This includes (1) foods that provide less than five percent of the reference daily intake (RDI) per 100 calories for eight specified nutrients,⁵⁸ as well as (2) soda water, chewing gum, and most candies.⁵⁹ Using this definition, we suggest that processed foods⁶⁰ that either fit USDA’s definition or exceed a certain percentage of calories from fat are automatically subject to obesity laden pricing.⁶¹

Third, the rate of obesity laden pricing must be calculated. Health economists can determine the amount that junk foods collectively add to societal costs in obesity prevention and treatment so long as: (1) the specific contribution of ingesting junk foods to national obesity rates (contrasted with other primary causes) can be reasonably ascertained; and (2) total costs of preventing and treating obesity within the population are accurately estimated. Using these figures, the proportion of total obesity costs related to ingesting junk foods can

55. See Econ. Research Serv., *Food CPI and Expenditures: Analysis and Forecasts of the CPI for Food*, U.S. DEP’T OF AGRIC., <http://www.ers.usda.gov/data-products/food-price-outlook.aspx> (last updated Apr. 24, 2013) (indicating that food prices for all categories of food may rise 3-4% in the next year).

56. A.M. Prentice & S.A. Jebb, *Fast Foods, Energy Density, and Obesity: A Possible Mechanistic Link*, 4 OBESITY REVS. 187, 192 (2003); Bowman et al., *supra* note 22, at 112; Cara B. Ebbeling et al., *Compensation for Energy Intake from Fast Food Among Overweight and Lean Adolescents*, 291 JAMA 2828, 2828 (2004) [hereinafter Ebbeling et al., *Compensation*]; Cara B. Ebbeling et al., *Effects of Decreasing Sugar-Sweetened Beverage Consumption on Body Weight in Adolescents: A Randomized Controlled Pilot Study*, 117 PEDIATRICS 673, 673 (2006) [hereinafter Ebbeling et al., *Effects*].

57. *Contra The Nutrient Profiling Model*, DEP’T OF HEALTH (Jan. 2011) (U.K.), http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_123494. The United Kingdom’s Food Standards Agency has taken an alternative approach. It regulates advertisements for foods high in fat, saturated fat, salt, and sugar during children’s programs through a nutrient profiling program that scores foods based on their protein, fiber, nut, fruit, and vegetable content minus their energy, saturated fat, sugar and sodium content.

58. These nutrients are protein, vitamin A, vitamin C, niacin, riboflavin, thiamine, calcium, and iron. National School Lunch Program, 7 C.F.R. § 210.11(a)(2) (2009).

59. “Foods of minimal nutritional value” cannot be served during lunch times for schools participating in the National School Lunch Program. *Id.*; 7 C.F.R. § 210, App. B (2009) (identifying foods of minimal nutritional value).

60. “Processed foods” are defined by the Food Drug and Cosmetic Act as “any food other than a raw agricultural commodity . . . that has been subject to processing, such as canning, cooking, freezing, dehydration, or milling.” 21 U.S.C.A. § 321(gg) (2009).

61. “Combination” meals (e.g., frozen meals, fast food combos) would be judged as to whether their components collectively meet the requirements for nutrients or fat overall.

be determined. When compared to junk food sales nationally, a percentage (e.g., thirty-five percent used in the examples above) may be generated to represent how much junk foods add to the cost. This resulting percentage would then be used as the basis for a sales tax based on the actual costs of any junk foods consistent with the two-part price calculation above.

Implementation of this type of pricing implicates numerous legal, political, and practical issues. Legislative efforts to pass a new sales tax imposed at the federal or state level and collected by retailers for distribution to government will be unpopular.⁶² Junk food manufacturers and restaurants will oppose it on the grounds that it may (1) fluctuate annually, (2) lack a proven epidemiologic basis, (3) single out their products for excess taxation, (4) decrease product consumption and sales, and (5) result in double taxation of some products like sodas.⁶³ Fierce lobbying by powerful food manufacturers and retailers must be countered with strong scientific evidence of the direct harms on population health incurred through use of these products. Without attempting to ban all junk foods altogether,⁶⁴ public health authorities can promote obesity laden pricing as an effort designed to help government efficiently recoup the costs of obesity prevention and related treatment costs. Tax revenues must be tied directly to obesity control efforts, particularly among children and adolescents, through existing prevention programs, or to advance other novel ideas discussed in subsequent parts below.⁶⁵

Another problem relates to the coverage of the tax. To the extent that all junk foods fall subject, all consumers, including approximately sixty-five percent of Americans who are not currently obese or overweight, will pay the same price. Why should a fit and athletic individual who is at an ideal weight have to pay more for an occasional purchase of junk food when government's perceived target is really his obese officemate? Imposing obesity laden pricing on the former individual may be cast as unfair and highly paternalistic, but it is neither illegal nor contrary to public health practice. Protecting the public's health has always been a shared venture among all citizens. Only through collective action

62. Even increased taxes on tobacco products in the highly regulated state of California have proven unpopular. A proposal to raise taxes on cigarettes to \$1 to fund cancer research has been met with \$47 million in negative advertisements funded by tobacco companies. Adam Nagourney, *A \$1 Cigarette Tax Starts a \$47 Million Brawl in California*, N.Y. TIMES (June 3, 2012), http://www.nytimes.com/2012/06/04/us/in-california-a-battle-over-a-plan-for-1-a-pack-cigarette-tax.html?_r=1&hp.

63. Thirty-four states already levy sales taxes on SSBs. A national tax on junk foods may subject soft drinks and juices to two different "sin" taxes. *Map of Sales Taxes as of 2011*, YALE RUDD CENTER FOR FOOD POL'Y & OBESITY, http://www.yaleruddcenter.org/resources/upload/docs/what/policy/ssbtaxes/SSB_Sales_Tax_Map/SSB_Sales_Tax_Map_2011.htm (last visited May 14, 2013). See generally Finkelstein et al., *supra* note 54. Our proposed obesity laden tax would override these existing taxes, thus eliminating the potential for double taxation.

64. See generally Lieberman, *supra* note 27 (criticizing the New York ban on soft drinks over sixteen ounces); William Saletan, *Food Apartheid Banning Fast Food in Poor Neighborhoods*, SLATE.COM (July 31, 2008), http://www.slate.com/articles/health_and_science/human_nature/2008/07/food_apartheid.html (discussing policy concerns involved in a zoning moratorium on new fast food restaurants in poor neighborhoods).

65. See *infra*, Parts III-VI.

can most communal health goals be achieved.⁶⁶ As a result, government routinely exercises its public health powers in ways that impact healthy and unhealthy individuals, especially concerning the broad use of its tax and spend authorities. Everyone pays taxes to prevent diseases or violence, control fires, and curb environmental risks even though many may not be directly impacted by these or other public health threats. Occasional smokers, for example, pay the same high sales tax rate for cigarettes as chain smokers, even though the latter are at far greater risk of tobacco-related diseases. Individuals seeking to avoid obesity laden pricing may simply opt to buy healthy foods not subject to such pricing⁶⁷ (presuming that they have access to sufficient outlets to purchase these foods).⁶⁸

Additional practical barriers and consequences may arise. Grocery and convenience store retailers may object to the additional burden of having to categorize junk foods separately from other products to accurately collect an obesity tax. In reality, most already administer varying sales taxes on products depending on whether they qualify as foods (e.g., milk, eggs, bread) or non-foods (e.g., alcohol, drugs, tobacco).⁶⁹ Manufacturers and sellers may attempt to drive down the actual costs of production of junk foods by substituting cheaper ingredients or decreasing packaging size to lower their overall prices to equate with their pre-obesity tax amount. Their premise may be that consumers will not reduce consumption if they do not perceive that the price has risen appreciably. While smaller portion sizes may be a positive side effect, the quality and relative bargain of manufacturers' and sellers' products may wane to the dissatisfaction of consumers, thus leading to decreased sales.

A more troubling consequence of obesity laden pricing may be its impact on persons and families living in poverty or other diminished statuses. Because the burdens of sales taxes invariably fall harder on low income persons than those with means,⁷⁰ imposition of an obesity tax that raises the prices of common goods runs counter to principles of social justice. Low income individuals will suffer the major brunt of the tax, especially if healthier options do not necessarily

66. GOSTIN, *supra* note 14, at 361–62.

67. Leonard H. Epstein et al., *Experimental Research on the Relation Between Food Price Changes and Food-Purchasing Patterns: A Targeted Review*, 95 AM. J. CLINICAL NUTRITION 789, 789 (2012).

68. While the existence of “food deserts,” or neighborhoods where no healthy food is available, has been called into question in recent studies, healthy foods are largely unavailable to persons living in some urban and other environments. See Gina Kolata, *Studies Question the Pairing of Food Deserts and Obesity*, N.Y. TIMES (April 17, 2012), http://www.nytimes.com/2012/04/18/health/research/pairing-of-food-deserts-and-obesity-challenged-in-studies.html?_r=3&ref=todayspaper (describing the recent studies questioning food deserts in urban areas); Econ. Research Serv., *Food Desert Locator*, U.S. DEP'T OF AGRIC., <http://www.ers.usda.gov/data/fooddesert/> (last updated May 8, 2013) (providing information about the location of food deserts in the United States).

69. Software systems supporting consumer sales practices can instantly distinguish products based on their tax classification. They can even notify consumers of the specific, additional amounts of taxes resulting from their purchase of junk foods as part of a larger order to facilitate their review of the impact of these purchases on their expenditures. *Sales Tax Compliance*, TAX MATRIX, <http://www.taxmatrix.com/sales-tax-compliance.htm> (last visited May 14, 2013).

70. Katherine S. Newman & Rourke O'Brien, *Taxing the Poor How Some States Make Poverty Worse*, PATHWAYS (Summer 2011), available at http://www.stanford.edu/group/scspi/_media/pdf/pathways/summer_2011/PathwaysSummer11_NewmanOBrien.pdf.

cost less than re-valued junk foods.⁷¹ Does a consumer who strongly prefers the taste of Yoo-hoo® chocolate drink have much incentive to purchase the same container size of low fat milk that is only five cents less than obesity laden priced Yoo-hoo®? Perhaps not initially. However, additional public health education programs emphasizing the values of healthy eating and other efforts to lower the costs of healthy foods discussed in parts III-VI, fueled by new revenues from obesity laden pricing, will help shift consumer behaviors toward healthier options. Food manufacturers and sellers will respond, consumer habits will change, and average daily intake of calories will decline along with obesity rates.

III. HEALTHY FOOD SAVINGS ACCOUNTS

One strategy to counteract likely opposition to obesity laden pricing is to simultaneously promote positive tax incentives for the purchase of healthy foods as part of a cohesive public policy plan. Annual payouts through tax credits offer one approach, but may not always work to alter daily, individual dietary choices that cumulatively affect obesity.⁷² Periodic payments shift rewards closer in time to the associated behavior, but tend to substantially increase operational costs.⁷³ An approach modeled on Flexible Spending Accounts (FSAs)⁷⁴ provides a happy medium by combining high consumer ease and low administrative burdens.

Many large (and some small) businesses offer FSAs to their employees.⁷⁵ FSAs incorporate a tax-advantaged system for the payment of health care and medical expenses not covered directly through health insurance plans. They are funded through voluntary salary reductions⁷⁶ allocated proportionately over the year, although the full value of the account is available at any time.⁷⁷ Contributions are exempt from federal and most state taxes.⁷⁸ Unlike other tax-advantaged medical expense accounts (e.g., health savings accounts, medical savings accounts), FSAs do not require income tax reporting.⁷⁹ Employee participation in FSAs depends on several factors (e.g., income, gender, age, marital status, race)⁸⁰ and their ability to estimate medical expenditures in

71. CARLSON & FRAZÃO, *supra* note 46.

72. Chris L. Winstanley, Comment, *A Healthy Food Tax Credit: Moving Away from the Fat Tax and Its Fault-Based Paradigm*, 86 OR. L. REV. 1151, 1157 (2007). We propose a related but differently constructed credit in Part V.

73. *Id.* at 1195.

74. Such accounts are also known as flexible spending arrangements. See generally *Flexible Spending Account (FSA)*, HEALTHCARE.GOV, <http://www.healthcare.gov/glossary/f/fsa.html> (last visited July 13, 2012).

75. Among all businesses that offer health benefits, 18% offer FSAs. Among large firms of over 200 employees, however, 77% offer FSAs. GARY CLAXTON ET AL., KAISER FAMILY FOUNDATION AND HEALTH RESEARCH & EDUCATIONAL TRUST, EMPLOYER HEALTH BENEFITS 2010 ANNUAL SURVEY 186, available at <http://ehbs.kff.org/pdf/2010/8085.pdf>.

76. *Publication 969 - Health Savings Accounts and Other Tax-Favored Health Plans*, INTERNAL REVENUE SERV., (2012), available at <http://www.irs.gov/publications/p969/index.html>.

77. *Id.*

78. *Reimbursement Made Easy*, AETNA, INC., <http://www.aetna.com/members/fsa/spendingAccounts/HealthFSA/healthcarefsa.html> (last visited May 14, 2013).

79. *Publication 969 - Health Savings Accounts and Other Tax-Favored Health Plans*, *supra* note 76.

80. Burton H. Hamilton & James Marton, *Employee Choice of Flexible Spending Account Participation and Health Insurance*, 17 HEALTH ECON. 793, 803 (2007).

advance.⁸¹ Some FSA plans require holders to purchase items and then seek reimbursement. Others use a preloaded debit card, allowing consumers to buy qualifying goods and services directly with tax-free funds without out-of-pocket expense.⁸² In either case, funds are forfeited if not expended by the end of the plan year.⁸³

Based on the FSA model, we propose the creation of a Healthy Food Savings Account (HFSA) program to encourage and facilitate purchases of healthy food. HFSA would allow consumers to elect an annual pre-tax withholding from their paychecks, the sum of which would be placed into a debit-card-enabled account.⁸⁴ The funds may be used to purchase eligible healthy foods pre-approved through applications submitted by manufacturers based on relevant nutritional data. Approved products would be specially designated on their packaging or at their point of sale as “HFSA eligible.”⁸⁵ Consumers would use their HFSA debit cards to pay for eligible purchases. Other means of payment (e.g., cash, credit, or check) may be used for other non-qualifying items within a purchase order.

Preloaded HFSA debit cards using tax-free funds offer consumers more buying power by reducing their tax bite in exchange for a limitation on use of the funds. Some existing government programs already use debit or electronic benefit transfer (EBT) systems. For example, all states administer their Supplemental Nutrition Assistance Program (SNAP)⁸⁶ benefits solely via EBT.⁸⁷ By 2020, all states will also be required to similarly administer their Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) benefits.⁸⁸ Most retail groceries’ systems already distinguish products for governmental programs like SNAP and WIC.⁸⁹ They are equally capable of

81. James H. Cardon & Mark H. Showalter, *An Examination of Flexible Spending Accounts*, 20 HEALTH ECON. 935, 936 (2001).

82. See, e.g., *Reimbursement Made Easy*, *supra* note 78.

83. ORGANISATION FOR ECON. CO-OPERATION & DEV., TAX POLICY STUDY NO. 15: ENCOURAGING SAVINGS THROUGH TAX-PREFERRED ACCOUNTS 84 (2007), available at <http://www.oecd.org/ctp/taxpolicyanalysis/taxpolicystudyno15encouragingsavingsthroughtax-preferredaccounts.htm>.

84. Additionally, funds from other programs targeting obesity at the individual level, such as those proposed in Part I, could also be directed into these accounts, thereby increasing their effectiveness by channeling them toward healthy food purchases.

85. Similar designations are used for products eligible for other targeted programs, such as the Special Supplemental Nutrition Program for Women, Infants, and Children Program (WIC). For additional information, see Food & Nutrition Serv., *WIC at a Glance*, U.S. DEP’T OF AGRIC., <http://www.fns.usda.gov/wic/aboutwic/wicataglance.htm> (last updated Nov. 20, 2012).

86. For general information regarding SNAP, see FOOD & NUTRITION SERV., U.S. DEP’T OF AGRIC., BUILDING A HEALTHY AMERICA: A PROFILE OF THE SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM 2 (Apr. 2012), available at <http://www.fns.usda.gov/ORR/menu/Published/SNAP/FILES/Other/BuildingHealthyAmerica.pdf>.

87. *Id.* at 33.

88. Food & Nutrition Serv., *Nutrition Program Facts*, U.S. DEP’T OF AGRIC., <http://www.fns.usda.gov/wic/WIC-Fact-Sheet.pdf> (last updated Dec. 2012). Several states already do so. E.g., *Special Supplemental Nutrition Program for Women, Infants and Children (WIC): Electronic Benefits Transfer*, TEX. DEP’T OF STATE HEALTH SERVS., <http://www.dshs.state.tx.us/wichd/ebt/ebt1.shtm> (last visited May 22, 2012).

89. Grocery stores are anticipated to be the primary purveyors of foods that meet the required nutritional conditions. Based on their existing experience with other programs (SNAP, WIC, etc.),

distinguishing products that qualify for HFSA expenditures and applying costs to debit cards. Some retailers are experimenting with differentiating between items based on healthfulness as part of independent, private-sector health initiatives. For example, Walmart® recently partnered with health insurer Humana® to offer a five percent store credit for the purchase of healthy items.⁹⁰

Though similar in approach, HFSA's would not share all facets of FSA's. Unlike FSA's, HFSA's would permit rollover of funds into subsequent years so long as funds remain available only for purchases of healthy foods. To limit risks to employers of potential administrative losses,⁹¹ HFSA's may limit consumer spending to the balance of funds contributed to date (instead of the chosen annual contribution amount). Unlike unanticipated⁹² and expensive⁹³ medical expenditures (e.g., hospitalization for injuries), consumers can budget their healthy food purchases based on predictable monthly costs even with some variations over time due to inflation and other factors.⁹⁴

these stores are best positioned to immediately implement necessary systems. Other vendors (e.g., convenience stores, smaller or specialty stores) may participate provided their systems can accommodate needed transactions. Stores already eligible for SNAP funds are perhaps the best targets. See Food & Nutrition Serv., *Supplemental Nutrition Assistance Program, Retail Store Eligibility*, U.S. DEP'T OF AGRIC., <http://www.fns.usda.gov/snap/retailers/store-eligibility.htm> (last updated Feb. 16, 2012) (noting that to qualify for SNAP funds, either fifty percent of a store's sales must be from the sale of eligible foods, or the store must continually offer a variety of staple and perishable foods in specific categories). A growing number of alternative venues, such as farmers markets, are also beginning to adopt EBT-compatible technology. See Julie Siple, *More MN Farmers Markets Accepting EBT*, MINN. PUB. RADIO NEWS (Aug. 22, 2012), <http://minnesota.publicradio.org/display/web/2012/08/22/more-minnesota-farmers-markets-accepting-ebt/> (last visited Aug. 24, 2012) (noting expansion of farmers markets able to process EBT cards tied to SNAP program).

90. The store credit will be applied to future purchases at Walmart. Caroline Humer, *Wal-Mart Stores Inc, the World's Largest Retailer, is Joining with Healthcare Insurer Humana Inc to Trim the Cost of Health Foods for Some Customers*, REUTERS (Sept. 10, 2012), <http://www.reuters.com/article/2012/09/19/us-walmart-humana-rewards-idUSBRE88I06620120919>.

91. FSA funds not used at the end of a plan year and forfeited by an employee generally flow back to the employer and are commonly applied to administrative expenses of the plan. This practice hedges potential losses incurred by the employer when employees expend the entire withholding and then leave or are terminated before making contributions for the full year. See *Flexible Spending Accounts (FAQs)*, CONEXIS, https://www.conexis.org/faqlibrary/BR_faqs_fsa.asp (last visited July 13, 2012); *FSA General Information*, FLEX ADMIN. INC., <http://www.flexadministrators.com/fsa/index.html> (last visited July 13, 2012) (discussing options for employers regarding unused FSA funds).

92. See *Hospital Emergency Room Visits per 1,000 Population, 2010*, KAISER FAM. FOUND., <http://www.statehealthfacts.org/comparemaptable.jsp?ind=388&cat=8&sort=a&gsa=2> (last visited July 13, 2012) (reporting an average of 411 emergency room visits per 1,000 people in the U.S. in 2010). See also *National Fed'n of Indep. Bus. v. Sebelius*, 132 S. Ct. 2566, 2610–11 (2012) (Ginsberg, J., concurring) (stressing the need for insurance, because while every American will incur significant medical costs during his or her lifetime, the exact time is highly unpredictable).

93. According to 2009 data, the average expense per person for an emergency room visit was \$1,318, with the uninsured paying 36.7% of their expenses out-of-pocket. Agency for Healthcare Res. & Quality, *Medical Expenditure Panel Survey*, U.S. DEP'T OF HEALTH & HUMAN SERVS. (2009), http://meps.ahrq.gov/mepsweb/data_stats/tables_compendia_hh_interactive.jsp?SERVICE=MEPSSocket0&PROGRAM=MEPSPGM.TC.SAS&File=HCFY2009&Table=HCFY2009_PLEXP_E&VAR1=AGE&VAR2=SEX&VAR3=RACETH5C&VAR4=INSURCOV&VAR5=POVCAT09&VAR6=MSA&VAR7=REGION&VAR8=HEALTH&.

94. Average costs per month for a family of four have increased from \$452.50 (Thrifty Plan) and \$877.90 (Liberal Plan) in 2001 to \$611.70 and \$1208.10, respectively, in 2011. *Cost of Food at Home: U.S.*

By stimulating purchases of healthy foods, HFSAs may drive down the effective costs of these foods in tandem with our proposal to reflect the true cost of junk food through obesity laden pricing.⁹⁵ Consumers are likely to respond to reductions in the comparative price of healthy food with increased consumption of healthier options.⁹⁶ While HFSAs do not directly affect retail price, the use of tax-free funds allows for the purchase of more food per unit of salary, effectively reducing the cost of healthy food for consumers and limiting, to some degree, negative impacts of obesity laden pricing on low-income individuals.⁹⁷

Implementation of HFSAs raises some complications. Distinctions between eligible and non-eligible foods must be clear. As noted above in part II, the USDA and other governmental authorities have failed to provide any firm determination of the relative healthfulness of individual foods.⁹⁸ This is due in part to the sheer number of food products on the market⁹⁹ and the complicated nature of nutrition.¹⁰⁰ As a result, USDA guidelines and other sources suggest limiting intake of foods low in nutritional value but do not call for their complete exclusion from one's total diet.¹⁰¹ This creates food classification problems in governmental programs covering a wider range of needs, such as SNAP.¹⁰² Proposals to restrict food choices in such programs face opposition in part because the programs represent how recipients meet their full range of dietary needs (and wants).¹⁰³

HFSAs are not meant to serve as comprehensive nutrition programs. Rather, they present optional benefits designed to encourage healthy eating behaviors

Average at Four Cost Levels, U.S. DEP'T OF AGRIC., <http://www.cnpp.usda.gov/USDAFoodCost-Home.htm> (last updated Apr. 19, 2013). However, monthly costs varied only \$25.70 (Thrifty Plan) and \$51.40 (Liberal Plan) over the course of 2011, representing variation of approximately 4.3% under each plan. *Id.*

95. *See infra* Part II.

96. Katherine B. Horgen & Kelly D. Brownell, *Comparison of Price Change and Health Message Interventions in Promoting Healthy Food Choices*, 21 HEALTH PSYCHOL. 505, 510-11 (Sept. 2002) (finding that price decreases were associated with increased purchases of some healthy food and had a stronger impact than either health messages alone or health messages combined with price decreases).

97. Because HFSAs are based on salary reduction, their benefits will not typically reach the unemployed. Yet many low-income individuals may still be able to take advantage of the program, as it simply moves funds that will ultimately be used for food more directly from paycheck to grocery store. In some ways, this may actually be easier for low-income individuals who lack reliable access to some banking services. Using an HFSA would not require a checking account, nor would funds be reduced by check-cashing or other service fees. Still, other proposals and programs may better address obesity rates among the unemployed and some other low-income individuals.

98. Food & Nutrition Serv., *Implications of Restricting the Use of Food Stamp Benefits - Summary*, U.S. DEP'T OF AGRIC. (March 2007). <http://www.fns.usda.gov/ora/menu/Published/snap/FILES/ProgramOperations/FSPFoodRestrictions.pdf>.

99. *Id.* (noting 300,000 existing products and an average of 12,000 new products introduced annually from 1990-2000).

100. *Id.*

101. *Id.*

102. *Id.*

103. *See* Richard Fausset, *Food Stamp Bills Seek to Restrict Junk Food*, L.A. TIMES (Jan. 29, 2012), <http://articles.latimes.com/2012/jan/29/nation/la-na-food-stamps-20120130> (noting that in the span of one year Illinois, Oregon, California, Vermont, and Texas attempted and failed to implement restrictions on the purchase of "junk foods" with SNAP funds).

among consumers. Foods qualifying for purchase via HFSA can be more selective, requiring a high level of healthfulness. Classifications may be based on more complex nutritional evaluations, such as those used in the United Kingdom to regulate television advertising to children.¹⁰⁴ Though limited in scope,¹⁰⁵ the UK system scores foods based on a variety of nutritional factors, penalizing high sugar, salt, fat, and saturated fat content, and rewarding protein, fiber, fruit, nut, and vegetable content.¹⁰⁶ Similar standards applied to HFSA expenditures would not restrict what consumers could purchase with non-HFSA funds.¹⁰⁷ Rather, they would simply distinguish particularly healthful products that consumers are *encouraged* to purchase. Some types of products (e.g., unprocessed fruits and vegetables, low-fat and fat-free dairy products, whole grains) could be included categorically. In contrast, processed foods would require analysis, submission, and approval for inclusion in the program.

Verifying the nutritional content of over 300,000 food products¹⁰⁸ for HFSA purposes should not fall on USDA or other government agencies. To the extent that HFSA stimulates consumption of healthier products (and thus increase profits for their producers and manufacturers), companies that offer healthier fare can reasonably be expected to bear the burden of costs associated with determining their products' eligibility. Manufacturers that want to have their products included in the program must supply information to USDA demonstrating that their products meet established criteria under clear and easy to apply standards.¹⁰⁹ Specific requirements may take many forms and draw from existing standards under other national programs,¹¹⁰ local initiatives,¹¹¹ or

104. U.K. DEP'T OF HEALTH, NUTRIENT PROFILING TECHNICAL GUIDANCE 4-9 (Jan. 2011), *available at* http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_123492.pdf.

105. The system is limited to the television advertising context. *Id.*

106. *Id.*

107. *Contra* D.A. Cohen & R. Bhatia, *Nutrition Standards for Away-from-Home Foods in the USA*, 13 OBESITY REVIEWS 618 (2012) (proposing regulation on the nutritional content of restaurant food).

108. Food & Nutrition Serv., *supra* note 98.

109. While fresh produce and some related categories are not subject to nutritional labeling requirements, appropriate and reliable estimated calculations of these values are readily available. 21 U.S.C. § 101.9(j)(10) (2006); *Nutritional Information for Raw Fruits, Vegetables, and Fish*, U.S. FOOD & DRUG ADMIN., <http://www.fda.gov/food/labelingnutrition/foodlabelingguidanceregulatoryinformation/informationforrestaurantsretail establishments/ucm063367.htm>. For example, despite the interplay of various nutritional standards, maximum per-serving levels of calories, fat, saturated fat, and sodium would be exceptionally easy to apply because such information must already be provided in most instances to satisfy nutritional labeling requirements. Some foods may also be included categorically (e.g., raw, unprocessed fruits and vegetables, low-fat and fat-free dairy products) based on their known health and nutritional benefits. See U.S. DEP'T OF AGRIC., DIETARY GUIDELINES FOR AMERICANS, 2010, at 42, *available at* <http://www.cnpp.usda.gov/DGAs2010-PolicyDocument.htm> (recommending increased intake of healthful foods including vegetables, fruits, whole grains, fat-free or low-fat milk and milk products, seafood, and oils).

110. In addition to the UK model noted above, specific criteria already exist in the USDA's "Foods of Minimal Nutritional Value" classification with respect to foods available in schools that participate in the federal child nutrition programs. Food & Nutrition Serv., *Foods of Minimal Nutritional Value*, U.S. DEP'T OF AGRIC. (Feb. 2012), <http://www.fns.usda.gov/cnd/menu/fmnv.htm>. Highly specific standards also govern minimal nutritional requirements for product approval under WIC Food & Nutrition Serv., *WIC Program - Benefits & Services*, U.S. DEP'T OF AGRIC. (May 2012), <http://www.fns.usda.gov/wic/benefitsandservices/foodpkregs.HTM>.

the private sector.¹¹²

Additional issues may also arise. Fiscally minded legislators may be concerned about administrative costs¹¹³ and forgone income tax revenues if the program is widely used. The costs of an HFSA program are amenable to controls. For example, restricting the maximum tax-free withholding allowed per year, either as a percentage of income or an absolute value, would place a ceiling on costs attributable to lost tax revenue. As well, the economic and public health costs of obesity¹¹⁴ are far higher than any costs imposed through HFSA.

Finally, some evidence suggests that an isolated reduction in the cost of healthy foods can actually lead paradoxically to increased total calorie consumption if consumers splurge on the purchase of unhealthy foods with the money they saved.¹¹⁵ Combining the use of HFSA with obesity laden pricing, as we propose, may deter such purchases because higher taxes imposed on junk foods is associated with reduced overall consumption.¹¹⁶ Furthermore, restricting HFSA purchases to healthy foods obviates the use of savings to subsidize less healthy purchases because other purchases must be made separately with post-tax dollars.

IV. TARGETED RESTAURANT TAX INCENTIVES

Americans eat out more than ever¹¹⁷ for a lot of reasons.¹¹⁸ Many are too

111. Some local jurisdictions have developed requirements for permitting purposes and voluntary recognition programs. Cohen & Bhatia, *supra* note 107, at 619 (providing information from programs including Colorado's "Smart Meals," San Antonio's "Por Vida," and others). Local standards include provisions such as requirements for healthy alternatives and limits on calories, fat and sodium content, fried food, and portion size, among others. *Id.*

112. Disney®, for example, recently developed new restrictions on the nutritional content of products that can be advertised on its television channels, radio stations, and websites. Brooks Barnes, *Promoting Nutrition, Disney to Restrict Junk-Food Ads*, N.Y. TIMES, June 5, 2012, at B1. The standards include very specific product categories and limits on calories, fat, sodium, and added sugar, among other criteria. *Disney Nutrition Guideline Criteria*, WALT DISNEY CO., http://thewaltdisneycompany.com/sites/default/files/MOHL_Nutrition_Criteria_2012.pdf (last visited July 6, 2012).

113. To place potential administrative costs in context, the total administrative costs in 2011 for SNAP, a far larger program, were \$6.9 billion, with nearly two-thirds attributable to costs of certification. As a percentage of total program costs, administrative costs have significantly decreased over the past decade. FOOD & NUTRITION SERV., *supra* note 86, at 31.

114. See, e.g., Eric A. Finkelstein et al., *Obesity and Severe Obesity Forecasts Through 2030*, 42 AM. J. PREVENTIVE MED. 563 (2012).

115. Leonard H. Epstein, et al., *The Influence of Taxes and Subsidies on Energy Purchased in an Experimental Purchasing Study*, 21 PSYCHOL. SCI. 406, 412-13 (March 2010), available at <http://pss.sagepub.com/content/21/3/406.full>. A decrease in the price of low-calorie-for-nutrient (LCFN) foods was found to increase their consumption, but also to coextensively increase consumption of high-calorie-for-nutrient (HCFN) foods, leading to an overall increase in daily caloric intake. Study participants were found to spend the money saved on LCFN foods on additional HCFN food purchases.

116. *Id.*

117. See *2008 Restaurant Industry Pocket Factbook*, NAT'L RESTAURANT ASS'N (2008), http://www.restaurant.org/pdfs/research/2008forecast_factbook.pdf (reporting that the percentage of food budget spent at restaurants has increased from 25% in 1955 to 48% in 2008).

118. See Cohen & Bhatia, *supra* note 107, at 622 (discussing factors that increase pressure to eat at restaurants, including "[l]imited time, competing work and parental duties[,]... business

busy to prepare and eat fresh foods at home.¹¹⁹ In more than half of dual-parent households, both parents work outside the home¹²⁰ and often face long commutes.¹²¹ Quick restaurant trips are frequent sources for family meals.¹²² According to a McDonald's® representative, drive thru sales represent seventy percent of the company's total business.¹²³ A consumer research firm recently found that seventeen percent of all restaurant food is actually eaten while in the car.¹²⁴ Poor nutrition and caloric overloads that pervade food served outside the home are major contributing factors to the obesity epidemic.¹²⁵ Even individuals who carefully limit portions and assess nutritional value of food they prepare at home face a sugar-, fat-, and sodium-laden minefield when they eat out.¹²⁶

Rising obesity rates clearly implicate fast food and other restaurants, especially big chains that sell cheap junk food at high profit. They are adept at shaping American tastes and behavior. Like the tobacco industry, the food, beverage, and restaurant industries are dominated by large corporations with massive marketing muscle and a stronghold on the behavioral preferences of many Americans.¹²⁷ Restaurant marketing of nutrition-poor products is ubiquitous¹²⁸ and particularly pervasive across various media targeting young and minority populations.¹²⁹ Restaurants spent \$5.87 billion on advertising in

meetings[.] . . . social gatherings[.] . . . travel[, and] . . . lack [of] cooking facilities or skills").

119. See Beth Anderson et al., *Fast-Food Consumption and Obesity Among Michigan Adults*, 8 PREVENTING CHRONIC DISEASE A71, 1 (2011), available at http://www.cdc.gov/pcd/issues/2011/jul/pdf/10_0186.pdf (stating that convenience is the most common reason cited by study participants for choosing to eat at a fast food restaurant).

120. *Employment Characteristics of Families Summary*, BUREAU OF LAB. STATS. (Apr. 26, 2012), <http://www.bls.gov/news.release/famee.nr0.htm>.

121. *Commuting in the United States: 2009*, U.S. CENSUS BUREAU, <http://www.census.gov/prod/2011pubs/acs-15.pdf> (reporting an average one-way commute of 25.1 minutes in 2009).

122. See Christina A. Roberto et al., *Rationale and Evidence for Menu-Labeling Legislation*, 37 AM. J. PREVENTIVE MED. 6, 546-51 (2009) (noting that Americans eat away from home an average of 5.8 times per week).

123. Sarah Nassauer, *What Tastes Like Chicken but Dips Like Chips?*, WALL ST. J., June 13, 2012 at D1, available at http://online.wsj.com/article/SB10001424052702303768104577462473394465122.html?mod=WSJ_hps_editorsPicks_3.

124. *Id.*

125. See Hodge et al., *supra* note 36 (discussing correlation of rising obesity rates with increasing incidence of eating outside the home, rising portion sizes, and poor nutritional content of restaurant foods).

126. See Helen W. Wu & Roland Sturm, *What's on the menu? A Review of the Energy and Nutritional Content of US Chain Restaurant Menus*, 11 PUB. HEALTH NUTRITION 87, 87 (2012) (noting that as few as three percent of restaurant entrees studied met USDA fat, saturated fat, and sodium guidelines).

127. See JENNIFER L. HARRIS ET AL., YALE RUDD CENTER FOR FOOD POL'Y & OBESITY, EVALUATING FAST FOOD NUTRITION AND MARKETING TO YOUTH 36 (2010), available at http://fastfoodmarketing.org/media/FastFoodFACTS_Report.pdf (detailing annual sales of the top 20 fast food restaurants).

128. Marketing of nutrition-poor products to children is increasing despite some industry efforts to improve children's nutrition. See Lisa Baertlein, *Kids' Cereals are Healthier, Ads Aren't: Study*, REUTERS (June 22, 2012), <http://www.reuters.com/article/2012/06/22/us-cereal-advertising-idUSBRE85L0O520120622> (reporting that, while many cereals have added fiber and whole grains and reduced sugar and sodium, \$264 million was spent to promote cereal to children in 2011, with particularly aggressive marketing for products with the poorest nutritional profiles).

129. *Fast Food FACTS in Brief*, YALE RUDD CENTER FOR FOOD POL'Y & OBESITY, http://fastfoodmarketing.org/fast_food_facts_in_brief.aspx (last visited July 9, 2012). See also *Kantar Media Reports*

2011.¹³⁰ Fast food restaurants alone spent over \$4 billion on marketing in 2010.¹³¹

Whether based on market research, legitimate desires to improve consumers' health, or responses to pressure from health and public health advocates, several fast food restaurants have made nutritional improvements to menu offerings in recent years. Subway® advertises eight sandwiches with fewer than six grams of fat and offers baked potato chips and apple slices as side dishes.¹³² McDonald's® added multiple breakfast items under 300 calories to its menu.¹³³ Burger King® revamped kids' meals to reduce calories and improve nutrition.¹³⁴ These sorts of menu options should be encouraged and reinforced through policies. Yet healthy menu choices are rarely promoted heavily by restaurants.¹³⁵ For example, the main web pages for these three chains have frequently trumpeted far less healthy fare: a foot-long Buffalo Chicken Sub from Subway® (840 calories, 30g of fat, 2260mg of sodium);¹³⁶ Spicy Chicken McBites® and a Chocolate Chip Frappé® from McDonald's® (together 940 calories, 49g of fat, 1130mg of sodium);¹³⁷ and a BBQ Pork Sandwich, Sweet Potato Fries, and a Bacon Sundae from Burger King® (together 1470 calories, 55g of fat, 2910mg of sodium).¹³⁸ As well, a recent study found that while most restaurant entrees contain less than one-third of the USDA-recommended 2,000 daily calories—and thus superficially appear to fit in a three-meal-per-day framework—as little as three percent also met guidelines for limits on fat, saturated fat, and sodium

U.S. Advertising Expenditures Increased 0.8 Percent in 2011, KANTAR MEDIA (March 12, 2012), <http://kantarmediana.com/intelligence/press/us-advertising-expenditures-increased-08-percent-2011> (noting that McDonald's ranked fourth among advertisers in Hispanic media for 2011, spending over \$114 million).

130. *Id.*

131. *Fast Food FACTS in Brief*, *supra* note 129.

132. *Meal Builder*, SUBWAY, <http://www.subway.com/menu/MealBuilder/MealBuilder.aspx> (last visited July 9, 2012). However, the chain aggressively markets its "\$5 foot longs," several of which include significant calories, fat, and sodium when ingested by consumers as a single meal.

133. *Promotions/Breakfast*, MCDONALDS, <http://www.mcdonalds.com/us/en/promotions/breakfast.html#/home> (last visited July 9, 2012).

134. *Burger King Tries Apple Fries in New Health Kick*, MSNBC, http://www.msnbc.msn.com/id/20740405/ns/health-childrens_health/t/burger-king-tries-apple-fries-new-health-kick/ (last visited July 9, 2012).

135. *Fast Food FACTS in Brief*, *supra* note 129 (only four percent of surveyed restaurants promote healthy items, despite an average of fifteen specific menu promotions per restaurant on average). In apparent contrast, McDonald's®, coextensive with its role as a sponsor of the 2012 Olympic Games, has begun touting items on its menu that are "Favorites Under 400 Calories." *McDonald's New U.S. Menu Platform Puts Calories Front and Center*, PR NEWswire (July 23, 2012), <http://www.prnewswire.com/news-releases/mcdonalds-new-us-menu-platform-puts-calories-front-and-center-163396846.html>. While the individual items are indeed under 400 calories, most consumers do not order a single item. Calories – as well as other negative nutritional components – add up quickly.

136. SUBWAY, <http://www.subway.com/subwayroot/default.aspx> (last visited 9, 2012) (on file with authors); *Menu & Nutrition - Buffalo Chicken*, SUBWAY, <http://www.subway.com/Menu/Product.aspx?CC=USA&LC=ENG&ProductId=132&MenuId=53&MenuTypeId=1> (last visited July 9, 2012).

137. MCDONALDS, <http://www.mcdonalds.com/us/en/home.html> (last visited July 9, 2012) (on file with authors).

138. BURGER KING, <http://www.bk.com/en/us/index.html> (last visited July 9, 2012) (on file with authors).

content.¹³⁹ Even when healthy items are available, they are often marketed and sold with a variety of add-ons (e.g., mayonnaise, cheese, dressing) that add copious calories, fat, and sodium.¹⁴⁰ Combination meals push the nutritional envelope even further.¹⁴¹

Direct governmental regulation to require restaurants to serve healthier options is one heavy-handed policy option, but a comprehensive approach encompassing negative and positive reinforcements may be more politically acceptable and efficacious toward altering firmly entrenched consumer behaviors. We propose specific tax incentives that simultaneously (1) encourage restaurants to serve and market healthier items and (2) preempt negative industry reactions and associated lobbying efforts.¹⁴² Restaurants would receive targeted tax deductions based on the percentage of their total sales attributable to items that meet specific criteria for healthfulness (similar to those proposed above in part III).

Like the producers of HFSA-eligible foods, restaurants (and not government) should bear the bulk of administrative burdens in conducting and submitting analysis of their products to qualify for the tax incentive.¹⁴³ Program oversight would fall to the FDA, which already administers similar reporting related to packaging¹⁴⁴ and calorie posting on menus at larger chains via PPACA.¹⁴⁵ For these restaurants having to meet PPACA's menu labeling requirements, submitting product analyses to qualify for our proposed federal tax incentives should be considerably reduced. For others, the benefits may be too good to pass up.

Calculating nutritional content of restaurant sales is key to the success of

139. Wu & Sturm, *supra* note 126.

140. For example, Subway's® "Ultimate Veggie" sandwich typically has 330 calories, 10g fat, and 440mg of sodium. *Menu & Nutrition - Ultimate Veggie*, SUBWAY, <http://www.subway.com/Menu/Product.aspx?CC=USA&LC=ENG&ProductId=225&MenuId=35&MenuTypeId=1>. However, the version pictured on the website is twice as large and topped with mayonnaise, bringing the totals to 820 calories, 43g fat, and 800mg of sodium.; *Menu & Nutrition - All Sandwiches*, SUBWAY, <http://www.subway.com/Menu/MenuCategoryItems.aspx?CC=USA&LC=ENG&MenuTypeId=1&MenuId=35>.

141. To illustrate, a fairly modest Whopper Jr.® from Burger King® (340 calories, 19g of fat, 510mg of sodium) is far more caloric when paired with a medium Coca-Cola® and medium fries (1040 calories, 37g of fat, 1085mg of sodium for the meal). *Whopper Jr.® Sandwich Nutrition*, BURGER KING, <http://www.bk.com/en/us/menu-nutrition/lunch-and-dinner-menu-202/flame-broiled-burgers-220/whopper-jr-sandwich-m5/index.html>; *Whopper Jr.® Sandwich Meal Nutrition*, BURGER KING, <http://www.bk.com/en/us/menu-nutrition/lunch-and-dinner-menu-202/combo-meals-219/whopper-jr-sandwich-meal-v3300/index.html>.

142. Recent industry reactions to proposed New York City regulations on the size of SSBs provide one recent example. Michael M. Grynbaum, *Soda Industry Maps Strategy to Defeat Bloomberg Plan to Ban Super-Size Drinks*, N.Y. TIMES, June 2, 2012, at A18, available at <http://www.nytimes.com/2012/06/02/nyregion/soda-industry-maps-campaign-to-defeat-bloomberg-plan.html>.

143. This should be done in a pre-determined format, such as a deduction-specific tax form like those already used for depreciation. *Form 4562 - Depreciation and Amortization*, INTERNAL REVENUE SERV. (2012), <http://www.irs.gov/pub/irs-pdf/f4562.pdf>.

144. See, e.g., *Label Claims*, U.S. FOOD & DRUG ADMIN., <http://www.fda.gov/Food/Labeling/Nutrition/LabelClaims/default.htm> (last updated Nov. 14, 2012) (FDA oversight of various food labeling practices).

145. 76 Fed. Reg. 19,192 (April 6, 2011) (to be codified at 21 C.F.R. pt. 11, 101). New menu labeling requirements apply to chains with more than twenty locations nationally.

our proposal. Two potential approaches can be taken. Each menu item could be evaluated separately against defined nutritional standards for “healthy” food.¹⁴⁶ For example, a family may order four hamburgers, three sides of French fries, one salad, two sodas,¹⁴⁷ and one dessert in a single transaction. The hamburgers and salad may be qualifying items within the order while the remaining menu items may not. The same approach applies to combination orders (calculated as a single item). Determining qualifying sales would follow the equation:

$$\frac{[\# \text{ of Qualifying Items or Combinations in Order}]}{[\text{Total } \# \text{ of Items in Order}]} = \% \text{ Qualifying Sales in Order}$$

Using the hypothetical order, the result would be:

$$\frac{5 \text{ (four hamburgers + one salad)}}{11 \text{ (total items)}} = 45\% \text{ Qualifying Sales in Order}$$

This sort of calculation is simple, but may not account for the total nutrition of what consumers actually order per restaurant visit.¹⁴⁸ As well, restaurants may attempt to sell healthy items *in addition* to unhealthy items (rather than in substitution) to increase the number of qualifying sales. This would run counter to the intention of the program.

An alternative approach would treat combination meals similarly but would additionally calculate the average nutrition within non-combination orders of multiple items, like the hypothetical order above. The total nutrition (i.e., total calories, fat, etc.) of the order is divided by the number of entrees or main dishes, yielding an approximation of the average “meal” ordered. Applying this approach to the same hypothetical order divides the total nutrition by four (the number of entrée hamburgers). While the hamburgers and side salad individually may meet nutritional guidelines, when factored into the total order, the average meal consumed exceeds one-third of the Daily Reference Value (DRV)¹⁴⁹ in all four listed categories, as illustrated in Figure 1. Evaluating orders on a per-meal, rather than per-item, basis yields potentially divergent results, but may be more reflective of how customers actually order (i.e., the hypothetical meal would most likely be consumed as four complete meals, rather than eleven independent items).

146. See *supra* Part III, discussing closely tied proposals and methods.

147. Restaurants where customers self-serve beverages could provide data based on their use of supplies to account for the inability to track which specific beverage (e.g., regular or diet) and refills individual customers obtain.

148. Fast food restaurant patrons order an average of 2.4 menu items per visit, including an average of 1.7 foods and 0.7 beverages. HARRIS ET AL., *supra* note 127, at 124.

149. DRV information is taken from GUIDANCE FOR INDUSTRY: A FOOD LABELING GUIDE, U.S. FOOD AND DRUG ADMIN. app. F (Oct. 2009). DRV is a likely component of the standards that would be applied to determine eligibility, but would not be the sole factor considered.

Figure 1: Calculation of Average Nutrition Profile for Hypothetical Restaurant Order¹⁵⁰

	Calories	Fat (g)	Saturated Fat (g)	Sodium (mg)
4 Hamburgers	1000	36	14	1960
3 Medium Fries	1520	76	10	1080
1 Side Salad (no dressing)	20	0	0	10
2 Medium Colas	420	0	0	30
1 Hot Fudge Sundae	330	9	7	170
TOTAL	3290	121	31	3250
AVERAGE MEAL (Total ÷ 4)	823	30	8	813
1/3 DRV	667	22	7	800

Though this approach better reflects how and what consumers eat, it is more administratively complex. The multiplicity of potential order permutations complicates any determination of the nutritional breakdown of an order intended for multiple individuals. Restaurants may object to any requirement that they track how many people will share an order, which could also be stigmatizing for consumers. As well, the percentage of qualifying sales under this approach may differ markedly from that calculated on an item-by-item basis. In the hypothetical above, for example, the entire order would fail to qualify for the tax incentive under the proposed calculation.¹⁵¹

Under our proposal, either calculation would be applied to all sales to yield an annual percentage of qualifying sales used to determine the deduction in several ways. A graduated deduction based on providing increasing tax benefits for higher percentages of qualifying sales may apply. Alternatively, a uniform deduction could be triggered at a specific minimum percentage, which subsequently could be ratcheted up to incentivize a continuing shift toward healthier food. Larger chains likely already conduct this type of analyses as part of their sales and marketing efforts. Smaller chains and individual restaurants may not, but they would still be eligible to claim the deduction if they can show that their sales qualify.

Despite some administrative burdens, restaurants will take advantage of an obesity-targeted tax incentive.¹⁵² In addition to positive impact on restaurants'

150. All nutrition data for this Figure are taken from *McDonald's USA Nutrition Facts for Popular Menu Items*, MCDONALDS, <http://nutrition.mcdonalds.com/getnutrition/nutritionfacts.pdf> (last visited July 16, 2012).

151. Because it is based on an average, the percentage of qualifying sales in a single order under this approach will always be either 100% or 0% if the order does not include combination meals. When applied across all sales, the average should ultimately be closer to the result of calculating on a per-item basis, though a substantial difference may remain.

152. Although not specifically proposed here, other tax incentives aimed at restaurants, such as a modified version of the HFSA proposed in part III, could further encourage positive changes by reducing costs of serving healthy food.

bottom lines, serving more healthy foods may avoid negative outcomes (e.g., increased costs or decreased revenues due to obesity laden pricing proposed above in part II). Many restaurants already participate in voluntary programs aimed at improving nutrition, such as the National Restaurant Association's Kids LiveWell initiative,¹⁵³ promoting the potential for restaurants to "[c]apitalize on the trend toward healthier dining and drive additional sales and traffic."¹⁵⁴ Individual chains have also undertaken improvements in the nutritional content of their offerings.¹⁵⁵ Significant tax advantages provide similar or greater incentives for positive change in menu choices and shifts in promotional focus without obligating participation or restricting what restaurants can sell or what consumers can order.

V. TAX INCENTIVES TO REWARD WEIGHT LOSS AND PROMOTE PHYSICAL ACTIVITY

Excessive food intake is merely one cause of obesity. Others include lack of exercise, family history and behaviors, psychological and social factors,¹⁵⁶ and genetic and environmental factors.¹⁵⁷ Given multifarious causes for obesity, no single approach to weight loss, even those that are proven on a population level, will work for everyone.¹⁵⁸ For some, either a reduction in calories consumed or an increase in calories expended is sufficient for lasting weight loss. Others' weight issues may be more complex, requiring psychological counseling to deal with food addictions or lack of self-esteem that lead to overeating. Direct education on healthy eating and behaviors may help correct misinformation of the impact of lifestyle on weight. In some cases, weight loss surgery or other more extreme medical interventions may be warranted.

As illustrated in Figure 2, among those hardest hit by the obesity epidemic are low-income individuals. Low socioeconomic status is a direct predictor of obesity, particularly for adolescents.¹⁵⁹ CDC found that obesity rates for adults in

153. *Kids LiveWell: Participating Restaurants*, NAT'L RESTAURANT ASS'N, http://www.restaurant.org/foodhealthyliving/kidslivewell/participating_restaurants/ (last visited July 9, 2012) (participating restaurants agree to offer meals for children that conform to specific nutritional standards and to promote and identify such options. In exchange, they receive placement on the program's website, promotion through the program, and the use of an icon to indicate healthy menu options).

154. *Kids LiveWell: Frequently Asked Questions*, NAT'L RESTAURANT ASS'N, <http://www.restaurant.org/foodhealthyliving/kidslivewell/about> (last visited January 3, 2012).

155. See, e.g., Bruce Horowitz, *Boston Market Shakes Salt Habit*, USA TODAY, Aug. 21, 2012, at B1 (noting voluntary removal of salt shakers from tables and a reduction in sodium levels in three popular menu items at Boston Market® restaurants).

156. *Childhood Obesity: Risk Factors*, MAYO CLINIC, 2 (May 4, 2012), <http://www.mayoclinic.com/health/childhood-obesity/DS00698/DSECTION=risk-factors>.

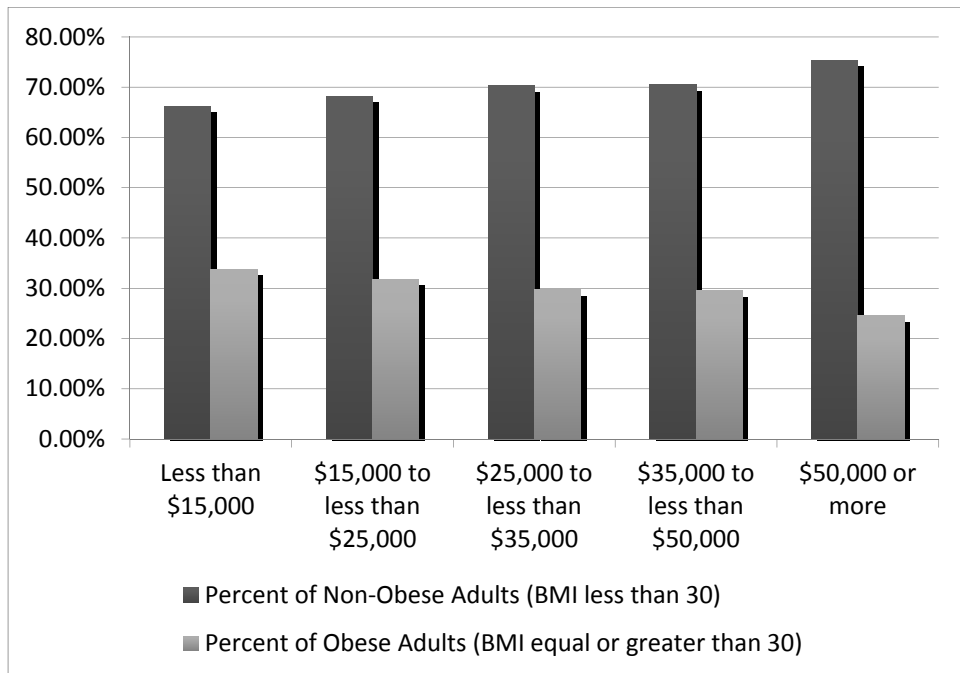
157. Between 25-40% of the variation in weight among individuals is due to genetic factors; 60-75% is due to environmental factors. Richard A. Epstein, *Obesity Policy Choices: What (Not) to Do About Obesity: A Moderate Aristotelian Answer*, 93 GEO. L.J. 1361, 1365 (2005) (citing KELLY D. BROWNELL & KATHERINE BATTLE HORGAN, *FOOD FIGHT: THE INSIDE STORY OF THE FOOD INDUSTRY, AMERICA'S OBESITY CRISIS, AND WHAT WE CAN DO ABOUT IT* (2004)).

158. See Epstein, *supra* note 157.

159. GEORGE A. BRAY, *CONTEMPORARY DIAGNOSIS AND MANAGEMENT OF OBESITY AND THE METABOLIC SYNDROME* 125 (2011) ("The inverse relationship of socioeconomic status (SES) and overweight is found in both adults and children."); David H. Rehkopf et al., *The Relative Importance of Predictors of Body Mass Index Change, Overweight and Obesity in Adolescent Girls*, 6 INT'L J. PEDIATRIC

families with incomes below the federal poverty level (or between 100 and 200% of the federal poverty level from 2001 to 2004) were 34.9% and 34.6%, respectively, compared to 30.6% for adults in families with incomes of at least 200% of the federal poverty level.¹⁶⁰ More dramatically, from 1999 to 2004, rates of overweightness were more than 50% higher among adolescents in families below the federal poverty level than in families above the federal poverty level.¹⁶¹

Figure 2: Household Income and Obesity¹⁶²



Compared to wealthier populations, those with low socioeconomic status are much less inclined to engage in healthy behaviors, such as exercise,¹⁶³ and much more likely to engage in unhealthy behaviors, such as eating junk food.¹⁶⁴ They often live in urban environments where it is difficult to exercise outdoors.

OBESITY e233 (2011) (concluding family socioeconomic position was one of the top two predictors of the onset of overweight and obesity in girls between the ages of nine and nineteen).

160. *Health, United States, 2006*, U.S. DEPT OF HEALTH & HUMAN SERVS., 288 tbl. 73 (2006), <http://www.cdc.gov/nchs/data/hus/hus06.pdf> (data provided are for 20-74 year olds).

161. Richard A. Miech et al., *Trends in the Association of Poverty with Overweight Among US Adolescents 1971-2004*, 295 JAMA 2385, 2385 (2006) (data provided are for adolescents aged fifteen to seventeen years).

162. *F as in Fat*, *supra* note 13, at 20.

163. *Health, United States, 2006*, *supra* note 160, at 36.

164. Adam Drewnoski & SE Specter, *Poverty and Obesity: The Role of Energy Density and Energy Costs*, 79 AM. J. CLINICAL NUTRITION 6, 11 (2004) (stating that food cost and economic factors explain why low income individuals are less likely to eat healthy diets).

Public parks in some settings may be lacking or unsafe. Gym memberships for low-income adults or organized sports fees for their children are unaffordable.¹⁶⁵ Paying for healthier foods is a challenge¹⁶⁶ (something we address through our proposal in part III above). For America's most obese populations, lack of funds is a driving factor in their unhealthy choices and lifestyles.

We acknowledge in part II that proposals to reduce obesity, such as taxes on junk foods, will have a disproportionate negative impact on those with low socioeconomic status, and may even exacerbate the socioeconomic conditions that already contribute to their obesity.¹⁶⁷ As a result, we seek to couple effective reforms that incentivize healthy behaviors like consumption of healthier foods and increased physical activity.

Research studies and real-world experiences in the U.S. and abroad indicate that substantial weight loss is achievable through financial incentives. In one randomized trial, financially-incentivized individuals achieved significant weight reduction without a formal weight loss program.¹⁶⁸ Employers and health insurers¹⁶⁹ have also successfully used financial incentives to promote weight loss and other healthy behaviors. Many American employers offer workplace wellness programs to encourage increased physical activity and heightened participation in health screenings. Financial incentives in the form of cash or reductions in insurance premium contributions can greatly increase employee participation in such programs. The most successful programs tend to pay participants soon after completing a given activity with longer-term incremental payments for more complex conditions.¹⁷⁰

Canada's Children's Fitness Tax Credit (CFTC), established in 2007, allows parents to claim up to \$500 per child for the fees paid to register their child in an approved physical activity program.¹⁷¹ A recent study concluded that the CFTC

165. Russell P. Lopez & H. Patricia Hynes, *Obesity, Physical Activity, and the Urban Environment: Public Health Research Needs*, 5 ENVTL. HEALTH 5-7 (2006).

166. Nicole Darmon & Adam Drewnowski, *Does Social Class Predict Diet Quality?*, 87 AM. J. CLINICAL NUTRITION 1107, 1111 (2008) (“[N]utrient-rich diets are associated with higher costs per megajoule.”).

167. See, e.g., Wendy Collins Perdue et al., *Legal Frameworks for Preventing Chronic Disease*, 33 J. L. MED. & ETHICS (SPECIAL ISSUE) 94, 96 (2005) (discussing the link between food insecurity and obesity).

168. This trial used two different financial incentives for weight loss over a sixteen-week period. The study found that at the end of the sixteen-week period, the incentive groups lost significantly more weight than the control group, using incentives that averaged \$272 and \$378, respectively. The use of economic incentives did produce significant weight loss over the sixteen-week intervention period, but it was not sustained when the incentives were removed, suggesting that the longer-term use of incentives should be evaluated. See Kevin G. Volpp et al., *Financial Incentive-Based Approaches for Weight Loss: A Randomized Trial*, 300 JAMA 2631 (2008).

169. United Healthcare's Vital Measures pilot program provides a \$500 credit against the participant's deductible for achieving certain health benchmarks, including having a healthy BMI. Shelly Reese, *Relevant Rewards: Incentives Inspire Healthy Behavior, but Be Prepared to Invest and Innovate*, MANAGED HEALTHCARE EXECUTIVE (November 1, 2007), <http://managedhealthcareexecutive.modernmedicine.com/mhe/Special+Report/Relevant-rewards-Incentives-inspire-healthy-behavi/ArticleStandard/Article/detail/469642>.

170. Ha T. Tu & Ralph C. Mayrell, *Employer Wellness Initiatives Grow, but Effectiveness Varies Widely*, NAT'L INST. FOR HEALTH CARE REFORM 5-6 (2010).

171. *Line 365-Children's Fitness Amount*, CANADA REVENUE AGENCY, <http://www.cra-arc.gc.ca/fitness/> (last modified Jan. 4, 2012).

has had a positive impact, encouraging physical activity among lower income children.¹⁷² The United Kingdom National Health Service has begun trials that pay overweight individuals for losing weight.¹⁷³ A 2011 study of the program showed that nearly half of the participants lost more than five percent of their body weight,¹⁷⁴ an amount shown to improve health even if a participant is still overweight.¹⁷⁵

These studies and programs suggest that financial incentives to decrease weight (which, as discussed below, should be considerably less expensive to administer than many other anti-obesity initiatives) could lessen rates of obesity across populations. Accordingly, we propose (1) a federally-supported Healthy Weight Tax Credit (HWTC) for all individuals in households under certain income ceilings and (2) expansion of the current federal income tax medical expense deduction to include a wider array of expenses that promote weight loss among wealthier Americans.

Federal income taxes have been used historically to advance many public policy goals.¹⁷⁶ In recent years, many new programs targeted at helping low- to moderate-income taxpayers have relied on tax incentives rather than direct government spending programs, due to the political stigma often associated with implementing new welfare programs.¹⁷⁷ Tax credits, as a dollar-for-dollar offset

172. John C. Spence et al., *Uptake and Effectiveness of the Children's Fitness Tax Credit in Canada: The Rich Get Richer*, 10 BMC PUB. HEALTH 4 (2010), available at <http://www.biomedcentral.com/content/pdf/1471-2458-10-356.pdf> (finding that lower income families were less likely to claim the CFTC credit and many were not aware of the credit, but also found that rates of children's participation in physical activity programs were higher for lower income families as a result of the CFTC).

173. Nick Allen, *NHS Pays Overweight People £425 to Lose Weight*, TELEGRAPH (Apr. 12, 2009), <http://www.telegraph.co.uk/health/healthnews/5145012/NHS-pays-overweight-people-425-to-lose-weight.html>.

174. The trial consisted of 402 participants that chose among various weight loss plans depending on their personal weight loss goals. Continued maintenance plans were optional. If the participants were successful they received a financial reward that varied based on the weight loss. See Clare Relton et al., *The 'Pounds for Pounds' Weight Loss Financial Incentive Scheme: An Evolution of a Pilot in NHS Eastern and Coastal Kent*, 33 J. PUB. HEALTH 536 (2011); Alexis C. Green, *Study: Weight Loss 'Bribery' Effective*, UPI.COM (April 29, 2011), http://www.upi.com/Health_News/2011/04/29/Study-Weight-loss-bribery-effective/UPI-75331304099500/.

175. Rena R. Wing et al., *Benefits of Modest Weight Loss in Improving Cardiovascular Risk Factors in Overweight and Obese Individuals with Type 2 Diabetes*, 34 DIABETES CARE 1481, 1484 (2011); *Healthy Weight: Losing Weight*, CENTERS FOR DISEASE CONTROL & PREVENTION, http://www.cdc.gov/healthyweight/losing_weight/ (last updated Aug. 17, 2011).

176. See Mona L. Hymel, *Consumerism, Advertising, and the Role of Tax Policy*, 20 VA. TAX REV. 347, 354-55 (2000) ("For example, the current preferential tax treatment of advertising costs encourages firms to invest in advertising . . . suggesting that the government views the exchange as having social value."); CHRISTOPHER HOWARD, *THE HIDDEN WELFARE STATE* 24 (1997) ("Anyone who thought the tax code was used solely to raise revenue may be surprised to discover just how many different functions it has . . . They range from providing special benefits to disabled coal miners to fostering home ownership and underwriting a variety of employment-based fringe benefits."); National Fed'n of Indep. Bus. v. Sebelius, 132 S. Ct. 2566, 2596 (2012) ("[T]axes that seek to influence conduct are nothing new.").

177. Alan Berube et al., *Tax Policies to Help Working Families in Cities 2* (Urban-Brookings Tax Policy Ctr., Discussion Paper No. 24, 2005), available at http://www.taxpolicycenter.org/UploadedPDF/411179_TPC_DiscussionPaper_24.pdf ("political realities . . . favor items that can be called 'tax cuts' over the same program enacted as a 'spending increase'").

of a household's tax liability, are most beneficial to lower-income taxpayers who derive little or no benefit from deductions (often because they do not itemize their deductible expenses). A refundable credit may effectively result in a direct payment from the federal government to the heads of the nearly forty-seven percent of households who have income but no tax liability.¹⁷⁸

The first part of our proposal is modeled after the federal Earned Income Tax Credit (EITC), the largest current cash transfer program benefitting low-income families.¹⁷⁹ It has a low cost of administration compared to direct spending programs with similar policy goals, such as SNAP.¹⁸⁰ By providing a refundable tax credit, the EITC is much more successful at reaching low-income households than deductions or taxable income exclusions.¹⁸¹ Households with qualifying children participate in the EITC at rates in excess of 80%.¹⁸²

Our proposed HWTC provides a refundable credit available to households under an income threshold of approximately \$50,000 (above which obesity levels tend to decrease).¹⁸³ The objectives are to (1) reward low-income individuals who are at or reach a healthy weight, or (2) refund expenses incurred in support of weight loss efforts or promotion of healthier behaviors. Adults and their children residing in households under the income ceiling will be eligible to receive the credit so long as they provide either a validated measurement of healthy weight each tax year or submit receipts for specific expenses.

A healthy weight could be determined using medically-accepted standards such as body mass index (BMI),¹⁸⁴ body fat percentage,¹⁸⁵ or waist-to-hip ratio.¹⁸⁶

178. Robertson Williams, *Who Pays No Income Tax?*, URBAN-BROOKINGS TAX POL'Y CENTER (June 29, 2009), available at http://www.taxpolicycenter.org/UploadedPDF/1001289_who_pays.pdf.

179. Berube et al., *supra* note 177.

180. In 1998, the administrative costs for the USDA's Food Stamps program were approximately \$4 billion or 19% of the program's benefits, while the entire budget for the IRS was only \$7.3 billion in 1998. Frank Sammartino et al., *Providing Federal Assistance for Low-Income Families Through the Tax System: A Primer* 47 (Urban-Brookings Tax Policy Ctr., Discussion Paper No. 4, 2002), available at <http://www.urban.org/uploadedPDF/410526.pdf>.

181. The Earned Income Tax Credit is widely considered a success in reducing poverty. A 2005 study found that without the credit the poverty rate of children would be 25% higher. Steve Holt, *The Earned Income Tax Credit at Age 30: What We Know*, BROOKINGS INST. 13 (2006), available at http://www.brookings.edu/~media/research/files/reports/2006/2/childrenfamilies%20holt/20060209_holt. More recently, the EITC successfully lifted over six million people out of poverty in 2010. *Policy Basics: The Earned Income Tax Credit*, CENTER ON BUDGET & POL'Y PRIORITIES, <http://www.cbpp.org/cms/index.cfm?fa=view&id=2505> (last updated Feb. 22, 2012).

182. Len Burman & Deborah Kobes, *GAO Study of EITC Eligibility and Participation*, URBAN INST. 2-3 (Jan. 18, 2002) available at <http://www.urban.org/uploadedPDF/410435.pdf>.

183. Finkelstein et al., *supra* note 114, at 565.

184. BMI = (weight [in pounds] / height² [in inches]) x 703, with a healthy BMI being at or below 24, and obesity beginning at a BMI of 30. *About BMI for Adults*, CENTERS FOR DISEASE CONTROL AND PREVENTION, http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html#Interpreted (last visited July 26, 2012). BMI is easy to calculate and is the most commonly used index of adiposity. However it is an imperfect measure of body fat because it does not distinguish between lean body mass and fat mass. Frank B. Hu, *Measurements of Adiposity and Body Composition*, in *OBESITY EPIDEMIOLOGY* 53, 56 (Frank B. Hu ed., 2008).

185. While recommended ranges vary, the American College of Sports Medicine states that an acceptable body fat percentage range for men is between 10-22%, and for women 20-32%. Tiffany Esmat, *Measuring and Evaluating Body Composition*, AM. COLL. SPORTS MED. (Jan. 11, 2012), <http://www.acsm.org/access-public-information/articles/2012/01/12/measuring-and-evaluating->

For children in school, nurses could easily measure all children's BMI, which some states already require.¹⁸⁷ Adults could have their BMI or other measurements taken by any medical professional (as part of routine preventive measures supported by PPACA).¹⁸⁸ Local governments may use PPACA funds for community health centers to create temporary measurement clinics or services leading up to tax filing deadlines. Employers could be encouraged to offer on-site measurements for employees.

Subject to further analysis as to how much the HWTC should pay each year to be most effective, the goal is to provide recipients with a significant portion of the savings government realizes from maintaining or lowering obesity rates across populations. To be sure, the potential for national savings is enormous. Government finances roughly half of all obesity expenditures¹⁸⁹ (approximately \$117 billion in 2003).¹⁹⁰ In 2018, the national costs of obesity are projected to be \$1,425 per person (as compared to \$361 per person today).¹⁹¹ Direct health care costs for obesity-related conditions will quadruple in ten years.¹⁹² If obesity rates remain stable at 2010 levels (instead of increasing linearly) the obesity-attributable savings in medical expenditures between 2010 and 2030 will be \$549.5 billion.¹⁹³

Rewarding persons for maintaining a healthy weight may limit increases in

body-composition. There are many different ways to determine an individual's body fat percentage. Under water weighing (densitometry) and the more recently developed air-displacement plethysmography accurately calculate body fat percentage but are not widely used due to cost, time, and equipment constraints. Simpler methods, such as measuring skinfold thickness, are used to estimate body fat percentage, but are less reliable. Hu, *supra* note 184, at 54–56 (“the ability of skinfold measurements to predict morbidity and mortality are not well established”).

186. Waist-to-hip ratio is supported by some medical professionals as a more accurate gauge of health compared to BMI. The recommended cut-points for waist-to-hip ratio for men and women were 0.95 and 0.88, respectively. Hu, *supra* note 184, at 53, 71–72. A calculator for this ratio is available online at http://www.bbc.co.uk/health/tools/hip_to_waist/hip_to_waist.shtml.

187. Val Wadas-Willingham, *Six States Get an 'A' for Work Against Kids' Obesity*, CNN (Jan. 31, 2007), <http://www.cnn.com/2007/HEALTH/diet.fitness/01/30/obesity.report/index.html>.

188. PPACA requires covered insurance plans to offer certain preventive services at no additional cost to the beneficiary. These measures include obesity screening and counseling for adults and children. *Preventative Services Covered Under the Affordable Care Act*, HEALTHCARE.GOV, <http://www.healthcare.gov/news/factsheets/2010/07/preventive-services-list.html> (last updated Sept. 27, 2012).

189. Eric A. Finkelstein et al., *National Medical Spending Attributable to Overweight and Obesity: How Much, and Who's Paying*, HEALTH AFFS. at W3-223, exhibit 4, (May 14, 2003), <http://content.healthaffairs.org/content/early/2003/05/14/hlthaff.w3.219.full.pdf+html>. In 1998, Medicaid spending related to obesity was \$14.1 billion, and equivalent Medicare spending was \$23.5 billion.

190. CALORIES COUNT: COHORT OF THE WORKING GROUP ON OBESITY, U.S. FOOD AND DRUG ADMIN., 1 (2004), available at http://www.fda.gov/OHRMS/DOCKETS/ac/04/briefing/4039b1_01_calories%20count.pdf.

191. Eric A. Finkelstein et al., *Annual Medical Spending Attributable to Obesity: Payer-and-Service-Specific Estimates*, 28 HEALTH AFFS. W822, W829–30 (2009). See also THE FUTURE COSTS OF OBESITY: NATIONAL AND STATE ESTIMATES OF THE IMPACT OF OBESITY ON DIRECT HEALTH CARE EXPENSES, UNITED HEALTH FOUND., AM. PUB. HEALTH ASS'N & P'SHIP FOR PREVENTION 2 (2009) <http://www.nccor.org/downloads/CostofObesityReport-FINAL.pdf>.

192. *Id.* at 3.

193. Finkelstein et al., *supra* note 114, at 568.

obesity rates, but complementary incentives are also needed to encourage overweight individuals to take steps to lose weight. To this end, the HWTC would also be available as a one-for-one refundable tax credit for all qualifying weight-loss related expenditures for those who cannot validate a healthy weight during a given tax year. Qualifying expenses may vary to provide multiple options to garner the incentive and include costs for weight loss programs (e.g., Weight Watchers®, Jenny Craig®), gym memberships, organized sports fees, or costs of exercise equipment. These expenses would be in addition to items that qualify for the current federal medical expenses deduction,¹⁹⁴ which may benefit higher-income households who are ineligible to receive the HWTC due to their wealth.¹⁹⁵

Requiring taxpayers to fund these expenses upfront, maintain adequate records of expenditures, and then file a tax return to receive a refund is the cheapest and most efficient means of administration of this facet of the HWTC. However, many eligible taxpayers cannot afford to self-fund these expenses and wait for a refund months later. Alternatively, the HWTC could be administered as a new government program with amounts placed onto a debit card that can only be used for qualifying expenses, similar to that proposed for the HFSA program discussed in part III. Public and private health insurers could also potentially fund the initial costs of such a debit card program for their beneficiaries to generate positive savings in projected insurance costs through increased use of the HWTC.¹⁹⁶

Although the HWTC should eventually generate savings through a decrease in obesity rates, there are start-up costs. Additional tax revenues generated from our proposals in parts II-IV could help offset costs. Yet in an era of societal reluctance to fund new government programs, requests for more government funding could be doomed. The HWTC, however, can be defended politically on at least four major grounds available to defend a tax credit.¹⁹⁷ First, it provides aid largely to the poor so they have funds to purchase items needed to make healthier choices. Second, as the poor spend more on healthier choices, it will increase demand for such products and services in developing areas,

194. Obesity-related expenses presently eligible for the existing medical expense deduction include those for bariatric surgery, FDA-approved weight loss drugs, physician and hospital-based programs, behavioral counseling, dietitians and nutritionists, and weight loss programs, but only if (1) the person incurring the expenses has been diagnosed as having a health problem, such as obesity, and (2) such expenses, aggregated over the entire year, exceed 7.5% of the taxpayer's adjusted gross income. See, e.g., Connie Farrow, *IRS Allows Tax Deduction for Doctor-Approved Weight-Loss*, USA TODAY (Mar. 1, 2004), http://www.usatoday.com/money/perfi/taxes/2004-03-01-weightloss_x.htm.

195. Health club dues, nutritional supplements, over-the-counter weight loss products, diet foods, and exercise equipment are not currently deductible. *Publication 502 - Medical and Dental Expenses*, INTERNAL REVENUE SERV. (2012), http://www.irs.gov/publications/p502/ar02.html#en_US_publink1000179034; Farrow, *supra* note 194.

196. United Healthcare has internally estimated that voluntary incentive programs can save employers 12-20% on their health expenses. Reese, *supra* note 169.

197. The four bases of defense for a tax expenditure such as a tax credit are "as aid to some needy category of citizens; as a subsidy to third-party providers in the private sector, who furnish most of the goods and services underwritten by the tax code; as tax reductions; and as alternatives to traditional government programs (i.e., direct expenditures and regulation)." HOWARD, *supra* note 176, at 11.

subsidizing their providers. Third, it will directly reduce taxes paid by the poor, raising their income profile. Finally, it will be far cheaper to administer than traditional spending programs.

VI. BANNING THE SALE AND POSSESSION OF SUGAR-SWEETENED BEVERAGES AMONG MINORS

According to the Robert Wood Johnson Foundation, intake of SSBs is a major contributor to obesity, particularly among minors.¹⁹⁸ The American Heart Association (AHA) recommends children ages 1–6 years should consume no more than 4–6 ounces per day of sweetened beverages and naturally sweet beverages, such as fruit juice. Children ages 7–18 years should consume no more than 8–12 ounces per day.¹⁹⁹ Unfortunately, current average consumption of SSBs by adolescents is more than double the AHA-recommended levels. Eighty-four percent of adolescents consumed at least one SSB a day between 1999 and 2004.²⁰⁰ Their daily consumption of SSBs averages 30 ounces and 356 calories (or 16% of their total caloric intake).²⁰¹ Between 2003 and 2004, children aged 2–18 consumed nearly 40% of their total calories through empty calories, the largest source of which was SSBs at 22%.²⁰² Kids are drinking more SSBs for a variety of reasons, including increased portion sizes. Between 1977–1996, for example, the average portion size of soft drinks ballooned from 13.1 ounces to 19.9 ounces (an increase of 51.9%).²⁰³

Over-consumption of SSBs among minors is linked to numerous immediate and long-term adverse health outcomes. Research indicates an association between SSB consumption and risk of development of obesity, metabolic disorders, and type 2 diabetes, along with increased risks of stroke, coronary

198. SSBs are defined as including “all sodas, fruit drinks, sport drinks, low-calorie drinks and other beverages that contain added caloric sweeteners, such as sweetened tea, rice drinks, bean beverages, sugar cane beverages, horchata and nonalcoholic wines/malt beverages.” Sport drinks includes “all beverages marketed for rehydration for athletes,” fruit drinks includes “all fruit drinks, fruit juices and fruit nectars with added sugar,” and sodas includes “all carbonated beverages with added sugar.” Steven Gortmaker et al., *The Negative Impact of Sugar-Sweetened Beverages on Children’s Health*, ROBERT WOOD JOHNSON FOUND. (November 2009), <http://www.rwjf.org/files/research/20091203herssb.pdf>. While recent research showed that the percentage of Americans consuming added sugar decreased between 1999–2000 and 2007–2008, overall intake remains well above recommended levels. Jean A. Welsh et al., *Consumption of Added Sugars Is Decreasing in the United States*, 94 AM. J. CLINICAL NUTRITION 726, 730–33 (2011).

199. Samuel S. Gidding et al., *Dietary Recommendations for Children and Adolescents: A Guide for Practitioners: Consensus Statement from the American Heart Association*, 112 CIRCULATION 2061, 2068 (2005).

200. Y. Claire Wang et al., *Increasing Caloric Contribution From Sugar-Sweetened Beverages and 100% Fruit Juices Among US Children and Adolescents, 1988–2004*, 121 PEDIATRICS e1604, e1611 (2008).

201. *Id.* One pound of fat is equal approximately to 3,500 calories. *Counting Calories: Get Back to Weight-Loss Basics*, MAYO CLINIC, <http://www.mayoclinic.com/health/calories/WT00011>. Using this guide, if a child consumed an additional 350 calories per day above their required daily caloric intake, she may gain one pound of fat in ten days.

202. Jill Reedy & Susan M. Krebs-Smith, *Dietary Sources of Energy, Solid Fats, and Added Sugars Among Children and Adolescents in the United States*, 110 J. AM. DIETETIC ASS’N 1477, 1482–83 (2010).

203. Samara J. Nielsen & Barry M. Popkin, *Patterns and Trends in Food Portion Sizes, 1977–1998*, 289 JAMA 450, 451–52 (2003).

disease, and low bone density in women.²⁰⁴ Among adolescents, an increase of SSB intake from one year to the next was associated with weight gain and higher systolic blood pressure.²⁰⁵ SSB consumption by five-year-old girls correlates positively with a higher percentage of body fat between ages five and fifteen years.²⁰⁶ Intake of carbonated beverages is connected with a heightened risk of bone fractures among teenage girls.²⁰⁷ Soda consumption overall also tends to lower consumption of milk and calcium among all populations.²⁰⁸ Even low to moderate consumption of SSBs has been found to lead to potentially harmful effects on markers of cardiovascular health in young adult males in just three weeks.²⁰⁹

Health hazards posed by over-consumption of SSBs and the increased rates of obesity among children²¹⁰ dictate significant regulatory measures in the interest of public health. Though national calls for a soda tax proposed in initial versions of PPACA fell aside,²¹¹ sodas, coffee drinks, and other SSBs are the target of existing and increasing calls for specific taxation across the United States.²¹² Some cities and school districts have sought to limit access or marketing of SSBs. In May 2006, the three largest national soft-drink companies, Coca-

204. Qibin Qi et al., *Sugar-Sweetened Beverages and Genetic Risk of Obesity*, 367 *NEW ENG. J. MED.* 1387 (2012), available at <http://www.nejm.org/doi/full/10.1056/NEJMoa1203039>; Gail Woodward-Lopez et al., *To What Extent Have Sweetened Beverages Contributed to the Obesity Epidemic?*, 14 *PUB. HEALTH NUTRITION* 501-06 (2010); Vasanti S. Malik et al., *Intake of Sugar-Sweetened Beverages and Weight Gain: A Systemic Review*, 84 *AM. J. CLINICAL NUTRITION* 274, 284-86 (2006); Sungwoo Lim et al., *Obesity and Sugar-Sweetened Beverages in African-American Preschool Children: A Longitudinal Study*, 17 *OBESITY* 1262, 1265-67 (2009); Lenny R. Vartanian et al., *Effects of Soft Drink Consumption on Nutrition and Health: A Systematic Review and Meta-Analysis*, 97 *AM. J. PUB. HEALTH* 667, 673 (2007); Vasanti S. Malik et al., *Sugar-Sweetened Beverages and Risk of Metabolic Syndrome and Type 2 Diabetes*, 33 *DIABETES CARE* 2477, 2481 (2010); Andrew O. Odegaard et al., *Soft Drink and Juice Consumption and Risk of Physician-diagnosed Incident Type 2 Diabetes: The Singapore Chinese Health Study*, 171 *AM. J. EPIDEMIOLOGY* 701, 706-07 (2010); Adam M. Bernstein et al., *Soda Consumption and the Risk of Stroke in Men and Women*, 95 *AM. J. CLINICAL NUTRITION* 1190, 1190 (2012); Katherine L. Tucker et al., *Colas, but Not Other Carbonated Beverages, Are Associated with Low Bone Mineral Density in Older Women: The Framingham Osteoporosis Study*, 84 *AM. J. CLINICAL NUTRITION* 936, 938-39 (2006); Dariush Mozaffarian et al., *Changes in Diet and Lifestyle and Long-Term Weight Gain in Women and Men*, 364 *NEW ENG. J. MED.* 2392, 2397-98 (2011); Teresa T. Fung et al., *Sweetened Beverage Consumption and Risk of Coronary Heart Disease in Women*, 89 *AM. J. CLINICAL NUTRITION* 1037, 1040-41 (2009).

205. Catherine S. Berkey et al., *Sugar-Added Beverages and Adolescent Weight Change*, 12 *OBESITY RES.* 778, 783 (2004); Stephanie Nguyen et al., *Sugar-Sweetened Beverages, Serum Uric Acid, and Blood Pressure in Adolescents*, 154 *J. PEDIATRICS* 807, 811 (2009).

206. Laura M. Fiorito et al., *Beverage Intake of Girls at Age 5 y Predicts Adiposity and Weight Status in Childhood and Adolescence*, 90 *AM. J. CLINICAL NUTRITION* 935, 938-40 (2009).

207. Grace Wyshak, *Teenaged Girls, Carbonated Beverage Consumption, and Bone Fractures*, 154 *ARCHIVES PEDIATRIC ADOLESCENT MED.* 610, 612-13 (2000).

208. Vartanian et al., *supra* note 204, at 673; See Teresa A. Marshall et al., *Dental Caries and Beverage Consumption in Young Children*, 112 *PEDIATRICS* e184, e185-88 (2003).

209. Isabelle Aeberli et al., *Low to Moderate Sugar-Sweetened Beverage Consumption Impairs Glucose and Lipid Metabolism and Promotes Inflammation in Healthy Young Men: A Randomized Controlled Trial*, 94 *AM. J. CLINICAL NUTRITION* 479, 481-85 (2011).

210. Ogden et al., *Prevalence 1999-2010*, *supra* note 9, at 483.

211. See 155 *CONG. REC.* S10459 (daily ed. Oct. 15, 2009) (statement of Sen. Johnny Isakson); See 155 *CONG. REC.* S6612 (daily ed. Jun. 16, 2009) (statement of Sen. Mitch McConnell).

212. *Sugar-Sweetened Beverages/Taxes: Legislation and Policies*, YALE RUDD CENTER FOR FOOD POL'Y & OBESITY, http://www.yalerruddcenter.org/what_we_do.aspx?id=272 (last visited Dec. 11, 2012).

Cola®, PepsiCo®, and Cadbury Schweppes®, agreed to voluntarily remove sweetened drinks, namely sodas and teas, from school cafeterias and vending machines by 2009.²¹³ Some states and many school districts have additionally banned the sale of soda or restricted the sale of SSBs during school hours.²¹⁴

In April 2011, Boston Mayor Thomas Menino ordered a phase out of the sale, advertising, and promotion of SSBs through vending machines, cafeterias, and concessions stands (but not grocery or convenience stores)²¹⁵ on city-owned property and at meetings and events catered with city funds.²¹⁶ A year later, in May 2012, New York City Mayor Michael Bloomberg proposed to limit the portion size of SSBs served in restaurants, ballparks, delis, movie theaters, and sidewalk carts in the city to no more than sixteen ounces.²¹⁷ In June 2012, Los Angeles Councilman Mitchell Englander proposed a ban on the sale of soda in vending machines in city facilities and parks, subject to additional approval.²¹⁸

213. Elementary school students were only permitted to be served bottled water, low-fat and nonfat milk, and 100 percent fruit juice, with a limit of an 8-ounce serving size. Middle school students were allowed up to a 10-ounce serving size of the aforementioned drinks, and high school students were permitted to be served low-calorie juice drinks, sports drinks and diet sodas, with serving sizes limited to 12 ounces. Marian Burros & Melanie Warner, *Bottlers Agree to a School Ban on Sweet Drinks*, N.Y. TIMES (May 4, 2006), http://www.nytimes.com/2006/05/04/health/04soda.html?_r=1.

214. See, e.g., *Philadelphia Schools Ban Soda Sales*, CNN (Jan. 16, 2004, 10:00 AM), <http://www.cnn.com/2004/EDUCATION/01/16/health.soda.reut>; Angie L. Craddock et al., *Effect of School District Policy Change on Consumption of Sugar-Sweetened Beverages Among High School Students, Boston, Massachusetts, 2004-2006*, 8 PREVENTING CHRONIC DISEASE 1, 2 (2011); N.C. GEN. STAT. § 115C-264.2 (2005) (banning all diet and regular soft drinks during meal periods and in elementary schools, and banning regular sugared soft drinks from middle schools); CAL. EDUC. CODE § 49431.5 (West 2006) (banning the sale of all diet and regular sodas on school premises during the school day); N.Y. EDUC. LAW § 915 (McKinney 1987) (banning any “sweetened soda water” from sale in public schools until after the last meal period of the day); N.J. STAT. ANN. § 18A:33-16 (West 2007) (banning beverages of “minimal nutritional value” as defined by USDA and those listing sugar as the first ingredient from being given in any form anywhere on school properties before the end of the school day, and banning all diet and regular soft drinks or otherwise sweetened beverages from elementary schools); IOWA ADMIN. CODE r. 281-58.11 (2010) (banning all carbonated beverages from distribution during the school day).

215. Derrick Z. Jackson, *Soda Loses Its Fizz*, BOS. GLOBE (Apr. 9, 2011), http://www.boston.com/bostonglobe/editorial_opinion/oped/articles/2011/04/09/soda_loses_its_fizz.

216. *Mayor Menino Issues Order to End Sugary Drink Sales on City Property*, CITY OF BOSTON.GOV (Apr. 7, 2011), <http://www.cityofboston.gov/news/Default.aspx?id=5051>. The mayor proposed a “traffic-light system” to govern permitted and prohibited beverage sales. Sales are permitted for “green” beverages (e.g., low fat milk, unsweetened soy milk, bottled water, and flavored and unflavored seltzer water), and “yellow” beverages (e.g., diet sodas, diet iced teas, 100% juice drinks, low-calorie sports drinks, sweetened teas, flavored and sweetened milk, sweetened soy milk, low-calorie sports drinks, and low-sugar sweetened beverages). “Red” beverages (e.g., non-diet sodas, pre-sweetened iced teas, energy drinks, juice drinks with added sugar, sports drinks, and refrigerated coffee drinks) may not be sold or promoted on city property. *Id.* For the image, see *Rethink Your Drink (Poster)*, BOS. PUB. HEALTH COMM’N, <http://www.bphc.org/programs/cib/chronicdisease/healthybeverages/Pages/Home.aspx>.

217. The New York City Board of Health approved the ban proposed by Mayor Bloomberg in September 2012, which will take effect on March 12, 2013. Michael M. Grynbaum, *Health Panel Approves Restriction on Sale of Large Sugary Drinks*, N.Y. TIMES (Sept. 13, 2012), http://www.nytimes.com/2012/09/14/nyregion/health-board-approves-bloombergs-soda-ban.html?_r=1; Grynbaum, *supra* note 18.

218. *No Soda at Parks, Libraries - Los Angeles Councilman Pitches*, KABC-TV (June 20, 2012),

These existing and proposed bans are meaningful, but do not go far enough. New York City's portion limits, for example, do not stop anyone, including minors, from purchasing or possessing SSBs in public (where nearly half of SSBs are consumed according to CDC).²¹⁹ Under every existing proposal, a minor can still purchase a liter of soda from a grocery or corner store, or refill their sixteen-ounce cup of soda at a restaurant multiple times. Only within many of the nation's schools have policies restricting minors' access to SSBs taken hold. While these school-based bans have increasingly been found to reduce minors' access, they have not been found to significantly reduce their overall consumption of SSBs.²²⁰

From a policy perspective, it seems odd that jurisdictions seek to restrict minors' access to SSBs in schools or during school-sponsored events, only to allow them basically unfettered access to these beverages outside of school. We see no reason to provide a healthy environment related to SSB consumption solely within schools. Akin to effective "zero-tolerance" approaches for minors relating to alcohol²²¹ and tobacco²²² products, we propose a complete ban of the public sale and possession of SSBs among minors nationally.

Implemented via state or local laws, the ban would apply to all retail outlets, not just restaurants or vending machines that may sell SSBs to minors.²²³

http://abclocal.go.com/kabc/story?section=news/local/los_angeles&id=8707923.

219. See Cynthia L. Ogden et al., *Consumption of Sugar Drinks in the United States, 2005–2008*, 71 NCHS Data Brief 1, 4 (2011). The CDC's study found that about as many SSBs are consumed at home (52%) as outside the home (48%). Among SSBs consumed outside the home, 43% were obtained at stores, 35.5% in restaurants or fast-food establishments, 1.4% in schools or day-care centers, and 20% from other locations, including cafeterias, vending machines, street vendors, or community food programs.

220. Daniel R. Taber et al., *Banning All Sugar-Sweetened Beverages in Middle Schools: Reduction of In-School Access and Purchasing but Not Overall Consumption*, 166 ARCHIVES PEDIATRIC ADOLESCENT MED. 256, 256 (2012).

221. Implementation of minimum drinking ages laws have led to reduced drinking of alcoholic beverages among youth. Christopher S. Carpenter et al., *Alcohol Control Policies and Youth Alcohol Consumption: Evidence from 28 Years of Monitoring the Future*, 7 B.E. J. ECON. ANALYSIS & POL'Y 1, 16–17 (2007), available at <http://www.rwjf.org/pr/product.jsp?id=20512>.

222. Regulations limiting tobacco access have proven effective in reducing the rate of tobacco use by minors. In 2008, researchers from DePaul University found that the percentage of minors who use tobacco products increases as the minor gets older. Combining enforcement in restricting access and fine imposition for possession was effective in reducing the increase in usage of tobacco. Leonard A. Jason, *Restricted Access to Cigarettes and Fines for Possession Reduce Underage Smoking*, ROBERT WOOD JOHNSON FOUND. (May 2008), <http://www.rwjf.org/pr/product.jsp?id=16810>. Junior high and high school students living in towns with more extensive purchase, use, and possession laws showed significantly lower increases in rates of smoking. Leonard A. Jason et al., *A Randomized Trial Evaluating Tobacco Possession-Use-Purchase Laws in the USA*, 67 SOC. SCI. & MED. 1700, 1703, 1706 (2008); School survey results showed that cigarette legislation containing licensing, enforcement, and possession provisions reduced the number of adolescents who smoked in a suburban community. Leonard A. Jason et al., *Active Enforcement of Cigarette Control Laws in the Prevention of Cigarette Sales to Minors*, 266 JAMA 3159, 3159–61 (1991). Increased access to tobacco is positively correlated with a higher rate of smoking initiation in youth. Steven B. Pokorny et al., *The Relation of Retail Tobacco Availability to Initiation and Continued Smoking*, 32 J. CLINICAL CHILD & ADOLESCENT PSYCHIATRY 193, 201 (2003).

223. While we recognize vending machines could pose a problem for enforcement, as vending machines including SSBs are quite prevalent and accessible to minors, minors would still be prohibited from possessing the SSB.

It would prohibit minors' public consumption and possession of SSBs²²⁴ and juice drinks with added sugar (excluding diet sodas, diet teas, 100% fruit juice drinks, water, and non-flavored or non-sweetened milk). It may be enforced through fines levied against establishments that sell SSBs to minors similar to those imposed on establishments that sell alcohol or tobacco to minors.²²⁵ Minors seeking to purchase SSBs would be denied; those attempting to publicly consume SSBs would be stripped of the products.²²⁶

A complete ban on minors' purchase and public possession of SSBs will be criticized as unnecessary, overbroad, or unpopular. As to the first point, while the necessity of any health policy can always be debated, studies have strongly linked SSBs to obesity and diabetes, both of which are increasingly prevalent in American youth.²²⁷ And obese children are at a much higher risk of becoming severely obese adults.²²⁸ As to its potential over breadth, our proposal directly targets the correlation between the increase in the obesity epidemic and SSB consumption specifically. Reasons underlying this correlation are subject to further study, but one theory suggests that individuals do not compensate for the calories they consume through SSBs by reducing calories from non-liquid foods.²²⁹ Possible explanations for a lack of reduction of intake from other food

224. We include flavored or sweetened milk due to the amount of added sugar in these products. For example, strawberry low fat milk contains thirty grams of sugar per cup and chocolate low fat milk contains twenty-eight grams of sugar per cup, while low fat plain milk contains just twelve grams of sugar per cup. NESQUIK® Calcium Fortified Strawberry Lowfat Milk 16oz, *Nutritional Information*, NESTLE NESQUIK, <http://www.nesquik.com/adults/products/nesquikreadytodrink/strawberry16.aspx#> (last visited Aug. 7, 2012); NESQUIK® Calcium Fortified Chocolate Lowfat Milk 16oz, *Nutritional Information*, NESTLE NESQUIK, <http://www.nesquik.com/adults/products/nesquikreadytodrink/chocolate.aspx#> (last visited Aug. 7, 2012); NESQUIK® Calcium Fortified White Lowfat Milk 8oz, *Nutritional Information*, NESTLE NESQUIK, <http://www.nesquik.com/adults/products/nesquikreadytodrink/lowfatwhitemilk.aspx#> (last visited Aug. 7, 2012).

225. See, e.g., CAL. BUS. & PROF. CODE § 25658 (West 2012) (providing for \$250-1000 fine for misdemeanor of sale of alcohol to a minor); N.Y. ALCO. BEV. CONT. LAW § 65 (McKinney 2010) (providing for possible license revocation or suspension to businesses for sale to a minor of alcohol); N.Y. PUB. HEALTH LAW § 1399-ee(2) (McKinney 2002) (providing for \$300-1000 fine for business that furnishes tobacco to minors); TEX. HEALTH & SAFETY CODE ANN. § 161.082 (West 1997) and TEX. PENAL CODE ANN. § 12.23 (West 1994) (proscribing the sale of tobacco to minors as a Class C misdemeanor, which includes a fine not to exceed \$500). Our proposed SSB ban would not prohibit parents from buying such drinks for their children for use at home, thus allowing parents discretion over choices they make in their children's diets.

226. Confiscation alone may not be sufficient in some jurisdictions. Some may consider additional forms of punishments, such as fines to adults to who furnish SSBs to minors in public.

227. Ogden et al., *Prevalence 1999–2010*, *supra* note 9. See discussion *supra* Part V linking SSB consumption to obesity and diabetes.

228. Less than 5% of individuals who were normal weight adolescents became severely obese as adults, while 37.1% of men and 51.3% of women who were obese as adolescents became severely obese as adults. Natalie S. The et al., *Association of Adolescent Obesity With Risk of Severe Obesity in Adulthood*, 304 JAMA 2042, 2045–46 (2010). Severe obesity was defined as being greater or equal to 120% of 95th percentile on BMI-for-age growth chart for individuals less than twenty years or having a BMI of greater or equal to forty for individuals aged twenty years and older. *Id.* at 2043.

229. Gortmaker et al., *supra* note 198. In 2000, one study researched the caloric intake differences from liquid and solid foods. See DP DiMeglio & RD Mattes, *Liquid Versus Solid Carbohydrate: Effects on Food Intake and Body Weight*, 24 INT'L J. OBESITY 794, 795–96 (2000). One subject group drank 450 calories worth of caffeine-free soda per day for twenty-eight days, followed by a rest period, and then later consumed 450 calories worth of jelly beans per day for another twenty-eight days. Another

sources when consuming SSBs include: (1) the absence of chewing and swallowing of liquid calories results in a decrease in endocrine and pancreatic exocrine responses;²³⁰ (2) liquids are emptied from the stomach at a higher rate than solid foods; and (3) the high fructose content in SSBs promotes fat storage and excessive food intake, possibly from non-liquid sources.²³¹ Based on this and similar studies, restricting minors' access to and consumption of SSBs will help reduce overall caloric intake and prevent further weight gain or facilitate weight loss.²³²

Our ban will likely be fervently opposed by the SSB industry, parents, and others.²³³ Following the NYC proposal, national polls found that sixty-four percent believed the proposed ban provided the government with too much control over an individual's decisions on what to consume²³⁴ and sixty-five percent opposed enacting similar measures.²³⁵ Even among NYC voters, fifty-one percent opposed the ban.²³⁶ Still, researchers suggest the policy would be effective in reducing caloric intake from SSBs purchased from fast food

subject group performed the test in reverse order. The study found that individuals did not reduce their intake from other food sources when they drank the increased number of calories from soda. Instead, they slightly increased their overall intake of calories. However, individuals who ate the jelly beans did compensate for the additional calories and reduced intake from other food sources. As the individuals did not otherwise change their activities during the period in which they consumed the soda, researchers observed an increase in BMI and body weight. No increase in body weight or BMI was observed among the group consuming jelly beans. *Id.* at 796-97.

230. The pancreatic enzymes that are secreted in response to chewing and swallowing are meant to act in digestion as food leaves the stomach and enters the intestines. See Karen L. Teff, *Cephalic Phase Pancreatic Polypeptide Responses to Liquid and Solid Stimuli in Humans*, 99 *PHYSIOLOGY & BEHAV.* 317, 324 (2010). These same enzymes may also contribute to feelings of satiety (fullness). Sarah Stanley et al., *Gastrointestinal Satiety Signals III. Glucagon-like Peptide 1, Oxyntomodulin, Peptide YY, and Pancreatic Polypeptide*, 286 *AM. J. PHYSIOLOGY GASTROINTESTINAL LIVER PHYSIOLOGY* G693, G695-96 (2004).

231. Liwei Chen et al., *Reduction in Consumption of Sugar-Sweetened Beverages Is Associated with Weight Loss: The PREMIER Trial*, 89 *AM. J. CLINICAL NUTRITION* 1299, 1305 (2009).

232. See *id.* at 1304-05 (finding a significant association between a reduction in SSB consumption in adults and weight loss, but a lack of a significant association between intake of other beverage types and weight change).

233. Public health intervention type bans are often wrought with initial controversy. Even though allergic children have died from exposure to peanuts at school (see *Student, 7, Dies From Peanut Allergy*, WAVY TV 10 (Jan. 5, 2012, 7:35 PM), <http://www.wavy.com/dpp/news/virginia/student-7-dies-from-peanut-allergy>; Hugh A. Sampson et al., *Fatal and Near-Fatal Anaphylactic Reactions to Food in Children and Adolescents*, 327 *NEW ENG. J. MED.* 380, 382-83 (1992)), an online poll on OpposingViews.com, between May 29 and May 31, 2012, found that 76.6% of the 884 respondents believed there should not be a peanut ban in schools. *PeanutAllergy.com and Opposing Views Poll Results: No Peanut Ban in Schools*, PEANUT ALLERGY (June 6, 2012), <http://www.opposingviews.com/i/society/education/home-schooling/peanutallergycom-and-opposing-views-poll-results-no-peanut-ban>.

234. *Reuters/Ipsos Poll: Sugary Drinks*, REUTERS, <http://reuters.tumblr.com/post/24681024695/sixty-four-percent-of-people-surveyed-in-a-new> (last visited June 8, 2012).

235. *65% Say No to Ban on Super-Size Sugary Drinks*, RASMUSSEN REPS. (June 4, 2012), http://www.rasmussenreports.com/public_content/lifestyle/general_lifestyle/may_2012/65_say_no_to_ban_on_super_size_sugary_drinks.

236. Michael M. Grynbaum, *Slight Majority of New Yorkers Oppose Soda Ban*, N.Y. TIMES BLOG (June 13, 2012, 11:33 AM), <http://cityroom.blogs.nytimes.com/2012/06/13/slim-majority-of-new-yorkers-oppose-soda-ban>.

restaurants.²³⁷ Furthermore, while some negative responses followed the initiation of regulations restricting soda and SSB sales to children in schools, most responses were positive.²³⁸

Opposition by the SSB industry may be driven by concerns over lost sales. Minors are a huge target audience for their products. In 2010, beverage companies spent \$948 million on advertising of sugary drinks and energy drinks in all forms of media.²³⁹ The food industry spends more on advertising of beverages to children than on advertising for any other food group, and SSBs make up the majority of all advertised beverage categories.²⁴⁰ Teenagers and young adults consume more SSBs than older age groups.²⁴¹ On average per day, seventy percent of boys and sixty percent of girls aged two to nineteen consume SSBs.²⁴² Additionally, beverage consumption and preference patterns established at a young age can persist for many years into adolescence.²⁴³ Establishing minors' consumption and preference patterns of SSBs early in life helps assure continued use and enhanced sales. To the extent our proposed ban derails minors' consumption of SSBs, it will negatively impact sales of SSBs but improve child and adolescent health.

SSB manufacturers may purport that their products are not a vice for minors, especially in moderation. Some even suggest, for example, that SSBs provide a source of hydration for kids.²⁴⁴ In reality, based on caloric and nutritional content and health benefits and risks, these drinks are actually the least recommended beverage category for minors and adults.²⁴⁵ The industry

237. Brian Elbel et al., *Potential Effect of the New York City Policy Regarding Sugared Beverages*, 367 NEW ENG. J. MED. 680, 681 (2012), available at <http://www.nejm.org/doi/full/10.1056/NEJMc1208318>.

238. Researchers examined opinion and newspaper responses to legislation in four states, Connecticut, Indiana, Massachusetts, and Maryland, which included restrictions in schools on the sale of sodas and other SSBs, and found that a majority of responses supported the legislation but negative responses were still prevalent. Lori Dorfman et al., *Debates from Four States over Selling Soda in Schools*, 17 BERKELEY MEDIA STUD. GRP. 1, 11 (2008), available at <http://www.bmsg.org/resources/publications/issue-17-debates-from-four-states-over-selling-soda-in-schools>. See also Prescott Carlson, *Stay out of My Kid's Lunchbox*, IMPERFECTPARENT.COM, http://www.imperfectparent.com/editor/articles169_1.php (last visited Aug. 7, 2012); Elizabeth M. Whelan, *No Evidence Connecticut School Soda Ban Will Promote Health*, AM. COUNCIL ON SCI. & HEALTH (Apr. 21, 2006), http://www.acsh.org/factsfears/newsID.731/news_detail.asp.

239. Jennifer L. Harris et al., *Sugary Drink FACTS: Evaluating Sugary Drink Nutrition and Marketing to Youth*, YALE RUDD CENTER FOR FOOD POL'Y & OBESITY, iii, 9 (2011), http://www.sugarydrinkfacts.org/resources/SugaryDrinkFACTS_Report.pdf.

240. *Id.* at 8.

241. Ogden et al., *supra* note 219, at 1-2.

242. *Id.* at 2. In contrast, 55% of adult males aged 20 years or older and 40% of adult females aged 20 years or older consume SSBs on a given day.

243. Girls who consumed SSBs at age five were more likely to consume SSBs from ages five to fifteen and were also more likely to have a lower intake of milk. Laura M. Fiorito et al., *Girls' Early Sweetened Carbonated Beverage Intake Predicts Different Patterns of Beverage and Nutrient Intake Across Childhood and Adolescence*, 110 J. AM. DIETETIC ASS'N 543, 543 (2010).

244. See *Hydration*, LET'S CLEAR IT UP, <http://www.letsclearitup.org/topic-tags/hydration> (last visited Aug. 7, 2012).

245. This finding stems from recommendations of the Beverage Guidance Panel, a panel of experts convened to review literature and provide health and nutritional guidance on various beverage categories. The highest recommended beverage category was water, in part due to its

may also note that minors consume a majority of added sugars from food sources and not from SSBs. While fifty-nine percent of added sugar calories in minors' diets on average come from food sources, a large percentage (forty-one percent) of calories are tied to SSBs and other beverage sources.²⁴⁶ And unlike many foods, sodas and other SSBs offer little to no nutritional benefits.²⁴⁷ As noted, even low or infrequent consumption of SSBs may cause negative health effects in just a few weeks.²⁴⁸ Replacing SSBs with less caloric or non-caloric beverages can significantly reduce body fat and weight gain in healthy children.²⁴⁹

Ultimately, many potential arguments against our proposed ban not only lack scientific support, they run counter to existing public support for school-based bans of these same products. The movement toward creating healthier schools devoid of SSBs can extend to the larger, public environment in which minors purchase and consume a great volume of SSBs. Coupled with sufficient evidence, state and local public health authorities have a rational basis and sufficient powers²⁵⁰ to implement a complete ban of SSB sales and possession among minors in public, just as in schools.

VII. CONCLUSION

Escalated rates of obesity, especially among minors, are catastrophic and yet preventable. Current law and policy interventions supported by abundant research and best intentions have not produced the type of dramatic results needed to curb this epidemic. Innovative and workable approaches at the national, state, and local levels are essential. We propose the (1) use of obesity laden pricing of junk foods to lower consumption and prevent future harms; (2) creation of HFSA's to facilitate healthier food purchases; (3) development of tax incentives to encourage restaurants' sales of healthier menu options; (4) provision of meaningful federal tax credits for individuals to promote their weight loss and physical activity; and (5) ban on the sale and possession of SSBs to minors in all public places. While potentially controversial, our varied approaches are grounded in laws and policies designed to promote the public's health without obviating autonomous consumers' choices. Whether implemented in combination or isolation, each approach has the potential to positively change the trajectory of this epidemic to the betterment of individual and communal health.

hydrating qualities. See Barry M. Popkin et al., *A New Proposed Guidance System for Beverage Consumption in the United States*, 83 AM. J. CLINICAL NUTRITION 529, 530-37 (2006).

246. R. Bethene Ervin et al., *Consumption of Added Sugar Among U.S. Children and Adolescents, 2005-2008*, 87 NCHS Data Brief 1, 4 (2012).

247. See *id.* at 5.

248. Aeberli et al., *supra* note 209, at 485.

249. Janne C. de Ruyter et al., *A Trial of Sugar-free or Sugar-Sweetened Beverages and Body Weight in Children*, 367 NEW ENG. J. MED. 1397, 1397(2012), available at <http://www.nejm.org/doi/full/10.1056/NEJMoa1203034>.

250. States' *parens patriae* power to protect the interest of minors provide ample legal basis for an outright ban of the sale and possession of SSBs to minors provided government has some rational basis for its intervention. LAWRENCE O. GOSTIN, PUBLIC HEALTH LAW & ETHICS 101 (2010).