

## Taxation of Sugar-Sweetened Beverages for Obesity Control:

### The Need to Talk in “Code”

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Obesity is described as an “epidemic” by the Centers for Disease Control and Prevention (CDC). Obesity prevalence has doubled between 1985 and 2008 according to the CDC’s Behavioral Risk Factor Surveillance System, which monitors obesity both nationally and on a state level. In 1990, no states had obesity prevalence greater than 15%. In 2008 the contrast is startling: only one state had a prevalence of obesity less than 20%, thirty-two states had a prevalence greater than 25%, and six states had a prevalence greater than 30% (CDC, 2008).

The primary cause of obesity is energy consumed being greater than energy expended. This leads to increased storage of energy as excess body fat, a significant risk factor for type 2 diabetes, cardiovascular disease, hypertension, stroke, and some cancers. Treatment of obesity-related disease is estimated to be 147 billion dollars or approximately 9.1% of US medical expenditures (Brownell et al., 2009). It has been postulated that failure to address rising obesity rates will cause a decrease in life expectancy in the US by 2020 for the first time since the early 20<sup>th</sup> century (Stewart et al., 2009).

The current obesity rates of the US population calls for a public health solution to the problem. However, determining effective solutions to obesity requires that we first understand the unique features of obesity as a public health issue and second, that we examine potential actions within an ethical framework. Brownell et al. (2009) recently proposed taxing sugar-sweetened beverages as a means to decrease obesity rates. This paper will discuss how sugar-

sweetened beverages potentially affect body weight and analyze whether the proposed action, taxation, is consistent with good public health practice per the Public Health Code of Ethics (Public Health Leadership Society, 2002).

Obesity is unique as a chronic disease because its primary cause is known: energy in > energy out. However, many secondary environmental causes potentially affect an individual's eating and activity behavior. An individual has a unique biologic environment that affects whether they gain excessive weight that includes genetic effects on appetite (Morrison and Berthoud, 2007). Those who are satiated at higher calorie intakes would presumably consume more calories from sugar-sweetened beverages when presented with them. Other external factors surround the individual that may be categorized within family, community, and political environments. Families have shared genetic traits so obesity can occur in one or more members depending on how genetic traits interact with environmental factors such as availability of sugar-sweetened beverages in the household (Musani et al., 2008). Family dynamics, socioeconomic factors, and cultural upbringing affect the development of obesity which may itself be affected by the consumption of sugar-sweetened beverages (Schmeiser, 2009; Garasky et al., 2009; Krebs, 2009).

The community environment that surrounds families and individuals includes factors such as food and beverage availability and cost (Nestle, 2009). For example, sugar-sweetened beverages and other high-calorie snacks are inexpensive and readily available at corner stores throughout urban environments (Food Trust, 2004). Whether communities have built environments and recreational facilities that promote walking and other forms of movement affect energy expenditure and tolerance for extra calories found in sugar-sweetened beverages

(Kumanyika, 2007). The political environment that surrounds communities, families and individuals avoids or creates policy at local, state, and national levels. For example, lack of restrictions on food advertising, especially to children, creates an environment that promotes consumption of sugar-sweetened beverages and other low nutrient foods (Veerman et al., 2009). Policies in the national school lunch program regulate what beverage is available to children who buy “school lunch”, but do not regulate competing foods available for purchase during lunch hours including sugar-sweetened beverages. Economic policies such as the Farm Bill continue to subsidize large mega-farms that produce excessive amounts of corn which, in turn, end up as corn syrup in sweetened beverages (Nestle, 2009).

Due to the pervasiveness of calorie availability from sugar-sweetened beverages, Brownell et al. (2009) have proposed taxing them to decrease consumption and corresponding obesity rates. They argue that Americans consume approximately 175 calories per day per capita from sugar-sweetened beverages and that they are correlated with increased weight gain and negative health consequences. They also cite three “market failures” as rationale for their proposal. First, they state that the public does not understand the link between these beverages and health outcomes so people make decisions to consume them without full information and/or disclosure. Second, they argue that decisions to consume soda provide short-term gratification but long-term harm. Third, they point out that financial externalities exist in that consumers do not bear the full costs of their consumption decisions. They estimate that a national tax of 1 cent per ounce of sugar-sweetened beverage would raise \$14.9 billion in one year. They suggest that this revenue could be beneficially used in to offset some of the medical costs for obesity-related illnesses, for obesity prevention programs, or for healthcare for the uninsured. Although taxation appears to provide much benefit and little risk, no action should be taken on any proposed

solution to obesity until it is discussed within an ethical framework such as the public health code of ethics (Public Health Leadership Society, 2002) as follows:

*1. Public health should address principally the fundamental causes of disease and requirements for health to prevent adverse health outcomes.* A solution to obesity needs to address the most significant causes that lead to excess energy intake and inadequate energy expenditure. Choosing to limit access to sugar-sweetened beverages through taxation will do little by itself to address the complexity of the sum total of environmental effects. The significance of each environmental effect is not yet known including whether consuming sugar-sweetened beverages is a fundamental cause of obesity for most (Tressande et al, 2009). If taxation is pursued, the public health community should acknowledge that it is based on limited and preliminary information.

*2. Public health should achieve community health in a way that respects the rights of individuals in the community.* While an argument about individual rights seems trivial when it is about sugar-sweetened beverages, the rights of the individual in public health are considered primary (Bayer, 2003). Individuals have a right to pay a fair market price for widely available beverages. However, if excess weight gain from consumption of those beverages poses harm to others, then it may be acceptable to infringe on individual rights to purchase them inexpensively. If harm is considered to be the burden of high health care premiums due to the cost of obesity-related illness, then a part of a comprehensive plan for revenue from taxation might be to subsidize health insurance costs.

*3. Public health policies, programs, and priorities should be developed and evaluated through processes that ensure an opportunity for input from community members.* Town hall meetings similar to those that were carried out for health care reform should be conducted. It is important

that any legislation be as transparent as possible to the gain the public's trust and for the public to understand the reasons why it is important to decrease consumption of sugar-sweetened beverages. A paternalistic government policy is not well-accepted by the US public. Therefore, taxation of sugar-sweetened beverages without taxation on other obesity-producing foods could be misconstrued as "invidious discrimination or moralism" if the topic were not fully discussed through public forums (Bayer, 2003).

*4. Public health should advocate and work for the empowerment of disenfranchised community members, aiming to ensure that basic resources and conditions for health are available to all.*

Lower socioeconomic groups consume a relatively large amount of inexpensive sugar-sweetened beverages and have a high risk of obesity (Drewnowski, 2004). A tax on sugar-sweetened beverages would be regressive and affect the poor more than the well off. According to this code, taxing sugar-sweetened beverages may necessitate subsidizing other foods beverages that have health-improving potential, such as milk or fruits and vegetables.

*5. Public health should seek the information needed to implement effective policies and programs that protect and promote health.* Public health information should include both quantitative and qualitative data. National quantitative data (Behavioral Risk Factor Surveillance System and National Health and Nutrition Examination Survey) should be used to make formal risk assessments on the effects of sugar-containing beverages. Researchers should seek additional qualitative information about factors that affect consumption in various groups so that they have the greatest perspective from which to design successful programs (Thomas, 2004).

*6. Public health institutions should provide communities with the information they have that is needed for decisions on policies or programs and should obtain the community's consent for*

*their implementation.* Public health leaders should be as explicit and transparent as possible with the public about available data when designing programs for obesity. Some of the issues regarding taxation might include disseminating research findings on the effects of sugar-sweetened beverages on obesity, providing real and projected data on health and financial impacts of obesity at local, state and national levels, and specifying plans for how tax revenue will be spent. This would also serve to empower the public to make consumption decisions based on full knowledge of outcomes (Brownell et al, 2009).

*7. Public health institutions should act in a timely manner on the information they have within the resources and mandate given to them by the public.* Once public health officials collect appropriate research data, inform the public, and obtain consent, legislation should not be held up due to lobbying efforts by beverage companies or other corporate entities that place profit above health. Allowing that to happen would likely undermine public confidence in public health's ability to carry any successful obesity intervention.

*8. Public health programs and policies should incorporate a variety of approaches that anticipate and respect diverse values, beliefs, and cultures in the community.* Public health should not assume a "one size fits all" approach toward sugar-sweetened beverages. For example, there may be cultural groups who do not drink alcohol but rather use sugar-sweetened beverages for social gatherings and celebrations. There are also those who do not drink alcohol due to personal reasons or addiction and instead choose sugar-sweetened beverages. Researchers should seek information about what affects soda consumption in various sub-populations so that they have the most comprehensive perspective possible on community needs.

*9. Public health programs and policies should be implemented in a manner that most enhances the physical and social environment.* Taxation of sugar-sweetened beverages is meant to decrease consumption with the ultimate goal of decreasing harm to individuals and society from obesity (Brownell et al, 2009). However, if taxation were to put soda in the same category as alcohol, this may potentially have the negative effect of increasing alcohol consumption, which in turn could increase other medical issues and societal problems. Obtaining research data about how taxation will be perceived by the public is crucial to keep from trading one social ill for another.

*10. Public health institutions should protect the confidentiality of information that can bring harm to an individual or community if made public. Exceptions must be justified on the basis of the high likelihood of significant harm to the individual or others.* Obesity differs from other public health diseases because it is apparent who is obese. When public health programs are instituted for decreasing obesity, there is no confidentiality regarding who the decisions are for. If taxation affects everyone, this could cause increased bias toward obese people and lead to discrimination or other negative effects (Hardy, 2009).

*11. Public health institutions should ensure the professional competence of their employees.* Sugar-sweetened beverages are only one of many foods that have the potential to add additional calories for weight gain. Public health practitioners should worry that placing taxation on only one food group may cause more of others to be eaten, which may potentially cause even greater calorie consumption than from sugar-sweetened beverages. For instance, in the previous public health campaign recommending lower fat intake, the public ate more of those foods that were labeled “low fat”, even if they had the same amount of calories. Achieving weight reduction is

related to portion control and not to whether fat or carbohydrate/sugar is controlled in the diet (Sacks et al., 2009). Therefore, it is imperative to better understand the public psyche and corresponding behavior when told that a class of food or beverage is labeled as “unhealthy”.

*12. Public health institutions and their employees should engage in collaborations and affiliations in ways that build the public’s trust and the institutional effectiveness.* Can public health and for-profit food companies collaborate to improve the nation’s weight? Change will require a new paradigm of marketing, but beverage companies could continue to thrive if they sold decreased package sizes for a “healthy lifestyle”. The good will potential may be enormous if they sold “new 8 ounce bottles” with a caring attitude for the public’s health. Promoting moderation is consistent with current public health nutrition guidelines and could be a positive path for all stakeholders to pursue (Dietary Guidelines for Americans, 2005).

Does a sugar-sweetened beverage tax for obesity control pass scrutiny by the public health code of ethics? If we involve all stakeholders in the ethical conversation above to gain understanding and cooperation, taxation of sugar-sweetened beverages may be a reasonable place to start decreasing calorie exposure, especially in high risk groups. If taxation is used alone, out of context of other actions that address additional environmental causes of obesity, it will likely have minimum effect. For instance, public health programs for decreasing smoking used clinical intervention and management, educational strategies, regulatory efforts, and economic approaches including taxation (Mercer et al, 2003). Because obesity is a behaviorally complex and multi-factorial problem, its solution will also likely require comprehensive programs that address aspects of the environment that promote positive eating behaviors as well as decreasing negative ones (Brug et al., 2008).

The process that public health leaders use to determine actions for obesity control will point us toward our collective future in public health. Constructive discussion and problem-solving of obesity within ethical guidelines can maintain individual autonomy while helping the public as a whole lower body weight. Ultimately, it is a worthy goal of public health to help society achieve the World Health Organization definition of health as “a state of complete physical, mental, and social well being, and not merely an absence of disease or infirmity” (Bayer, 2003). Starting with the ethics of any public health action will help get us there.

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