

## Perspectives and Debates

# Understanding beverage taxation: Perspective on the Philadelphia Beverage Tax's novel approach

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### Significance for public health

The prevalence of obesity and its related non-communicable diseases has continued its upward trajectory globally, despite our decades-long awareness of this trend. Excess caloric intake is a principle factor for this growing global burden of disease – with overconsumption of liquid calories in the form of sugar-sweetened beverages (SSB) a central component of this imbalance. A relatively recent public health response to reduce SSB consumption and increase revenue for public health spending has been the passage of beverage taxes at the local, state and national levels. However, there are many nuances in the design, passage and goals for these beverage taxes globally. The Philadelphia Beverage Tax's use of a non-health frame, its specified earmarking and its scope by including diet beverages both allowed for its passage and create unique ethical questions that have yet to be completely addressed by the literature. These ethical considerations in the context of the Philadelphia Beverage Tax's passage are important for other public health professionals, policy-makers and advocates working towards their own legislative efforts.

### Abstract

Despite the growing global trend of sugar-sweetened beverage (SSB) taxes for their potential as an untapped source of revenue and as a public health boon, these legislative efforts remain controversial. Multiple articles have reviewed this trend in recent years from modeling of long-term impacts to short-term empirical studies, yet most comprehensive, long-term health impact assessments remain forthcoming. These multi-faceted efficacy studies combined with case-based assessments of the policy process, descriptive pieces highlighting unique features of the policy and reflective perspectives targeting unanswered questions create a comprehensive body of literature to help inform present and future legislative efforts. The passage of the Philadelphia Beverage tax required a mix of political entrepreneurs, timing and context; while uniquely employing a non-public health frame, specific earmarking and a broadened scope with the inclusion of diet beverages. This perspective on the Philadelphia Beverage Tax will describe the passage and novel features of the Philadelphia Beverage Tax with a discussion of the ethical questions unique to this case.

### Introduction

The global prevalence of overweight and obesity has precipitously increased over the past few decades, respectively impacting 39% and 13% of adults in 2016.<sup>1</sup> Children and adolescents have seen a similarly concerning rise with a prevalence of overweight

and obesity of 4% in 1975 and over 18% in 2016.<sup>1</sup> The rising tide of these high body-mass index (BMI) risk factors is being taken very seriously by health professionals worldwide due to its correlation with many non-communicable diseases (NCDs), including cardiovascular disease, diabetes mellitus and multiple cancers.<sup>2,3</sup> Globally, the burden of disease brought by having a high BMI was estimated to account for 4 million deaths and 120 million disability-adjusted life-years (DALYs).<sup>2</sup> Urbanization; modification to the food environment; plentiful, accessible energy-dense food items; and targeted advertising have been proposed as some of the reasons for the global increase in caloric intake and decrease in physical activity, which is the principle arbiter of the global increase in BMI.<sup>2</sup> Sugar Sweetened Beverages (SSBs) have become a target for action, as they constitute a primary source of dietary added sugar and represent a singular type of food item.<sup>4,5</sup> Taxation of SSBs at the local, state or national level has gained the most momentum in the effort to curb SSB consumption. Nearly 50 such taxes have been passed worldwide, since Norway began in 1981 – each requiring unique adaptations.<sup>3</sup> The passage of the Philadelphia Beverage Tax will be outline here with its unique framing, transparent earmarking and broadened scope (with the inclusion of diet beverages in the tax). The discussion will elaborate on the ethics of the aforementioned features.

### Design and Methods

The information contained in this article is primarily based on a combination of scientific and digitized media source review that used relevant key search terms to assess the design, passage, implementation and evaluation of the Philadelphia Beverage Tax. Supporting evidence was also gathered through a review of other SSB taxes in the United States of America and the world. This review was supplemented by two semi-structured interviews and interview notes by public health researchers and professionals who work directly with the Philadelphia Beverage Tax, whom also reviewed the piece for accuracy. A case study on the Philadelphia Beverage Tax performed by Purtle *et al.* and the World Cancer Research Fund (WCRF) International's document on SSB taxation provided additional background for this perspective piece.<sup>3,4</sup>

### Passing the Philadelphia Beverage Tax

#### Identifying a policy entrepreneur

SSB legislation requires a broad base of support to pass; how-

ever, a singular policy entrepreneur has been an instrumental support in some notable cases (e.g. Philadelphia and France).<sup>3</sup> Mayor Kenney was that policy entrepreneur for the Philadelphia Beverage Tax – in large part by his self-presentation as a logical supporter of early childhood education through detailing of his personal story in Philadelphia.<sup>3,6</sup> After 23 years on the city council, Jim Kenney resigned to run in Philadelphia's 99<sup>th</sup> mayoral election.<sup>6</sup> Running on a campaign of education, economic development and public safety, he won the 2016 election.<sup>6</sup> He was presented as the son of a Philadelphia firefighter and homemaker who worked hard to send him to school, and the first member of his family to earn a college degree, coloring Mayor Kenney's understanding of the importance of education.<sup>6</sup> Bearing this in mind, the cornerstone of his platform was universal access to pre-kindergarten in the city of Philadelphia. However, he acknowledged that this would be a costly service to provide, requiring the identification of new sources of city revenue.<sup>6</sup>

The Philadelphia Beverage Tax stood out for Kenney as the untapped resource he needed to make his vision a reality, as multiple other taxes (parking, occupancy, property and use) had already been raised or their proposals had recently failed.<sup>3,7,8</sup> Mayor Kenney immediately went to work crafting a bill to impose a 3 cents per ounce tax on all SSBs to provide the necessary funding for universal pre-kindergarten. SSBs are precisely defined in this legislation as «any non-alcoholic beverage, syrup, or other concentrate used to prepare a beverage that lists as an ingredient any form of caloric sugar-based sweetener, including, but not limited to sucrose, glucose, or high fructose corn syrup». Examples include sodas, sports drinks and non-100%-fruit drinks.<sup>7</sup> Negotiations with the Philadelphia city council led to amended legislation that lowered the Philadelphia Beverage Tax to 1.5 cents per ounce but included both diet and SSBs. The tax is applied to the distributors of these beverages, providing them the option of passing all or part of the tax on to their retailers. These retailers can then decide to do the same to their customers. The new proposal was projected to yield \$91 million in annual revenue (\$4 million short of the initial 3 cents per ounce proposal).<sup>8</sup> This concession as well as the confluence of external political bargaining, other recently failed city legislation and council member consensus allowed the passage of the 1.5 cents per ounce tax.<sup>8</sup> Despite the change in projected revenue, this was the largest legislative effort in Mayor Kenney's first six months of office.<sup>3,8</sup>

### The effect of timing

In addition to Mayor Kenney's position as a policy entrepreneur, the Philadelphia Beverage Tax benefitted from the precise

timing of support by a variety of other key stakeholders, placement in the context of past legislative efforts for beverage taxation and City Council member cycle. Philadelphians for a Fair Future, Bloomberg Philanthropies, the Laura and John Arnold Foundation, and other private donors countered the \$1.5 million spent by the American Beverage Association through pro-Tax fundraising and advertising.<sup>3,8</sup> The local department of public health coupled with the Harvard CHOICES project provided timely cost-effectiveness research to support the Beverage Tax.<sup>8-11</sup>

The previous Mayor of Philadelphia, Michael Nutter, presented his proposals in 2010 and 2011. City Council member Bobby Hennon also proposed a soda tax in 2015. All three failed.<sup>12</sup> By the time Mayor Kenney took office, Berkeley, California's 2014 SSB tax had already been in effect for some months.<sup>13</sup> SSB taxes were also becoming much more commonplace internationally.<sup>3,14</sup> The recently elected Mayor Kenney and his City Council members were able to capitalize on this global normalization of beverage taxes without facing re-election until 2019.<sup>12</sup> Moreover, fourteen of the members of this body were Democrats and only three were Republicans – a positive indicator of SSB tax passage.<sup>3,15</sup> Mayor Kenney's Beverage Tax had a fighting chance with the multifactorial favorability of its timing through increased feasibility and community awareness.<sup>3,9</sup>

### Understanding the broader context

In order to better understand the unique features of the Philadelphia Beverage Tax, it is helpful to describe the broader context of beverage legislation. In 2014 Berkeley, California was the first jurisdiction in the United States (US) to pass a SSB tax.<sup>16</sup> When Philadelphia followed suit in 2016, this signaled the viability of such a tax nationwide among other major U.S. cities.<sup>9,14</sup> Just a few months later, Oakland, San Francisco, Stockton and Albany, CA; Cook County, Illinois; and Boulder, CO had all passed SSB legislation. However, Cook County's tax was repealed after four months, because it was perceived to be «[just] for money and not for public health».<sup>17,18</sup> The Navajo National Council's 2014 Healthy Dine Nation Act took SSB legislation a step further by placing a 2% sales tax on foods of little to no nutritional value, which includes SSBs and unhealthy snacks (high in saturated fat, salt and sugar).<sup>17</sup> Seattle, WA joined this growing list in 2017 – along with a handful of countries globally (most notably the United Kingdom (UK): passed in 2016 and implemented in 2018).<sup>3,14,16</sup> The US has been unable to effectively pass SSB legislation beyond local jurisdictions in part by incomplete Democratic party dominance and more significant effects from anti-tax lobbying at higher governmental levels.<sup>15</sup> Table 1 summarizes the US

**Table 1. Selected beverage taxes passed from 2014-2017 in the United States of America.**<sup>13,14,16-18</sup>

Location	Date passed	Diet included	Revenue Appropriation
Berkeley, CA	Nov 2014	No	General funds and the Healthy Berkeley Program
Navajo Nation	Nov 2014	No	Community Wellness Development Fund
Stockton, CA	June 2016	No	Not Applicable
Philadelphia, PA	June 2016	Yes	Universal pre-K and community development
Cook County, IL	Oct 2016	Yes	Fill 2017 projected county budget deficit
Oakland, CA	Nov 2016	No	Fund programs to improve children's health
Albany, CA	Nov 2016	No	Placed in general funds
San Francisco, CA	Nov 2016	No	Placed in general funds
Boulder, CO	Nov 2016	No	Nutrition and physical activity promoting city health programs
Seattle, WA	June 2017	Yes	Healthy food incentives (Fresh Bucks), programs to reduce disparities and Seattle Preschool Program facilities

<sup>a</sup>The Stockton, CA legislation was not a direct tax but set milk or water as the default choice for children's meals.<sup>17</sup><sup>b</sup>Cook County, IL's tax was repealed as of 2017.<sup>18</sup>

efforts, considering explicitly if the legislation included artificially sweetened beverages (diet) as well as SSBs and how the collected revenue would be used.

## Unique Features of the Tax

### Shifting the frame with transparent earmarks

Mayor Kenney and his administration initially focused the Tax’s frame entirely upon the transparent funding of programs to enhance the Philadelphia community and provide universal pre-kindergarten to all children in Philadelphia.<sup>8</sup> This appeared to be a calculated move.<sup>9,19</sup> Mayor Nutter twice failed to pass a SSB tax in Philadelphia when employing health improvement and budget deficit resolution frames.<sup>19</sup> In May 2016, a poll by The Philadelphia Citizen (a local non-profit, non-partisan media organization) and a number of community partners (including Temple University’s Institute for Survey Research) sought to assess the public’s opinions surrounding the new Beverage Tax before its passage as law.<sup>20,21</sup> Over 1000 people responded to the BeHeardPhilly poll: 59% were in favor of the proposed tax, 84% felt universal pre-K was very important and only 13% thought it would have an overall negative effect on their lives.<sup>21</sup> The historical precedent of failed legislation and timely survey information were strong pieces of evidence that supported Kenney’s transparent non-health frame through direct earmarking of funds to community improvement projects.<sup>3,9</sup>

In the final few weeks before voting, coordinated discussions of health emerged onto the scene.<sup>9</sup> The health-related swell of attention was centered around a paper published by Gortmaker and colleagues, which modeled the health effects of a 3 cents per ounce SSB tax in Philadelphia.<sup>9,10</sup> This study showed a net cost savings of \$197 million with \$84.05 of health care cost savings per \$1 of tax. The results from this study originated from the predicted prevention of 36,000 cases of obesity in Philadelphia.<sup>10</sup> After the 1.5 cents per ounce tax was passed on sugar-sweetened and diet beverages, Gortmaker’s team remodeled the tax, yielding a net cost savings of \$76.8 million with a ratio of \$35.60 in cost savings to \$1 of tax through the prevention of 14,340 cases of obesity.<sup>11</sup> Prior to the vote, the Philadelphia Health Department and the Office of the Mayor arranged a press conference in coordination with Dr. Gortmaker to publicly disseminate this information. This invocation of direct health benefits from the Beverage Tax was added just prior to the vote as a secondary, data-driven, pro-health frame, which played an important role in City Council member decision-making, and supplemented Mayor Kenney’s primary non-health frame.<sup>9</sup>

The smaller modeled impact upon obesity by the Tax’s restructuring could feel frustrating, but Mayor Kenney’s principle goal was to generate funding for universal pre-K and community development.<sup>8</sup> Kenney’s non-health frame also allowed for the acquisition of broader support by shifting the focus away from counterarguments regarding government impact upon individual behaviors.<sup>9</sup> Just days after the tax was implemented in 2017, Mayor Kenney blamed the retailers for *“gouging their own customers”*. He was disapprovingly alluding to the distributors and retailers choosing to pass the added tax on to the customers instead of directly paying for it from their profits.<sup>23</sup> This re-emphasized the Mayor’s frame that it is all about the revenue (from customer, retailer or distributor) for community development – not the health benefits provided by decreased soda consumption. Importantly, the increased point-of-purchase cost of SSBs due to a tax is the principle mechanism

of health behavior change to reduce the prevalence of obesity, yielding the modeled health care cost savings.<sup>3</sup> Recent, on-going analyses have shown that the actual pass through rate is variable based on retail location. However, on average the 1.5 cents per ounce tax was passed fully to consumers with an average price increase of 1.6 cents per ounce on all taxed beverages.<sup>23,24</sup>

### Broadening the scope by taxing diet beverages

Relatively few beverage taxes have included diet beverages as well as SSBs, as shown by Table 1. The final Philadelphia Beverage Tax defined the taxable products as any SSB (previously defined) or any drink *“considered [a] diet or zero calorie...non-alcoholic beverage, syrup or other concentrate used to prepare a beverage that lists any form of artificial sugar substitute, including stevia, aspartame, sucralose, neotame, acesulfame potassium (Ace-K), saccharin, and advantame”*.<sup>7</sup> At face value, the addition of diet beverages into the overall tax is seen as a political compromise to raise sufficient revenue whilst cutting the overall tax in half from 3 to 1.5 cents per ounce. A secondary advantage (not directly mentioned in the literature) could be that diet beverage taxation may be perceived as less regressive. A 2013 Gallup poll of over 2,000 individuals showed that socioeconomically disadvantaged individuals consume more regular SSBs, while more advantaged individuals consume more diet beverages.<sup>25</sup> Increased consumption of diet over regular soda was highest among individuals who make over \$75,000 annually, are senior citizens (over 65 years old) or self-describe as being overweight.<sup>25</sup> Moreover, the consumption of regular SSBs was highest among Americans who are non-white, low-income or children.<sup>26</sup>

Though there are no short-term health consequences associated with diet beverage consumption, there is still uncertainty over their potential long-term health impacts.<sup>27</sup> Diet beverages do appear to be associated with unhealthy lifestyle factors, but no direct association was found between diet beverage consumption and the risk of developing diabetes after adjusting for potential reverse causation by BMI and dieting habits.<sup>27</sup> Thus, the diet soda effect for the Philadelphia Beverage Tax could have been more than just a political compromise over revenue; it might have also reduced the Tax’s regressive feel, bolstering the perceived equity of the Philadelphia Beverage Tax’s methods of revenue generation.

## Discussion

The Philadelphia Beverage Tax is an important piece of legislation within the context of beverage taxation strategies that required a unique confluence of factors to result in its passage (Table 2).<sup>3,9</sup> Mayor Kenney’s role as the principle policy entrepreneur drove this legislation forward from its design to its implemen-

**Table 2. Key considerations from the Philadelphia Beverage Tax policymaking process.**<sup>3,9</sup>

Key considerations
Know your audience
Be transparent in design and messaging
Create a diverse coalition of supporters
Pick a defined frame
Maintain consumer choice
Align timing with research and context
Anticipate opposition
Consider diet beverages

tation. However, the multitude of public and private support in the form of research, advertising and funding also proved essential to the passage of this legislation. The coordination of multiple governmental departments (*i.e.* local health department and department of revenue) at the outset of policy development through implementation is essential to the design, implementation and evaluation of beverage taxes.<sup>3</sup>

This proved important when the Philadelphia Beverage Tax had to contend with legal challenges of double taxation, where opposition to the Beverage Tax claimed that the same item was being taxed twice with state/local sales taxes and the new Philadelphia Beverage Tax. However, the Supreme Court of Pennsylvania determined that this strategy was legal, as these two taxes, regardless of pass through rate, are legally applied to two separate transactions retailer to consumer and distributor to dealer (retailer).<sup>28</sup> This singular instance of the importance of sound legal design provides evidence for the early and continued interdepartmental collaboration needed to pass such broad pieces of legislation.<sup>3</sup> Moreover, support from academic institutions (e.g. Harvard's CHOICES project and Temple University) coupled with the local department of public health should be tapped to provide unbiased monitoring and evaluation of these beverage taxes.<sup>3,10,11,20,21</sup> Philadelphia also benefitted from the multi-factorial elements of timing from the aforementioned supporters, City Council member election cycle and the climate of beverage taxation within Philadelphia, the U.S. and abroad.<sup>2,9-14</sup>

The WCRF places the effects of SSB taxes into four different groups: to promote product reformulation, improve public awareness to sugar consumption, increase SSB price and/or the generation of revenue. The latter two are purported to reduce the risk of developing NCDs through direct behavior modification or the funding of other public health efforts (respectively).<sup>3</sup> The effect desired by the legislation is principally defined by its design, which also informs the frame applied by advocates and counter-arguments posed by opponents.<sup>3</sup> The design and intention of the Philadelphia Beverage Tax allowed the Tax's advocates to choose the frame best suited to their specific context. Thus, the Mayor's emphasis on transparent earmarking for community development projects and early childhood education directly informed the choice of his initial non-health frame.<sup>3,9</sup> The BeHeardPhilly poll showed the community's support for this frame – without sound audience knowledge framing efforts may fail (*e.g.* Cook County, IL). After sufficient academic research was presented, a strong secondary pro-health frame was formulated and disseminated prior to the City Council's vote.

Multiple articles have refuted the ethical right to tax SSBs that can be similarly abstracted to diet beverages as a non-essential food item with little nutritional value (in most cases).<sup>3,29</sup> A few of which are the external impact upon those not involved in the transaction (through increases in Medicare/Medicaid expenditure secondary to rising rates of NCDs), information asymmetry between beverage consumers and producers, and the possibility of revenue generation.<sup>29</sup> The revenue generation argument is likely the strongest for diet beverages, since its long-term health effects remain uncertain.<sup>27</sup> Tobacco and alcohol taxes are often used as helpful comparators.<sup>29</sup>

The ethics of employing a non-health frame to enhance its chance of passage is another matter. The Philadelphia Beverage Tax's non-health frame could arguably be more ethical than the pro-health frame, at least at the outset. The transparent earmarking of the Tax's funds (before the modeled health effects provid-

ed by Dr. Gortmaker) represent Mayor Kenney's stated primary intention. The earmarked funds would act upon the Social Determinants of Health, which are well described in the public health literature to improve population health. Yet, this focus upon the need to improve population health is often poorly understood and often requires better community mobilization before such an effort is successfully made. The inclusion of diet beverages bolstered the logos of the non-health frame, as it allowed for the generation of revenue without a direct impact upon individual or population health.<sup>27</sup> See the WCRF's publication for further discussion of framing in other SSB taxation cases.<sup>3</sup>

The taxation of diet beverages may also contribute to a stronger rebuttal to the argued regressive nature of SSB taxation, as more affluent individuals are more likely to consume them.<sup>25</sup> There is some reported media evidence that the inclusion of diet beverages helped win a few City Council members by lessening the burden placed upon low-income neighborhoods.<sup>8</sup> Philadelphia's pro-Tax advocates (including the local health department) chose to refute the claims that this Tax was regressive by asserting low-income Philadelphians' higher prevalence of obesity and diabetes was a regressive health disparity in and of itself. Thus, this Tax served to help equalize the effect of this health disparity by reducing their consumption of SSBs, since low-income minorities are the most common SSB consumer.<sup>3,9</sup>

As with any policy, there is always the potential for unintended consequences. Taxing diet beverages could be dampening the modeled health benefits from SSB taxation by the loss of their substitution effect, as untaxed diet beverages may be a more feasible substitution for overweight/obese SSB-buying customers.<sup>30</sup> SSB and diet beverage consumption patterns have been shown to fluctuate in border areas due to location context and price differentials, resulting in price increases of border beverages without the social benefit provided by the tax or unchanged price yielding decreased tax efficacy secondary to increased boarder area consumption.<sup>23,24</sup> That said, the Philadelphia Beverage tax has also shown modest reductions in consumer SSB consumption. Adults in Philadelphia consumed one less SSB every three days (with a baseline consumption of about one SSB per day prior to the tax). Consumption decreased most notably among African-American adults, children and adults that believed SSB consumption was unhealthy. The effect of the tax upon children was greater among those whom had higher levels of SSB consumption.<sup>23,24</sup> Thus, the continuum of short- and long-term modeling and empiric studies are needed to not only transparently inform policymakers and the community but also to evaluate the intended and unintended effects of SSB legislation.

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## Conclusions

SSB legislation across many diverse contexts requires adaptation to result in its passage and efficacy. Philadelphia's Beverage Tax provides a unique opportunity to understand novel features and question its process. This perspective highlighted Philadelphia's use of transparent earmarking, differential framing methods and broadened scope through the inclusion of diet beverages. With the array of SSB legislation being passed, more perspective pieces should be written to describe and discuss their innovations to aid advocates, public health professionals and policymakers along their individual legislative process.

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