# Sugary Drink Taxes 2019

JIM KRIEGER, MD, MPH

OCTOBER 16, 2019





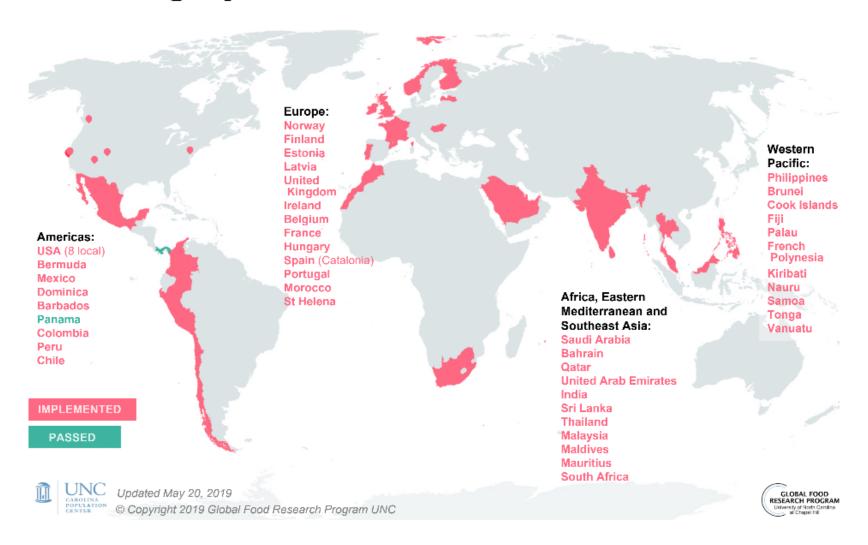
## Local beverage taxes United States



## Local beverage taxes United States

Location	Population	Effective date	Tax rate per ounce (cents)	Type of beverage
Philadelphia, PA Council	1,584,130	1/1/2017	1.50	Sweetened
Berkeley, CA Measure D	122,324	1/1/2015	1.00	Sugary
Albany, CA Measure O1	20,143	4/1/2017	1.00	Sugary
Oakland, CA Measure HH	425,195	7/1/2017	1.00	Sugary
San Francisco, CA Measure V	884,363	1/1/2018	1.00	Sugary
Boulder, CO Measure 2H	107,125	7/1/2017	2.00	Sugary
Seattle, WA Council	724,745	1/1/2018	1.75	Sugary

### Sugary drink taxes around the world



## Next up

## Politics October Debate White House Congress Impeachment Inquiry Polling The Trailer Fact Checker The Fix

D.C. Politics

The District may approve one of the nation's highest taxes on sugary drinks



## Massachusetts considering taxing sugary drinks to fight childhood obesity





## Tax Design

## What to tax – volume or sugar?

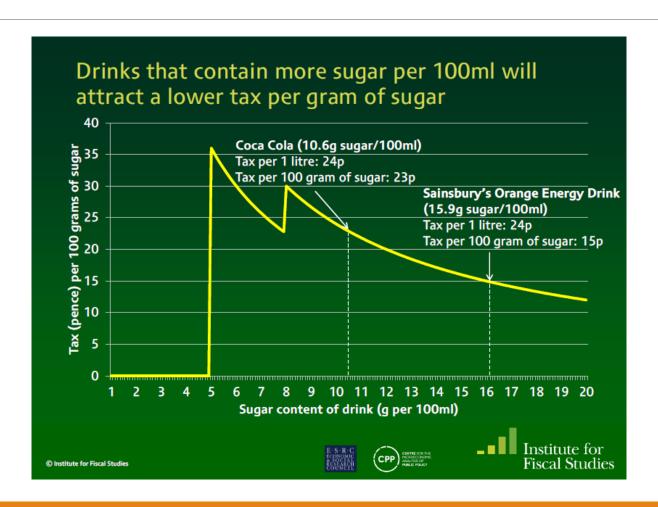
#### TABLE 1



Taxing Content Is More Effective than Taxing Volume or Sales Value Incentives created by different approaches to taxing added sugar in drinks

	Tax Base			
	Sugar content (per gram)	Volume (per ounce, per liter)	Sales value (percent of retail price)	
Consumers cut back on sugary drinks	√	$\checkmark$	✓	
Businesses develop and promote zero-sugar drinks	✓	✓	✓	
Consumers cannot avoid tax by buying cheaper drinks	✓	✓	×	
Consumers shift to lower- sugar drinks	✓	x	×	
Businesses develop and promote lower-sugar drinks	✓	x	×	

## Does a volume tax make sense?



"When the main objective of an SSB tax is to improve public health, we show that a calorie-based SSB tax is more efficient than an ounce-based SSB tax in the sense that the former is able to achieve a given calorie reduction target with smaller loss in consumer surplus." (Zhen 2014)



## Optimal tax rate

1.42 cents per ounce\*
(39%)

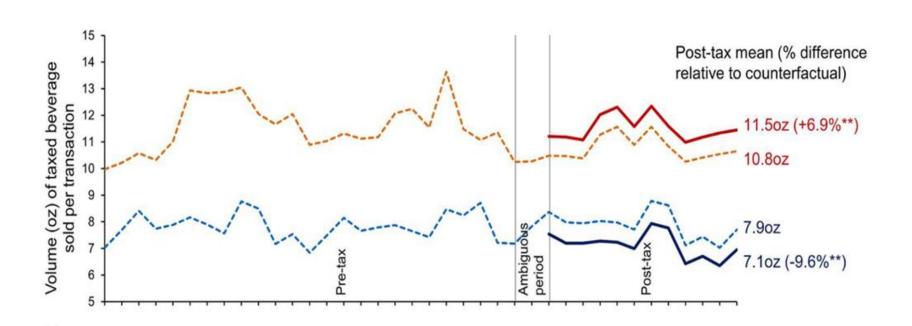
\* Lower as cross-border shopping increases

Regressive Sin Taxes, with an Application to the Optimal Soda Tax. Hunt Allcott, Benjamin B. Lockwood, and Dmitry Taubinsky. 2019.

# Tax evaluation: Sales or consumption?

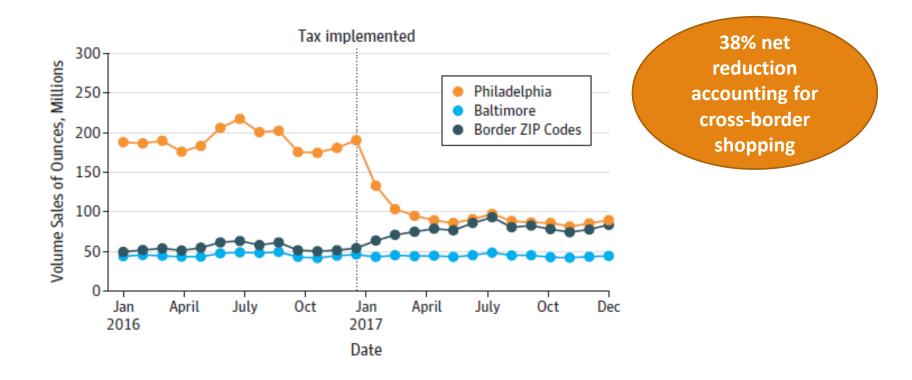
## Sales: Berkeley

Impact of a 1 cent per ounce tax (15%) in Berkeley

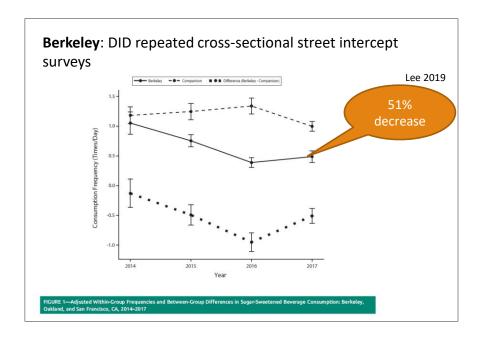


Silver LD, et al. (2017). PLoS Med 14(4): e1002283.

## Sales: Philadelphia



## Do taxes decrease consumption – Less certain and harder to measure



**Berkeley**: Single group repeated crosssectional phone survey 1 year after tax:

- Kcal/per capita/day: -19.8%, p = 0.56
- Grams/per capita/day: -13.3%, p = 0.49

Silver 2017

**Philadelphia**: DID repeated cross-sectional phone survey 2 months after tax:

- Odds daily soda consumption: 40% lower
- Regular soda consumption frequency: 38% lower

Zhong 2018

## Evaluation challenges

- Consumption data are messy and inconsistent
- Limited information on substitution effects
- Data on revenue collection, allocation and impacts of funded programs not readily available
- Limited information on jobs and business impacts
- Models show health benefits but developing empirical evidence demonstrating tax-specific changes in population health metrics will be difficult
- No data on reformulation in US



## Tax revenue

## Taxes are generating substantial revenues to meet community needs

Location	Annual revenue (\$1,000,000)	Use of Revenue
Philadelphia, PA	\$77.3	Pre-k, parks, community schools
Berkeley, CA	\$1.6	Health
Albany, CA	\$0.3	Health
Oakland, CA	\$10.6	Health
San Francisco, CA	\$15.3	Health
Boulder, CO	\$5.0	Food access, health
Seattle, WA	\$24.0	Food access, health, early childhood

\$135 million per year

### Revenue allocations across all sites

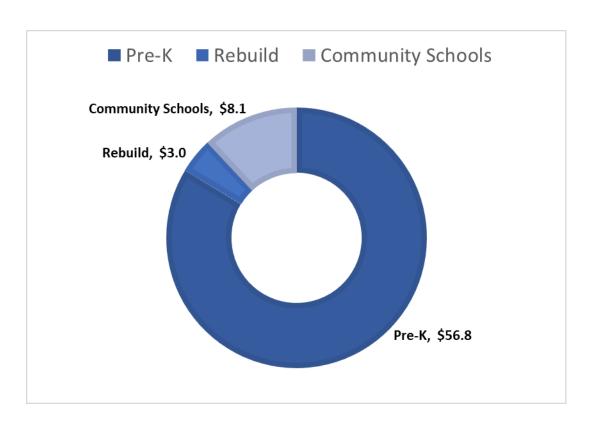
- Healthy food access programs
- School-based nutrition education and gardens
- Community gardens
- Diabetes Prevention Program
- Healthy beverage & water promotion
- Hydration stations
- Oral health access
- Community education and public awareness /counter-messaging campaigns
- Pre-school and early childhood programs
- Parks and recreation site repairs and upgrades
- Active transportation, physical activity and rec programs
- Community schools
- High school completion and college matriculation







## Philly Bev Tax



- Spent \$68M of \$154M collected
- Increased community schools from 12 to 17
- Added 1050 preschool seats to total of 3300
- Started 41 Rebuild projects

\$7.3 million to non-profit agencies for health equity programs in 2017-18

## Boulder 2019 allocations

#### Healthy Food

- Meal programs
- Preschool/childcare farm to table
- Fresh connect
- Healthy food vouchers (WIC)
- Healthy food for food pantries
- Breast feeding support
- School gardens



#### **Physical Activity**

- Parks and rec programs
- Soccer programs
- PA education
- Vouchers
- Bike program

#### Health services

- Weight loss program
- Dental care/education
- Opioid addiction

#### Early Childhood

- Subsidies
- Support for healthy eating and physical activity





## Seattle 2019 Adopted Budget

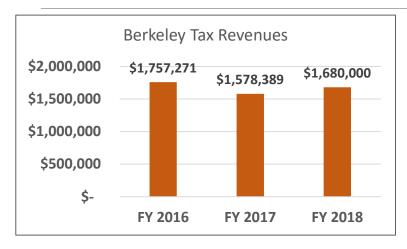
		2019 Adopted Budget
Food Access Programming		\$9.4 million
	Fresh Bucks Program	
	Food Banks	
	Food Access Opportunity Fund	
	Farm-to-Table program	
Community-based Meal Providers and Programs		
Subsidies to Schools to provide more fruits and vegetables		
	Senior Congregate Meals	
	Senior Meal Delivery	
	Out-of-School Nutrition Time	
Education	on and Early Learning	\$7.8 million
	Early Learning Programs, e.g.:	
	Health Consultation, Coaching and Training for 0-3 Providers	
	Family Child Care Initiative	
	Parent-Child Home Program	
	Developmental Bridge Program	
	Child Care Assistance Program (CCAP)	
	Parent-Child Home Program	
	Nurse and Family Partnerships	
Other		\$1.4 million
Evaluation – of the SBT		
Evaluation – of SBT funded programs such as Food Access Opportunity Fund		
	Public Awareness and Counter-marking Campaign	
	Physical Activity programming at Seattle Parks & Recreation	

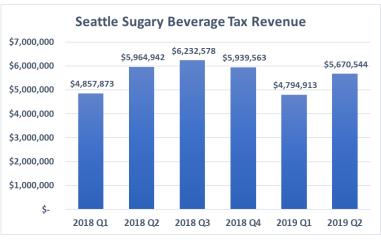






## "Tax revenues decline over time - they are not a stable funding source"

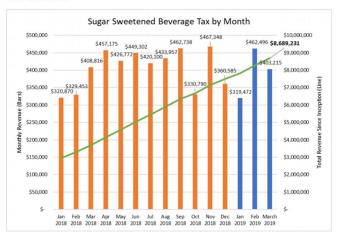




- Tax revenues appear to be stable
- Even if they do decrease, they raise new revenue now to meet important community needs.

#### Sugar Sweetened Beverage Tax Revenue

The Sugar Sweetened Beverage Product Distribution Tax is a voter-initiated tax that was adopted by Boulder voters in the November 2016 election and went into effect on July 1, 2017. It places a 2 cent per ounce excise tax on the distribution of beverages with added sugar and other sweeteners.



Note: October 2018 Sugar-Sweetened Beverage Revenue is lower than average due to several accounts that did not file and pay taxes. These collections were recorded in February 2019 and are reflected in the chart above.

# Synergies with taxes: Healthy food subsidies and communications campaigns

"You take the bad sugar in pop and turn it into good nutrition at the markets. That's a job well done. Thank you."

> Fresh Bucks customer who called the program office to say thanks

### Healthy food subsidies





Seattle investing close to \$6 million/year – the USDA budget for entire US is \$50 million

Photos used with permission of the Fresh Bucks program



## Rethink your drink - Australia



## Fruit drink countermarketing





## Seattle campaign (2020): \$750,000

- A public awareness campaign: healthier alternatives to SSBs.
- A counter-marketing campaign: deceptive and manipulative marketing of SSBs to people of color and low-income communities to generate action and resistance.
- Raise awareness of Seattle's SBT (how it works, revenue raised, how revenue is being used) to build support for the SBT.
- Priority population:
  - Youth and young adults (12-39 yo)
  - People with low incomes
  - Families
- Focus population:
  - Black
  - Latinx



## Subsidies and media campaigns

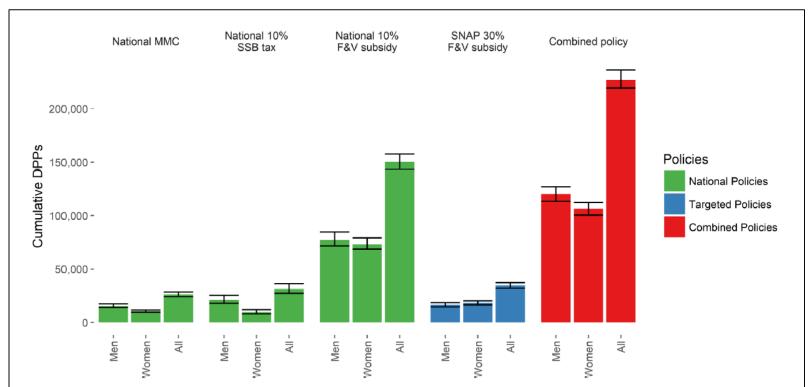
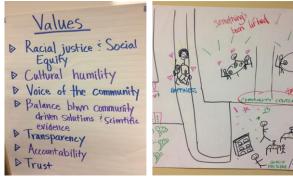


Fig 1. Cumulative deaths prevented or postponed from 2015 to 2030 under each policy modelled, by sex. Error bars indicate 95% uncertainty intervals. DPPs, deaths prevented or postponed; F&V, fruit and vegetable; MMC, mass media campaign; SNAP, Supplemental Nutrition Assistance Program; SSB, sugar-sweetened beverage.

## Community Advisory Boards

## Seattle: Community Advisory Board

- Recommends how to allocate revenues to benefit people who experience the greatest education and health inequities
- Members
  - 3 with experience in healthy food access and food security
  - 2 representing populations disproportionally impacted by SSB-related diseases
  - 4 with expertise in public health and nutrition
  - 2 with expertise in education and early learning





### **Budget Principles**

- Priority populations
- Place-based
- Community-driven
- Culturally-responsive
- Prevention-oriented

"Investments supported by the beverage tax revenues should prioritize allocation of funds to communities disproportionately affected by health and education inequities, especially those related to the adverse health effects of sugary drinks."

### Community Engagement

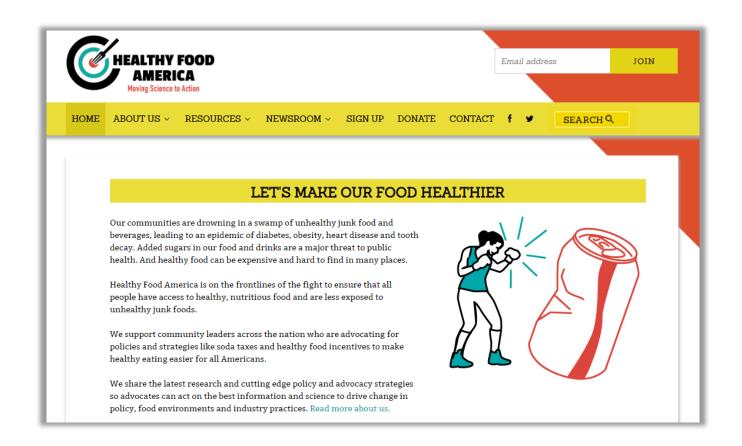


## Boulder: Health Equity Advisory Committee

- Nine-member committee appointed by the city manager
- Reviews proposals from community and city agencies
- Makes recommendations to city staff and manager
- Roles:
  - Help define desired outcomes and key indicators of success;
  - Provide recommendations on expansion of existing city and community programs and on new programs
  - Provide input on strategies and programs to engage residents most affected by health disparities and lack of access to health services.

#### HEALTH EQUITY ADVISORY COMMITTEE (HEAC)





## Thank you

http://www.healthyfoodamerica.org/

## Extra slides

## LiveSugarfreed

Appalachia and New Jersey





## "Taxes are regressive"



## "Taxes are regressive" - countermessages

- Tax revenues are being invested in low-income communities to meet community needs and address social and health inequities.
- Consumption is higher in low-income communities, in part due to predatory marketing, and may decrease more as result of tax.
- Low-income communities have the highest rates of SSB-related diseases and may reap the greatest health benefits.
- No one has to pay the tax.
- Low income people now spend more on sugary drinks – the tax may reduce the spending gap between rich and poor.

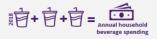


### Regressivity - the evidence

Analyzing the progressive and regressive impacts of taxes on sugar-sweetened beverages (Jesse Jones-Smith, PI)

#### Quantify magnitude of tax regressivity

1. Sum annual spending on beverages for each household



2. Estimate spending on tax for each household

3. Calculate proportion of household income spent on the tax and annual absolute spending per capita

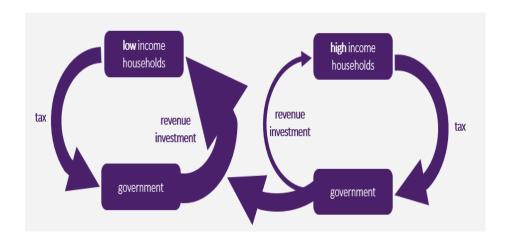






**4.** Using regression models, test whether tax burden (absolutely and as proportion of HH income) differs by household income and race

#### Tax Payments & Redistributions (Benefits)



## "Taxes cause job loss"

"A tax hike on beverages would hit working families not only at the cash register but could also put good-paying jobs at risk. One needs to look no further than Philadelphia, where business owners have seen sales drop by as much as 50 percent because of the beverage tax as Philadelphians shop in the suburbs to avoid the tax."

Ellen Valentino, executive vice president of the Maryland-Delaware-D.C. Beverage Association



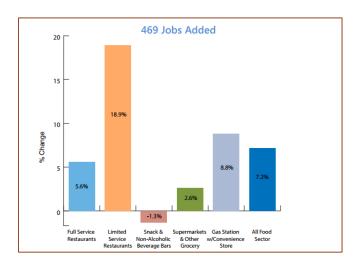
## "Taxes cause job loss" - countermessages

- The research is clear: There is no evidence that taxes have a negative impact on jobs.
- Scientific and government studies show no lost jobs and even increases in SSB-related businesses.
  - In Berkeley, jobs and revenues in the food sector increased after the tax was implemented.
  - In Philadelphia, new data show increases in wages and no increases in unemployment claims.
  - In Mexico, beverage sector employment has been stable while food sector employment has increased.
- Only industry-funded studies claim to show job loss.

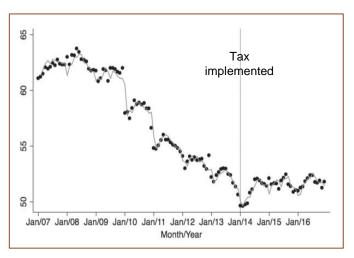


## "Taxes cause job loss" – the evidence

Berkeley – 2 years after

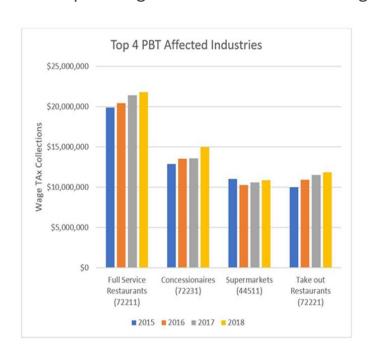


#### Mexico – 2 years after



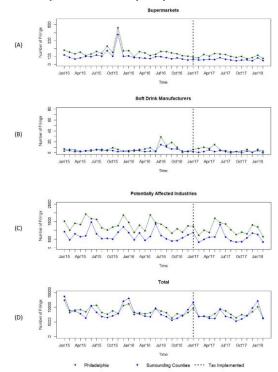
## "Taxes cause job loss" – the evidence

#### Philadelphia wage tax collections: increasing



#### Philadelphia Department of Revenue 2019

#### Philadelphia unemployment claims: no change



Lawman et al 2019

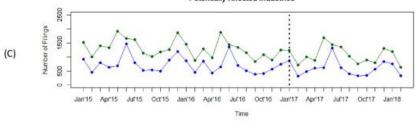




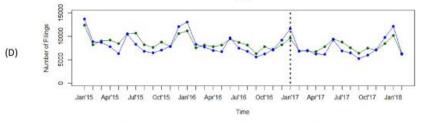
#### Soft Drink Manufacturers



#### Potentially Affected Industries



#### Total



Philadelphia

Surrounding Counties --- Tax Implemented

## "Consumers will shop across the border to avoid the tax"



## "Cross-border shopping" – countermessages

- Cross-border shopping does occur, although the amount varies from city to city.
- Despite cross-border shopping, taxes are reducing sales in cities with taxes.
- The extent of cross-border shopping may be determined by geography, transportation and other factors.
- No objective evidence that stores near the border are harmed.
- Implementing taxes at the state level will likely reduce cross-border shopping.
- We know from studies of tobacco taxes that cross-border shopping for tobacco products is limited and decreases once taxes are in place for a while.

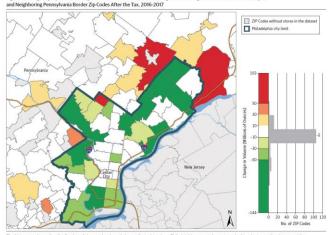


## "Cross-border shopping" – the evidence

24% of sales decrease offset by cross border

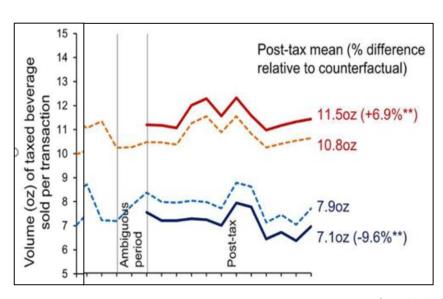
#### Philadelphia

 $Figure\ 2.\ Changes\ by\ Zip\ Code\ in\ Unadjusted\ Total\ Volume\ of\ Taxed\ Beverages\ Sold\ at\ Large\ Chain\ Retailers\ in\ Philadelphia$ 



The histogram shows the distribution of changes by zip code in unadjusted total volume (millions of ounces) of taxed beverages sold at large chain retailers in Philadelphia and neighboring Pennsylvania zip codes after the tax (2016-2017). Neighboring counties included Bucks, Montgomery, and Delaware, New Jersey was not included in the analysis. Ywent-four zip codes that were not in or near Philadelphia are not shown to make it easier to see the changes at the Philadelphia border. Of 140 zip codes, 2 (18949 and 19407) were excluded due to being post office box zip codes. There were 188 zip codes. The mean (SD) beverage volume change per zip code was –6.5 million oz (28.9; minimum, 144; maximim. 103 million oz).

#### Berkeley



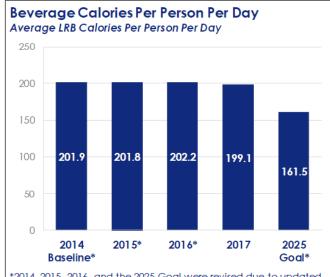
Roberto 2019, Silver 2017

## "We are doing our part..." – the evidence



"This is the single largest voluntary effort by an industry to help fight obesity and leverages our companies' greatest strengths in marketing, innovation and distribution."

Susan Neely, CEO of the American Beverage Association



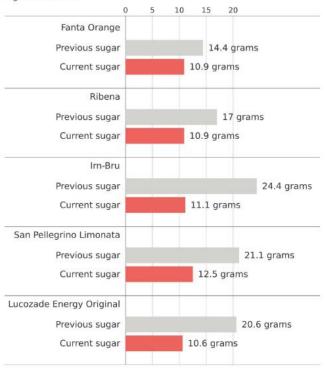
\*2014, 2015, 2016, and the 2025 Goal were revised due to updated data. See Data Sources section in the Detailed Methodology.

Sources: Beverage Marketing Corporation: DrinkTell Database; U.S. Census Bureau, 2017

## Taxes may induce product reformulation: Early effects of UK tax

#### British soda-makers are slashing sugar

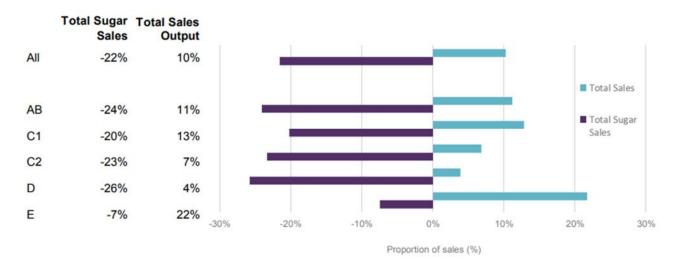
Some brands have changed their recipes to avoid a new tax, which applies to soft drinks with more than roughly 12 grams of sugar per eight-ounce can.



Source: Media and company reports; all numbers converted from metric THE WASHINGTON POST

## Taxes may induce product reformulation: Early effects of UK tax

Figure 4. Changes in volume of soft drinks sold and in the total sugar in soft drinks sold by socio-economic group



Source: Sugar reduction: report on progress between 2015 and 2018, Public Health England, 2019

Overall sales (of soft drinks have increased by 10.2% after the levy's introduction, and total sugar content within the soft drinks sold decreased by 21.6% Great Britain.

## Preemption





EDITORIALS

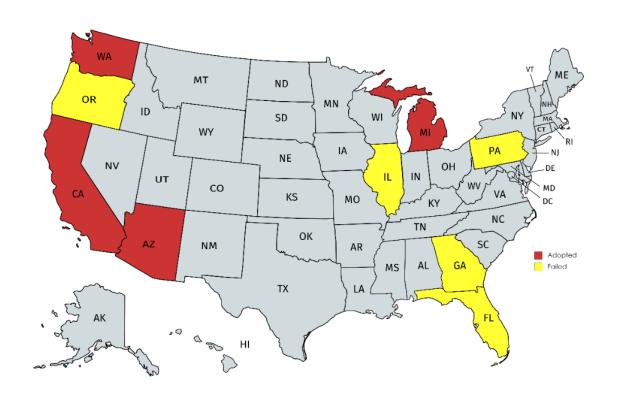
Big Soda's sweet deal to ban soda taxes is a California shakedown

BY THE SACRAMENTO BEE EDITORIAL BOARD



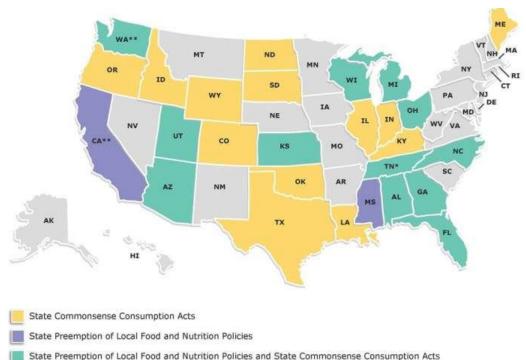


## SSB tax preemption: November 2018



## 13 states preempt local food and nutrition policies

- **Nutrition labeling**
- Consumer incentives (toys)
- Portion size
- **Taxes**
- Food safety
- Food deserts



State Preemption of Local Food and Nutrition Policies and State Commonsense Consumption Acts

Pomeranz 2018

# Seattle 2020 Mayor's Proposed Budget

#### Sweetened Beverage Tax - Resources for Early Education and Food Access

#### **Available Resources**

- Approximately \$10.1 million in "new" ongoing Sweetened Beverage Tax (SBT) Resources
  - Budget eliminates ~\$6.3 million in general fund "swaps"
  - Revenue forecast update adds ~\$3.8 million in annual, on-going revenues.
- Additional \$4.3 million of unspent fund balance from 2018 and 2019

#### Proposed Uses - Ongoing

- \$3 million per year to expand Child Care Assistance Program (CCAP)
  - Expand income eligibility to 350% of federal poverty (approx. \$90K for a family of four)
  - Increase minimum subsidy from 10% to 25%
  - Provide financial incentives for providers to participate in CCAP, and also invest ~\$2 million from other sources to provide one-time capital funding to help further expand supply
  - Expect to provide vouchers to 600 additional children

#### Sweetened Beverage Tax - continued

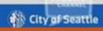


#### Proposed Uses - Ongoing

- \$2.5 million per year for an "Healthy Food Fund" grant program to support food access
  - Administered by the Department of Neighborhoods (DON)
  - Fund will invest in community-led activities to increase access to healthy food
- \$2+ million to expand the City's Fresh Bucks program
- Approximately \$1.1 million to expand support to food banks and additional staff at HSD to administer the program expansions funded by the Department's SBT allocations
- \$150,000 to expand summer recreational programming for youth at the Parks Department

#### Proposed Uses - One-time

- \$3 million one-time grant fund to support capital investments in P-patches and community gardens
- \$2 million for a financial reserve in the newly created Sweetened Beverage Tax Fund



## Tiered tax

Taxation Tiers Based on Sugar and Calories from Sugar Concentration in 8- and 12-ounce Beverage Servings					
TIERS	FIRST (LOWEST)	SECOND	THIRD	FOURTH (HIGHEST)	
Sugar (g) per 8-oz	0 to <5	5 to <10	10 to <20	More than 20	
Sugar (g) per 12-oz	0 to <7.5	7.5 to <15	15 to <30	More than 30	
Calories from sugar per 8-oz	0 to <20	20 to <40	40 to <80	More than 80	
Calories from sugar per 12-oz	0 to <30	30 to <60	60 to <120	More than 120	
Beverage Examples	Unsweetened or Diet Tea, Water and Sparkling Water, Unsweetened (black) Coffee, Diet or Very Low Sugar sodas	Lightly Sweetened Coffees, Kombucha, Some lightly Sweetened Juices, Teas, and Energy Drinks	Lightly Sweetened Teas, Lightly Sweetened Sodas, Sports Drinks	Fruit-Flavored Drinks, Regular Sodas, Energy Drinks	

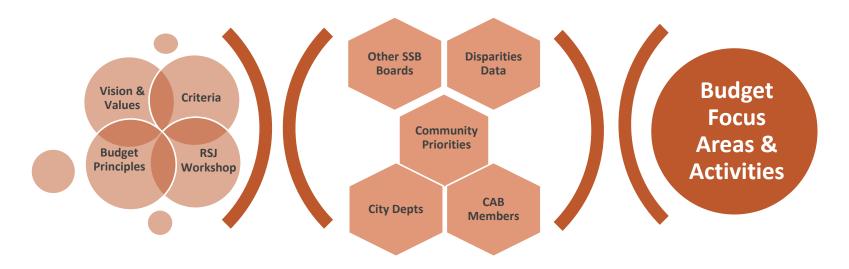
\*Second and third tiers may be combined to create a three-tiered taxation strategy

Ideally, campaigns choosing a three-tiered taxation strategy will use a cut-off for the lowest tax bracket at 5 g of sugar per 8-ounce serving, keeping the middle bracket at 5 to 20 g per 8-ounce serving and the higher bracket for drinks greater than 20 g per 8-ounce serving. By implementing these brackets, disincentives within the top bracket could yield effective behavioral changes among consumers and encourage manufacturers to reduce added sugar and drink size to move their products out of the high tax brackets.

## Seattle CAB 2019 recommendations

Topic	% of all ongoing funding	
Healthy Food and Beverage Access	32.5%	
Birth-to-Three Services and Kindergarten	30.0%	
Readiness		
Community-based programs and activities to	15.0%	
support food nutrition and physical activity		
Public Awareness campaign about sugary drinks	9.5%	
Support for people with obesity and diabetes	10.0%	
Evaluation support for community-based	3.0%	
organizations		

#### CAB - Process



**Foundational Work** 

Dec 2017 – Mar 2018

**Information Gathering** 

Feb 2018 – May 2018

**Prioritization Process** 

May 2018 – June 2018

## Boulder

- Farmers marketsvouchers -WIC recipients
- Healthy cooking classes older adults
- Fresh Food Connect –
   distribute free local
   produce to low income
   residents
- No Student Hungry –
  food bags for weekends
  & holidays
- YWCA Children's Alley –
   physical activity, wellness

   and nutrition at childcare

