

## The Berkeley Sugar-Sweetened Beverage Tax A Transdisciplinary Approach to Evaluating the Impact

Frequent consumption of sugar-sweetened beverages (SSBs)—especially by children—is contributing to high rates of tooth decay, obesity, cardiovascular disease, and diabetes. In an effort to reduce these health threats, Berkeley became the first municipality to pass an excise tax on SSBs in November of 2014. While most of the public dialogue on SSBs has focused on the obesity-related concerns, the oral health concerns warrant additional attention. Through an interdisciplinary collaboration among public health, nutrition, dental, and media experts, along with community groups, this project assesses the impact of Berkeley’s SSB tax by adding evaluation of oral health themes through analysis of media messages, focus groups and interviews with parents, and tracking oral health outcomes through existing child dental screening data.

### Objectives and Methods

#### 1. Evaluate the public debate about SSB excise taxes, including the role of oral health, through the window of news coverage

The team collected data from local and national media—television, newspapers, e-news, radio, home mailers, and social media—to assess how the SSB tax debates unfolded during the campaign and immediately following the Berkeley vote. The team coded and analyzed how, by whom, and in what context oral health arguments were used relative to arguments surrounding obesity, diabetes, and other SSB-related health outcomes.

#### 2. Determine the saliency of oral health, relative to other health outcomes, among Berkeley voters

In collaboration with Berkeley Head Start and Berkeley Unified School District, the team conducted focus groups



Photo by Chen Gong, *Daily Californian*.

with Berkeley voters who have children under twelve years old around issues of oral health, other SSB-related health outcomes, and the SSB tax campaign. Additionally, the research team conducted in-depth interviews with 20 Berkeley parent voters, in both English and Spanish, to explore what they felt, knew, and practiced when it comes to giving their children SSBs.

#### 3. Determine the impact of Berkeley’s SSB tax on changes in oral health among Berkeley children

In collaboration with UCSF School of Dentistry, the team developed partnerships with the City of Berkeley’s Oral Health Program and Alameda County’s Office of Dental Health to begin assembling a dataset of Berkeley children’s oral health outcomes pre- and post-tax.

### Findings

#### 1. Dental professionals can be better engaged in SSB tax efforts

Dental professionals were not significantly involved in the media efforts around the SSB tax, and oral health/tooth decay was mentioned in only 2% of the communications. This study identified a missed opportunity that could be seized in future SSB tax efforts—to increase both the

involvement of dental professionals and the focus on reducing SSB consumption to decrease tooth decay rates in children and adults.

### 2. Parents want to reduce sugar consumption, but additional education and outreach is needed

Parents were interested in reducing their families' sugar consumption, but held misperceptions regarding the sugar content of different beverages, and experienced social pressures to consume SSBs at family and community events. Parents who succeeded in reducing SSB consumption often cited education or personal experiences with diseases such as obesity, diabetes, and tooth decay as motivation for behavior change. Parents found visual messages regarding oral health to be very impactful.

### 3. Parents seek greater transparency over how the tax funds are being used

Although most parents supported Measure D, and some reported decreasing SSB consumption as a result of the tax, many expressed confusion and concern over how funds were being used.



An example of marketing materials created by Contra Costa County to communicate the connection between consumption of SSBs and children's oral health.

## Conclusions

Berkeley's passage of the SSB tax in November 2014 provided an unprecedented opportunity to evaluate the

impact of these campaigns and taxes. This study is the first to document parents' reactions to a local SSB tax and their responsiveness to health messages, particularly regarding oral health. The study identified an opportunity to increase advocacy by dental professionals and expand public health messages to oral health, which may increase the effectiveness of advocacy and messaging beyond those limited to obesity and diabetes.

In addition, the study identified a need to further educate parents about the sugar content of SSBs and how funds from Measure D are spent, and to develop strategies to support parents in reducing SSB consumption, particularly at social events.

## Next Steps

The research team is disseminating the study results through multiple avenues including presentations, websites, and professional publications. This study's interdisciplinary partnerships—across the university, public health, nutrition, dentistry, media experts, public health agencies, and community groups—may be extended for further interventions and studies focused on obesity and oral health. Berkeley's SSB tax may stimulate changes at multiple levels: in food environments via higher prices, message environments via media, culture by changing social norms, and individual behavior and health.

Lessons learned from this study can provide important information for other cities promoting SSB taxes (including San Francisco, Oakland, and Albany where SSB taxes were passed in November 2016), and other municipalities that are planning SSB tax initiatives.

In all, Berkeley's SSB tax serves as a landmark case study of a local economic approach to changing food systems, which may inform future local and grassroots efforts to improve the food and agricultural environment.

## Research Team

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