Medical Xpress

Philadelphia's sweetened drink sales drop 38 percent after beverage tax

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One year after Philadelphia passed its beverage tax, sales of sugary and artificially sweetened beverages dropped by 38 percent in chain food retailers, according to Penn Medicine researchers who conducted one of the largest studies examining the impacts of a beverage tax. The results, published this week in *JAMA*, translate to almost one billion fewer

ounces of sugary or artificially sweetened beverages—about 83 million cans of soda—purchased in the Philadelphia area. The findings provide more evidence to suggest beverage taxes can help reduce consumption of sugary drinks, which are linked to the rise in obesity and its related non-communicable diseases, such as type II diabetes.

On January 1, 2017, Philadelphia became the second city in the United States to implement a tax on the distribution of sugary and artificially sweetened beverages. The goal of the 1.5 cent per ounce tax was to generate revenue to support universal pre-K, community schools, and improvements to parks and recreation centers, with the potential side benefit of curbing consumption of unhealthy drinks.

"Taxing sugar-sweetened beverages is one of the most effective policy strategies to reduce the purchase of these unhealthy drinks. It is a public health no-brainer and a policy win-win," said first author Christina A. Roberto, Ph.D., an assistant professor of Medical Ethics & Health Policy in the Perelman School of Medicine at the University of Pennsylvania. "It's likely to improve the long-term health of Philadelphians, while generating revenue for education programs in the city of Philadelphia."

Countries across the globe, like Mexico and the United Kingdom, have turned beverage taxes into public health tools to help slow the increasing rates of obesity, a global epidemic. In the United States alone, two-thirds of the adult population is obese or overweight. In Philadelphia, more than 68 percent of adults and 41 percent of children are overweight or obese. Additionally, according to Philadelphia's Community Health Assessment, 32 percent of adults and 18 percent of teens in the city consume one or more sugar-sweetened beverages each day. Beverage taxes have now been passed in seven U.S. cities and are being considered at the state level in Connecticut and Colorado. The first city to pass the tax, Berkeley, Calif., reduced overall sales of sugary beverages by 10 percent and consumption by 52 percent among its low-income residents,

according to recent studies.

To determine the impact the new law would have on prices and sales in Philadelphia, the researchers analyzed store-wide beverage price and sales data one year before and one year after the tax was implemented at 291 chain retailers. Stores included supermarkets, mass merchandisers, and pharmacies, which together represent the largest sources of sugary beverage sales. The study does not include restaurants or independent stores. The team included stores within the city limits and those just outside to understand how many taxed drinks were being purchased across city lines to avoid the tax. They also compared their results to Baltimore, which has no beverage tax.

Data was obtained from Information Resources, Inc., a company that tracks and compiles sales data from U.S. retailers. The researchers also calculated how much prices increased after the tax.

One year after the tax was implemented, the cost of sugary and artificially sweetened drinks increased by 0.65, 0.87, and 1.56 cents per ounce at supermarkets, mass merchandisers, and pharmacies, respectively.

Between January 2016 and December 2017, there was a 59 percent reduction in taxed beverage sales at supermarkets, a 40 percent reduction at mass merchandisers, and a 13 percent reduction at pharmacies. Overall, people purchased nearly 1.3 billion fewer ounces after the tax, which is over a 50 percent decrease in total volume of ounces. However, sales in Pennsylvania border zip codes did increase by 308.2 million ounces. Therefore, after accounting for some consumers crossing the city lines to buy drinks outside the city, the overall sales of taxed beverages dropped 38 percent among chain food retailers in the area, the researchers reported. In a separate study published earlier this year in *PLOS ONE*, the Penn researchers found that filings of unemployment

claims in Philadelphia industries potentially affected by the beverage tax did not change in the year after the tax was implemented.

"Philadelphia's tax on sweetened drinks led to a huge reduction in sales of these unhealthy drinks one year after it was implemented and generated revenue for thousands of pre-k slots. That's great news for the well-being of the people of Philly," Roberto said.

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