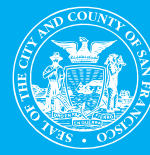




2024 Sugary Drinks Distributor Tax (SDDT) Data Brief



Scientific evidence links the overconsumption of sugary drinks to chronic diseases like type 2 diabetes, heart disease, and tooth decay - health concerns that disproportionately affect low-income communities of color. In 2016, San Francisco voters passed the Sugary Drinks Distributor Tax (SDDT), also known as the soda tax, to reduce sugary drink consumption and mitigate preventable diet-related diseases. This brief highlights the most recent data as of 2023 for three metrics: public health impacts, sugary drink consumption, and sugary drink sales and pricing in San Francisco.

Preventing chronic disease is more complicated than simply asking people to eat more fruits and vegetables and exercise 30 minutes a day. To ask people to make those “simple” changes, we must consider how their behaviors are shaped by their social, physical, and political environments. The goals of the soda tax are focused on long-term impact and is meant to be part of a comprehensive strategy to reduce sugary drink consumption. The current data show small positive changes since the tax went into effect in 2018, highlighting the need for larger investment in multicomponent strategies.

Impact of Sugary Drinks on SF Public Health

- Food Insecurity is the highest (67%) that it has been since the California Health Interview Survey began measuring food insecurity in 2001.
- Native Hawaiian or Other Pacific Islander (NHOPI) and Black/African American (B/AA) residents have the highest hospitalization rates for type 2 diabetes.
- Black/African American and Native Hawaiian/ Other Pacific Islander residents face the highest rates of diet-related diseases and have the shortest life expectancies compared to other racial and ethnic groups.

Sugary Drink Consumption Among SFUSD Students

- Middle and high school students are drinking more sugary drinks.
- Black/African American and Latino students were more likely to drink at least one sugary drink a day than their Asian and White classmates.

Beverage Sales and Pricing in SF

- Data has shown an increase in sugary drink sales since 2020. There are competing factors that may contribute to this increase such as the return of tourism to San Francisco, return to work mandates, and/or the possibility that residents are purchasing more sugary drinks.



Impact of Sugary Drinks on SF Public Health

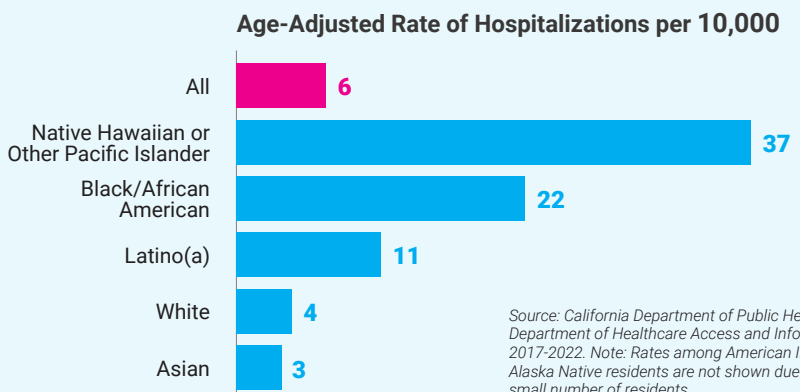
A note regarding use of obesity as a measure of health. Evolving research indicates that focusing on overweight/obesity furthers stigma and can exacerbate or contribute to poor health. The goals of the soda tax are to reduce sugary drink consumption and prevent related chronic diseases through programs, services and policies that promote nutrition and physical activity as opposed to obesity prevention. Therefore, this data brief does not report on obesity and focuses instead on other health conditions associated with sugary drink consumption such as diabetes, heart disease, and tooth decay.

People who consume sugary drinks regularly—1 to 2 cans a day or more—have a 26% greater risk of developing type 2 diabetes than people who rarely have such drinks.¹ Consumption of sugary drinks is also linked to increased risk of heart disease. According to a 2024 Harvard study², consuming one sugary drink per day is associated with an 18% increased risk of cardiovascular disease (CVD), regardless of exercise. Drinking soda nearly doubles the risk of cavities in children.³

In San Francisco, Black/African American people make up less than 5% of the population, and Native Hawaiian or Other Pacific Islanders make up less than 1%. Despite their small numbers, these populations experience the most significant health burden and higher death rates from preventable diet-related chronic diseases.

- **Hospitalization rates for type 2 diabetes are highest among Native Hawaiian or Other Pacific Islander and Black/African American residents.** Native Hawaiian or Other Pacific Islander adults are admitted to the hospital for type 2 diabetes at a rate six times greater than the overall average and Black/African American adults have a rate almost four times greater than the overall average.
- Across all diet-sensitive causes of death, aside from Alzheimer Disease, **Black/African American residents experience mortality rates that are often twice as high** as the mortality rates experienced by other race/ethnicities.
- In San Francisco, **Black/African American, Latinx, and Asian kindergarteners are two to three times more likely to experience dental decay** as White kindergarteners.

HOSPITALIZATIONS DUE TO TYPE 2 DIABETES AMONG ADULTS BY RACE/ETHNICITY, 2018-2022

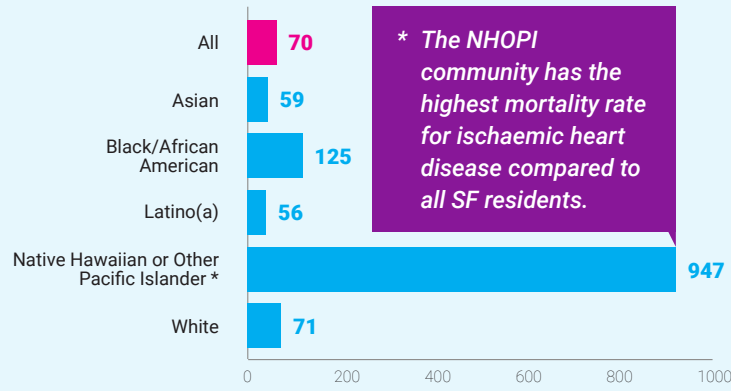


Source: California Department of Public Health, Department of Healthcare Access and Information 2017-2022. Note: Rates among American Indian/Alaska Native residents are not shown due to the small number of residents.

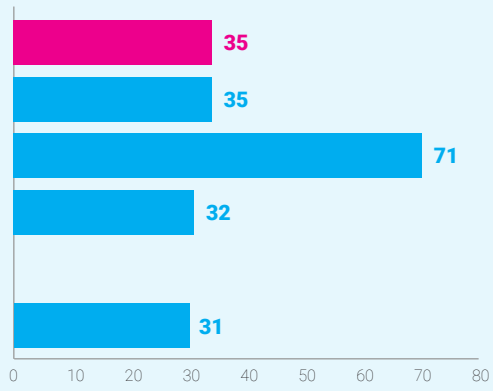


AGE-ADJUSTED MORTALITY RATES FOR THE LEADING CAUSES OF DEATH, DIET-SENSITIVE DISEASES 2019-2023

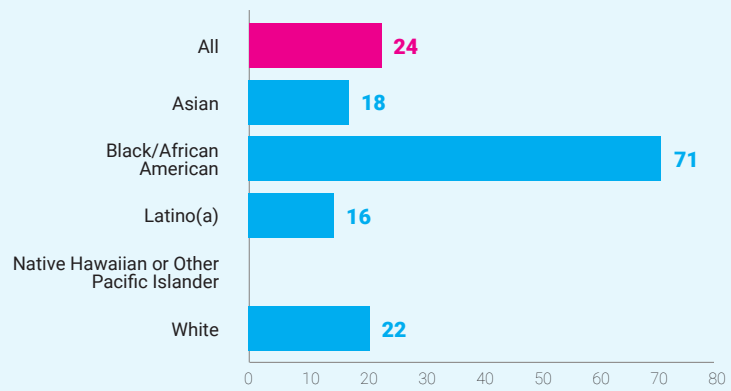
Ischaemic Heart Diseases



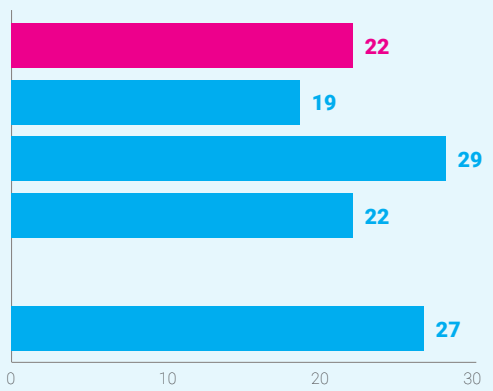
Cerebrovascular Disease



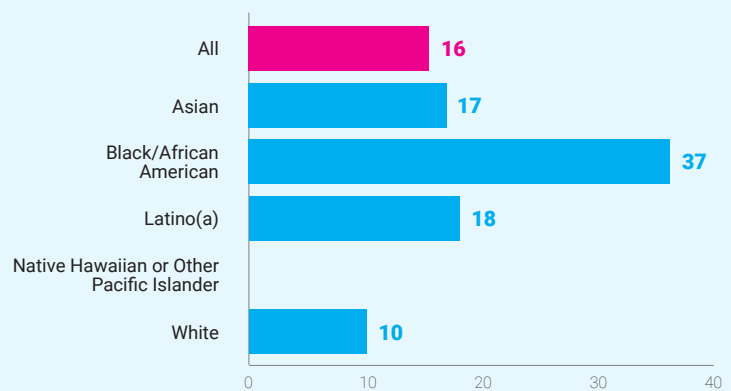
Hypertensive Diseases



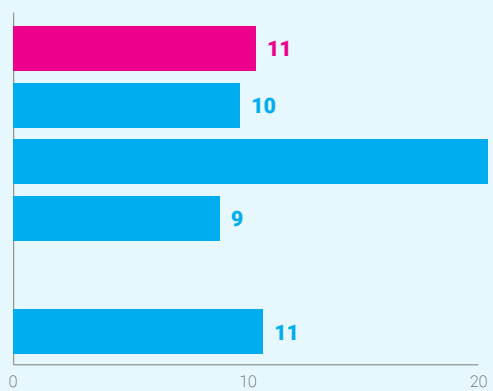
Alzheimer's Disease



Diabetes Mellitus



Colon/Rectum Cancer



Age-adjusted mortality rate per 100,000

NOTE: Caution should be used when interpreting mortality rates among NHOPI residents. The available population estimates are likely lower than the true population of NHOPI residents in San Francisco, resulting in higher rates.

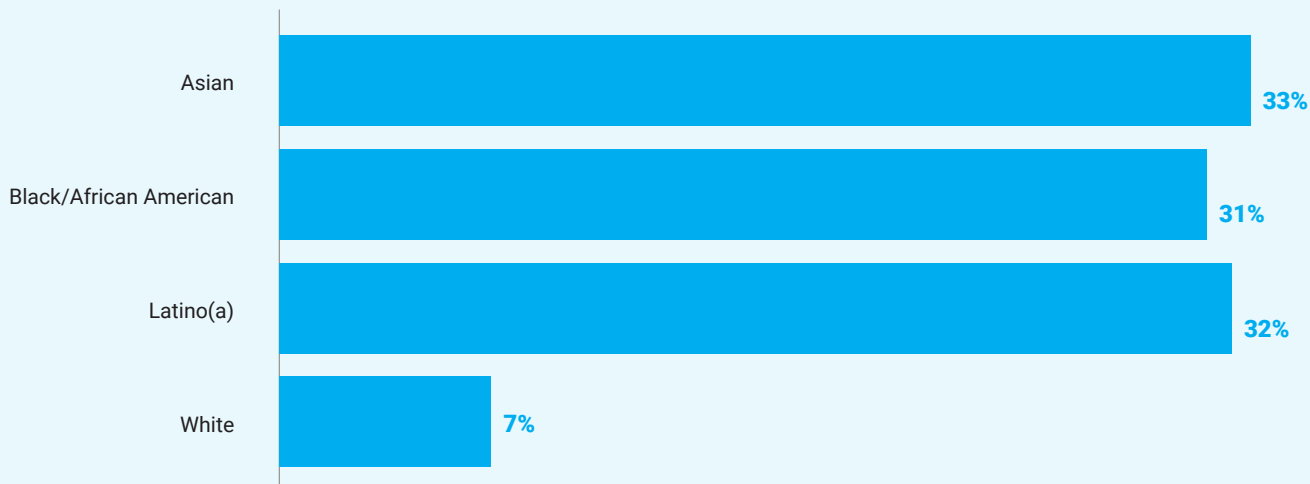
Source: California Department of Public Health, Vital Records Business Intelligence System (VRBIS) Death Statistical Master File, 2019-2023. Rates were calculated using 5-year 2017-2022 American Community Survey population estimates. Note: Please interpret the rates between causes of death with caution as the x-axis scale varies for each cause of death. Rates for American Indian or Alaska Native residents were not available because too few deaths were reported. Data are 5-year age-adjusted mortality rates per 100,000 residents using deaths from 2019 through the end of 2023. Most mortality rates for NHOPI residents were suppressed due to too few deaths.



Oral Health

Sugary drink consumption is associated with increased tooth decay, cavities, and tooth loss.⁴⁻⁷ Tooth decay is the most common chronic disease of childhood and the leading cause for missed school days. Poor oral health can reflect systemic inflammation, which over time may limit growth and development, as well as increase the risk of adverse health outcomes, including hypertension, cardiovascular disease, and cancer.⁸ In San Francisco, Black/ African American, Latino(a), and Asian kindergartners have four times the prevalence of untreated dental decay as White kindergartners.

PERCENT OF SFUSD KINDERGARTNERS WITH UNTREATED CARIES BY RACE/ETHNICITY, 2022-2023



Source: San Francisco Unified School District - San Francisco Department of Public Health Dental Services Kindergarten Oral Health Screening Program
Note: 2022-2023 is a single year estimate and refers to the school year. Estimates for 2022-2023 are not weighted.
Note that screening response rates for 2022-2023 were below pre-pandemic levels and may not be comparable to estimates from prior years.



In 2022-2023, Vietnamese, Other Asian, and Filipino kindergartners had a higher prevalence of untreated dental caries than Chinese kindergartners.

PERCENT OF SFUSD KINDERGARTNERS WITH UNTREATED CARIES BY ASIAN SUBGROUP, 2022-2023



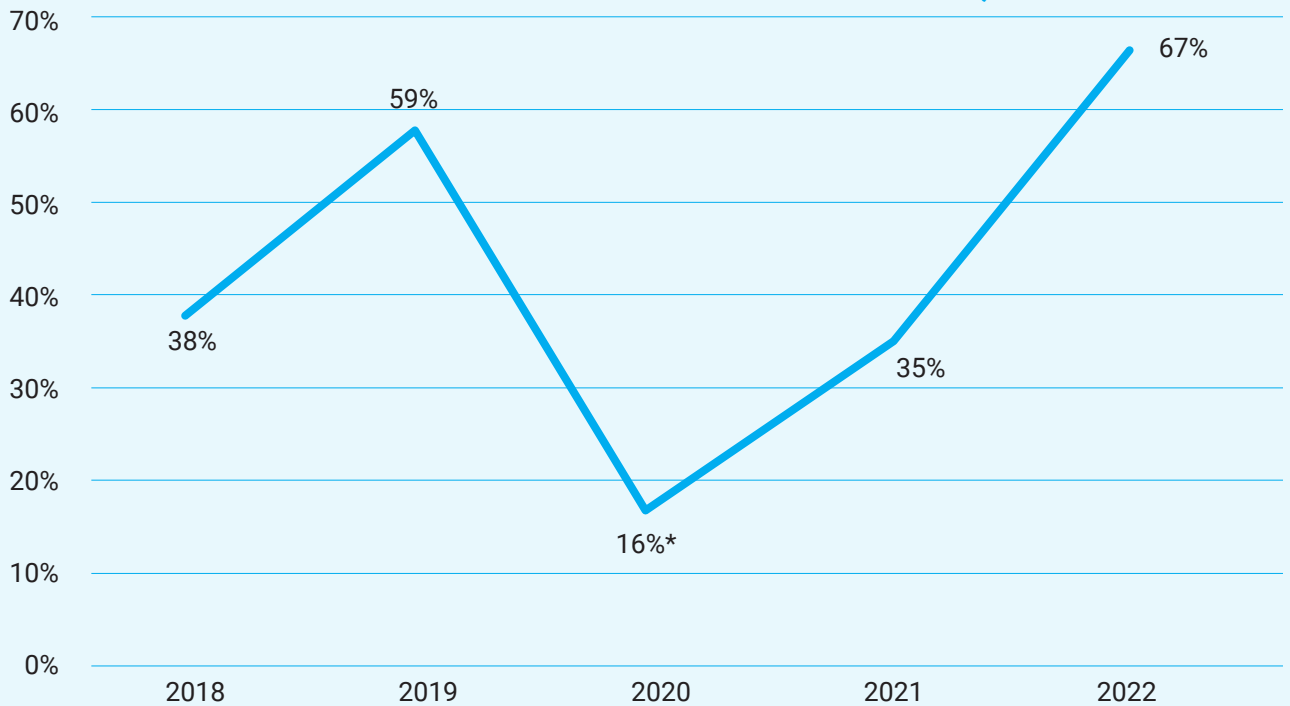
Source: Kindergarten Oral Health Screening Program. Note: Data are pooled estimates from 2022-2023

Food Insecurity Rates are Increasing

Food insecurity increases the risk of multiple chronic conditions including diabetes, heart disease and hypertension, and can exacerbate physical and mental health conditions. Food insecurity can lead to higher health care costs due to higher incidence of chronic diseases. During the pandemic, soda tax funding supported additional food access for families who experienced food insecurity. In 2022, the California Health Interview Survey (CHIS) found that in SF, among adults earning less than 200% of the Federal Poverty Level, 67% experienced food insecurity. This was the highest percent seen since CHIS began measuring food insecurity in 2001. For cities like San Francisco that have higher costs of living, this estimate does not capture the full extent of food insecurity in San Francisco. CHIS also observed low levels of food insecurity in 2021, this was likely due to the historic investment in food programs during the COVID-19 pandemic in SF.⁹



PERCENT OF ADULTS UNDER 200% OF THE FEDERAL POVERTY LEVEL THAT ARE FOOD INSECURE IN SAN FRANCISCO, 2018-2022



Source: California Health Interview Survey, 2018-2022. Note: * indicates an estimate that is statistically unstable. The California Health Interview Survey only asks individuals earning less than 200% of the federal poverty level about food security.



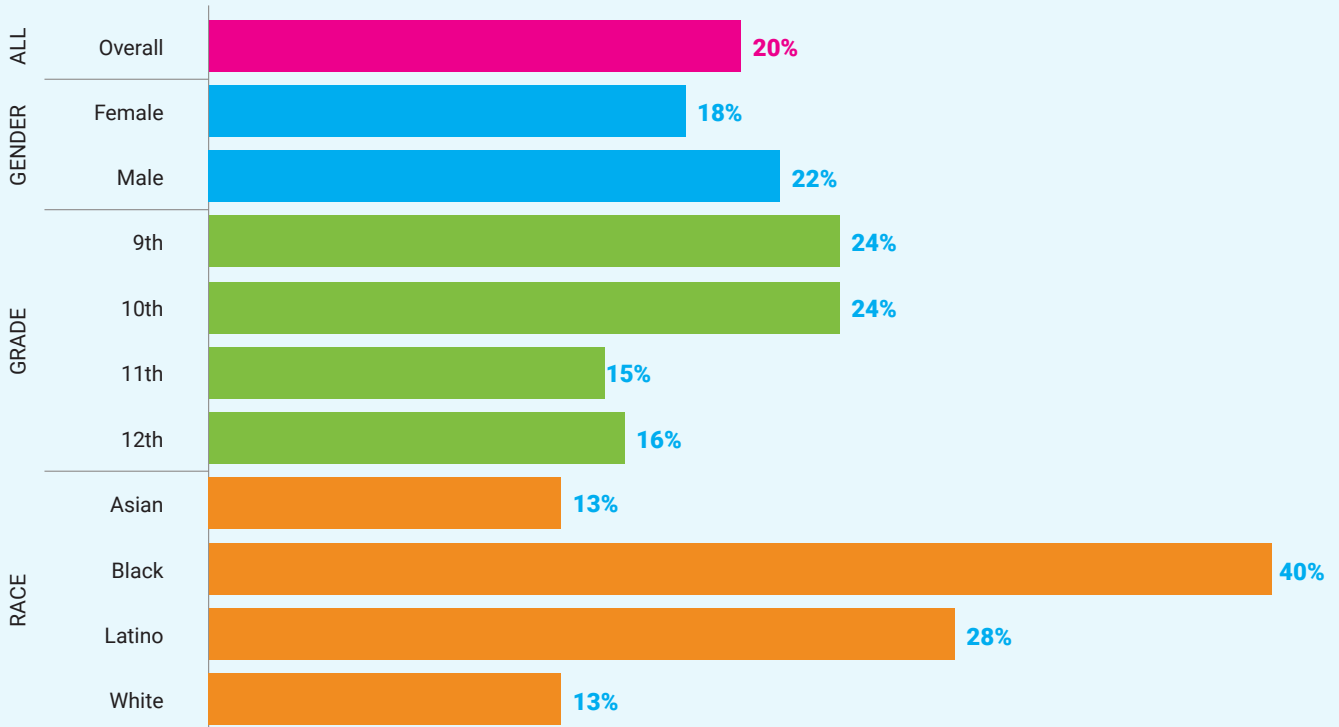
Sugary Drink Consumption Among SFUSD Students

San Francisco youth are drinking more sugary drinks, especially Black/African American and Latino youth. The beverage industry spends millions of dollars targeting young people, parents, and communities of color in order to increase profits and brand loyalty. According to [UCONN Rudd Center's 2022 Targeted Marketing Report](#), "food and beverage TV advertising targets Black and Latino consumers. In 2021, Black youth and adults viewed 9-21% more food and beverage TV ads compared to their White peers."

As illustrated in the charts below from San Francisco Unified School District's (SFUSD) Youth Risk Behavior Surveillance System, disparities persist. More work is needed to ensure that San Francisco youth have culturally relevant education and environments to support healthy behaviors like consuming more tap water. Among SFUSD students:

- **Black/African American and Latino students are more likely to consume at least one sugary drink a day in comparison to Asian and White classmates.**
- **Younger students were more likely to consume at least one sugary drink daily** than older students (24% for 9th and 10th graders compared to 15% for 11th and 16% for 12th graders).
- In 2022, **male middle school students were more likely to consume at least one sugary drink the day prior** to the survey compared with female students (61% versus 55% for male and female students, respectively).
- **Latino and Black/African American students were the most likely to consume at least one sugary drink the day prior** to the survey while Asian students were the least likely (67%, 65%, and 54% for Latino, Black, and Asian students, respectively).

PERCENTAGE OF HIGH SCHOOL SFUSD STUDENTS CONSUMING SUGARY DRINKS DAILY, BY DEMOGRAPHICS, 2023



Source: Centers for Disease Control and Prevention. 2023 Youth Risk Behavior Survey

PERCENTAGE OF MIDDLE SCHOOL SFUSD STUDENTS CONSUMING AT LEAST ONE SUGARY DRINK THE DAY BEFORE THE SURVEY, BY DEMOGRAPHICS, 2022



Source: Centers for Disease Control and Prevention. 2023 Youth Risk Behavior Survey.

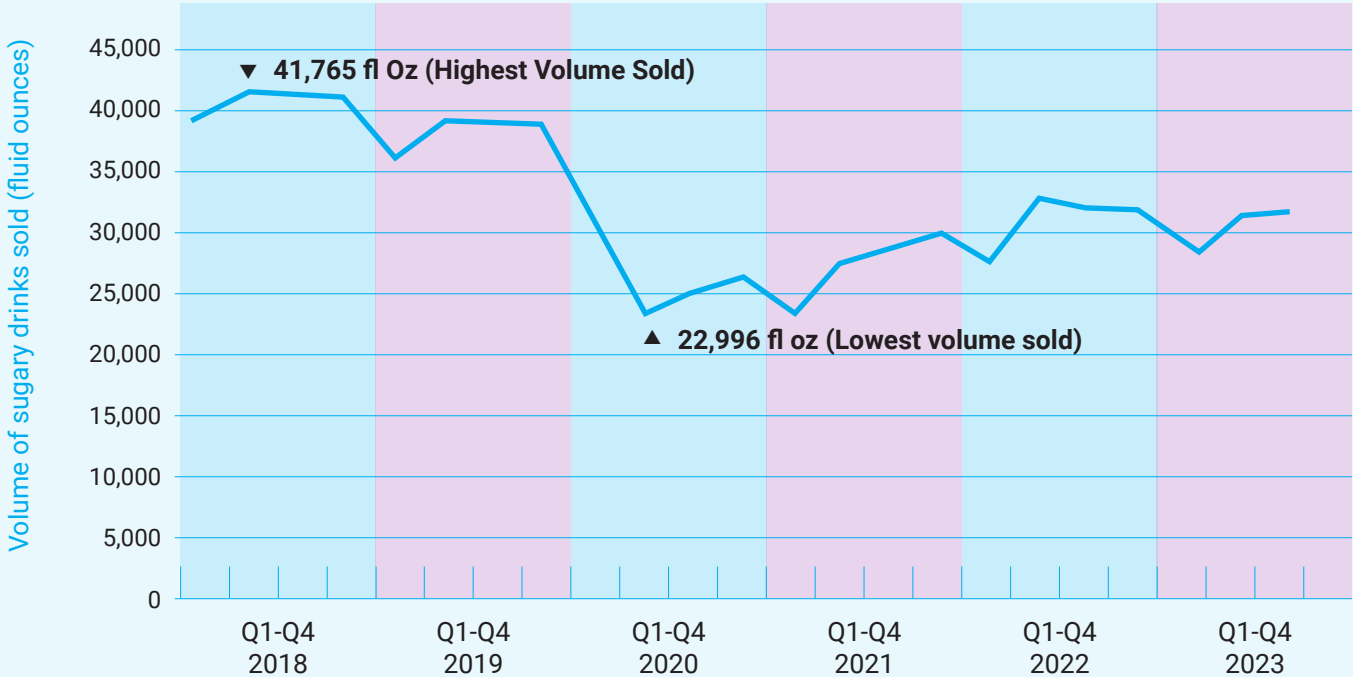
• Data brief does not include data for non-student sugary drink consumption.

Beverage Pricing and Sales in SF



Data shown here are from the City Controller and represent the volume of sugary drinks sold in San Francisco for each reporting fiscal quarter. The total volume of sugary drinks sold within San Francisco dropped from 2018-2020 – likely due to the impact of COVID-19 on tourism and commuters. From Q2 in 2020 through Q3 of 2023, the volume of sugary drinks sold increased, however it is unclear how much of this increase is from San Francisco returning to pre-pandemic levels of tourism and office workers or how changes in sugary drink consumption among residents.

VOLUME OF SUGARY DRINKS SOLD IN SAN FRANCISCO BY QUARTER, 2018-2023



Source: San Francisco City Controller, Budget and Analysis Division. Note: Q1 is July through September, Q2 is October through December, Q3 is January through March, and Q4 is April through June.



Conclusion

It takes years and even decades for health behaviors to contribute to disease, thus it may take a similar amount of time to see the impact of interventions. While soda taxes are a step in the right direction, they are just one part of a larger effort to make communities healthier in the long run. More time and investments are needed to see sustainable changes and reductions in chronic disease health disparities. Nevertheless, progress is being made through initiatives funded by the soda tax. Community-based organizations are delivering culturally-relevant programs, services, education, outreach and direct access to food, as well as making changes at a systemic level to create healthier environments for everyone. The photos throughout this data brief document the important work that is happening by our funded organizations and agencies. Their captions are available in the Appendix. For more details on the impacts of soda tax funding, see the [2022-2023 Evaluation Report](#) produced by [Raimi and Associates](#).

This data brief is prepared by the Healthy Eating Active Living (HEAL) Team in the [Community Health Equity and Promotion \(CHEP\) Branch](#) and the [Center for Data Science \(CDS\)](#) of the [Population Health Division](#) of the San Francisco Department of Public Health to meet requirements of [Article XXXIII of the SF Administrative Code](#): Starting in 2018, by March 1 of each year, the Advisory Committee shall submit to the Board of Supervisors and the Mayor a report that evaluates the impact of the Sugary Drinks Distributor Tax on beverage **prices, consumer purchasing behavior, and public health**.

Since all data sources are not updated annually and because we do not expect changes in public health outcomes in the short term, the HEAL Team and CDS will produce a data brief on an annual basis highlighting the metrics outlined in the legislation above. A full report will be produced every 5 years. The next full data report will be produced in 2028.

For more information and reports, visit sf.gov/sddtac.

For data dashboards, visit sodatax-sf.org.

For limitations, caveats for data sources, and photo captions, please visit the Appendix posted at <http://sf.gov/sddtac>.

