Recent reductions in sugary drink consumption in the United States are promising, but sugary drink intake among children and teens, including youth of color, remains high. Beverage companies have pledged to increase demand for lower-calorie options, but research is needed to determine whether they have reduced advertising of high-sugar drinks to children and teens.

Recent evaluations of National Health and Nutrition Examination Survey [NHANES] data demonstrate that young people are consuming less sugar in the form of sugary drinks. From 2003-04 to 2015-16, calories consumed from sugary drinks declined by 55% for youth (2-19 years), while the proportion of youth who consumed a sugary drink on a given day declined from 77% to 54%.[1] In 2015-16, sugary drinks contributed 94 calories-per-day per capita to children's and teens' diets, down from 210 calories-per-day in 2003-2004.

However, sugary drink consumption by children and teens remains a significant public health concern. More than one-half of youth continue to consume sugary drinks on a given day,[2] and sugary drinks contribute approximately one-half of added sugars in young people's diets.[3] Long-term health risks from consuming sugary drinks include cardiovascular disease, type 2 diabetes, hypertension, dental decay, and all-cause mortality.[4] Further reductions in sugary drink consumption are needed.

In 2019, the American Academy of Pediatrics (AAP) and American Heart Association (AHA) recommended broad policy solutions to reduce the harm from sugary drinks on the health of children and teens.[5] Noting continued extensive marketing of sugary drinks to youth and its negative impact on consumption, the AAP and AHA called for—among other policies—federal and state government support to reduce sugary drink marketing to children and teens. Marketing of these products often disproportionately targets Black and Hispanic youth,[6] contributing to diet-related health disparities affecting their communities.[7] Policy makers and public health experts have launched numerous initiatives to reduce sugary drink consumption, including sugary drink taxes, public health communication campaigns, and individual interventions with parents and children.[8] However, reductions in marketing of sugary drinks to children and teens are also necessary for such initiatives to effectively reduce consumption.

In 2019, the Rudd Center published Children's Drink FACTS.[9] That report documented how beverage companies continue to extensively advertise sugary children's drinks (including fruit drinks and flavored water) directly to children and their parents. But other types of sugary drinks are also highly marketed to children and teens. In this report, we document advertising of other sugary drink categories, including regular soda, sports drinks, energy drinks, and iced tea, as well as fruit drinks and flavored water not directly targeted to children under age 12 (i.e., not children's drinks).

Continued concerns about sugary drink consumption by children and teens

Despite overall reductions in sugary drink consumption, the latest NHANES data demonstrate disproportionately high consumption by some youth, including teens, minority, and low-income youth.[10,11] Increased intake of some categories of sugary drinks also raises concerns.

Teens (12-19 years) consume more sugary drinks than other age groups, contributing 5.9% of their total calories compared to 4.5% for adults (20+ years).[12] The median calorie intake from sugary drinks was 150 to 200 calories-per-day for teens (12-18 years), while teenage boys with the highest sugary drink consumption (those in the 90th percentile) consumed more than 300 calories-per-day.[13] Teenage girls in the highest percentile consumed 250 calories-per-day from sugary drinks.

Consumption is also higher among low-income youth. Low-income teenage boys (12-18 years) consumed a median of 200 calories of sugary drinks in a given day.[14] A large California study conducted in 2013-14 found that 46% of low-income youth (2-17 years) reported consuming one or more sugary drinks per day compared to 33% of high-income youth.[15] Three-quarters (76%) of youth (2-19 years) living in households participating in SNAP consumed sugary drinks on a given day, which contribute more of their per-capita daily calories compared to youth living in eligible non-SNAP and non-eligible households.[16]

Greater sugary drink consumption by children and teens in some racial/ethnic groups raises additional concerns due to health disparities affecting communities of color. Non-Hispanic White youth continued to have the lowest consumption: 60% of children (6-11 years) and 63% of teens (12-17 years) reported consuming a sugary drink on a given day.[17] Non-Hispanic Black youth had the highest rates of sugary drink consumption: 66% of children and 78% of teens on a given day. Rates of sugary drink intake were higher among White and Hispanic youth, but not Black youth, in lower-income households.[18] Rates were also higher for Mexican American and other Hispanic youth compared to non-Hispanic White youth.[19]

Furthermore, reductions in consumption have not been consistent across all sugary drink categories. Declines were highest for regular soda (or soft drinks). From 2003-04 to 2013-14, the percent of children (6-11 years) who consumed sugar-sweetened soda on a given day declined from 55% to 24% (-56%), and the percent of teens (12-19 years) consuming declined from 61% to 33% (-46%).[20] However, the annual Youth Risk Behavior Surveillance Survey (YRBSS) from the Centers for Disease Control and Prevention (CDC) shows that most high school students continue to consume sugar-

sweetened soda.[21] In 2017, 72% reported consuming at least one soda in the past 7 days, and 19% report consuming one or more every day. The proportion of children and teens consuming sugar-sweetened fruit drinks also declined from 2003 to 2014, but at a lower rate, from 35% to 27% (-22%) of children consuming on a given day and from 28% to 21% (-26%) of teens.[22]

At the same time, consumption of sports drinks and energy drinks increased. In 2013-14, 9% of teens consumed a sports drink on a given day, a 24% increase versus 10 years earlier.[23] Prevalence of energy drink consumption increased seven-fold, with 1.4% of teens consuming energy drinks on a given day.[24] Although relatively few teens consume energy drinks daily, energy drinks contribute 200 additional calories and more than triple the amount of caffeine (227 mg vs. 52 mg) on the days they are consumed.[25] The YRBSS also assessed consumption of sports drinks by high school students in 2017.[26] That study found that 63% of boys and 42% of girls had consumed at least one sports drink in the past 7 days, and 17% of boys reported consuming at least one sports drink every day. In addition, Black and Hispanic youth were more likely to have consumed sports drinks in the past 7 days (61% and 60%, respectively) compared to White youth (49%).

A California study found similar results.[27] In 2013-14, 37% of teens (12-17 y) reported consuming one or more sports drinks or energy drinks per day (combined categories), up from 31% five years earlier. In contrast, the number who reported consuming soda daily declined from 43% to 34%. California teens were more likely to report consuming a sports drink or energy drink than a soda. This same study found that Black teens had the highest sports and energy drink consumption (41% reported consuming daily).

In other categories, teen consumption of "low-calorie" drinks also more than doubled from 2003 to 2014.[28] This study defined low-calorie drinks according to whether product packages labeled them as "low-calorie," but did not examine added sugar or zero-calorie sweetener content. Large-scale studies have not reported consumption of other categories of sugary drinks, including iced tea, coffee, and flavored water, separately.

Industry response to public health concerns

Recognizing the role that beverage companies may play in unhealthy rates of sugary drink consumption, industry groups have launched initiatives to improve their marketing practices. Companies that belong to the American Beverage Association pledge "not to advertise soft drinks or juice-based drinks to audiences under the age of 12" and "to only advertise 100% juice, water and milk-based drinks to this audience."[29] Companies participating in the Children's Food and Beverage Advertising Initiative (CFBAI), the U.S. food industry voluntary self-regulatory initiative, also pledge to "encourage healthier dietary choices" in advertising in "child-directed media."[30] However, the CFBAI has determined that low-calorie drinks (≤40 kcal per container) that contain added sugar and zero-calorie sweeteners are exempt and can be advertised directly to children.[31]

A major limitation of both voluntary industry-led programs is that they only address advertising directed to children ages 11 and younger. As a result, participating companies are permitted to market all non-alcoholic beverages to children ages 12 and older, including advertising in media that are widely viewed by children together with older audiences.

Beverage companies have also promised to encourage consumers to consider calories when they choose a beverage. In 2015, the American Beverage Association and the three largest beverage companies (Coca-Cola, PepsiCo, and Dr Pepper Snapple Group), working with the Alliance for a Healthier Generation, announced the Balance Calories Initiative with the goal of reducing beverage calories consumed per person by 20% by 2025.[32] Participating companies promised to put calorie information on the front of packages, report total calories per container (for single-serve containers of 20 ounces or less), report nutrition for 12-ounce servings for larger containers, and provide a wider selection of reduced-calorie beverages. Since the Balance Calories Initiative was launched, average beverage calories per person per day have declined from 203.0 in 2014 to 196.9 in 2018, but far more substantial declines will be necessary to meet the 2025 goal.[33]

These companies also promised to devote marketing resources to increase consumer demand for lower-calorie choices. For example, both Coca-Cola[34] and Dr Pepper Snapple Group[35] stated, "Our marketing programs are designed to boost consumer demand for reduced sugar and lower calorie choices, with a focus on flavor, hydration and taste." PepsiCo announced, "We're creating consumer excitement by using big names and big venues to increase awareness and demand for lower calorie choices," noting a promotion for its lower-calorie version of Mtn Dew (Dew Kickstart).[36] PepsiCo also highlighted three versions of Gatorade with different calorie levels (G [full-calorie], G2 [low-calorie], and G Zero [diet]) and reformulations to reduce the calories in Brisk and Lipton iced tea and fruit drinks. Dr Pepper Snapple Group cited additional marketing resources devoted to reduced sugar products, "Our 2017 marketing spend on zero sugar and reduced sugar beverages increased 450%+ since 2015."[37]

Notably absent from the Balance Calories Initiative are any promises by beverage companies to reduce advertising or other forms of marketing for full-sugar varieties of their drinks. Furthermore, the beverage industry has devoted substantial resources to oppose passage and fight for repeal of sugary drink taxes and other policies designed to reduce consumption of sugary drinks through well-funded anti-tax consumer campaigns, sponsorships of health and medical organizations, and lobbying for state laws to preempt local sugary drink tax proposals.[38-40] Their actions suggest that beverage companies

may not be as committed to reducing demand for sugary drinks as their voluntary pledges seem to imply.

Therefore, independent researchers must continue to monitor beverage company advertising of sugary drinks, especially advertising targeted to young people and communities of color. Information about advertising spending on sugary drinks and youth exposure to that advertising is essential to evaluating whether beverage companies are doing all they can to support public health goals to reduce sugary drink consumption.

Measuring progress

In 2019, we reported that beverage companies have made some progress in reducing advertising of sweetened children's fruit drinks and flavored water (see Children's Drink FACTS 2019).[41] However, they must do more to reduce children's consumption of sweetened drinks that can harm their health.

In this report, we document 2018 advertising spending and TV advertising exposure for all other categories of sugary drinks, excluding children's drinks that were previously reported in Children's Drink FACTS. We identify and analyze drinks in the regular soda, sports drink, energy drink, and iced tea categories that contain added sugar, as well as sugar-sweetened fruit drinks and flavored water (excluding children's drinks). We report on diet soda and diet drinks in the same categories (those that do not contain added sugar) for comparison. The analyses of energy drinks examine all energy drinks and shots, including drinks without added sugar, which are included in the total sugary drink numbers.

Utilizing the same methods as previous FACTS reports, we examine differences in the nutrition content and advertising of sugary drinks by category, company, and brand in 2018, and assess changes from 2010 and 2013 when possible.

The report includes the following analyses:

- Nutrition content and ingredients in sugary drinks for package types and sizes listed on brand websites (Dec 2019 – Feb 2020);
- Advertising spending for sugary drinks and diet drinks and exposure to TV advertising by preschoolers (2-5 years), children (6-11 years), and teens (12-17 years) (2018 Nielsen data);
- TV advertising targeted to Black and Hispanic youth, including on Spanish-language TV (2018 data); and
- Changes in advertising spending and exposure from 2010 and 2013 (reported in Sugary Drink FACTS 2014[43]).

This research answers the following questions:

- What is the nutrition content of advertised sugary drinks and energy drinks?
- How has sugary drink advertising spending changed?
- Are preschoolers, children, and teens seeing less TV advertising for these products?
- What companies and brands were responsible for sugary drink advertising?
- How has targeting of sugary drinks to Hispanic and Black youth changed?
- Which companies and brands targeted their advertising to teens and Hispanic and Black youth?

We did not have access to food industry proprietary documents, including privately commissioned market research, media and marketing plans, or other strategic documents. Therefore, we do not attempt to interpret beverage companies' goals or objectives for their marketing practices. Rather, we provide transparent documentation of advertising that promotes sugary drinks to children and teens and changes in advertising expenditures and exposure over time.

Beverage companies have promised to increase marketing of low-calorie beverages, but research has not examined whether they have also reduced their promotion of high-sugar beverages or their focus on targeting teens and communities of color. The findings in this report serve to evaluate beverage companies' commitment to reducing young people's consumption of sugary drinks that can harm their health.

Children's Drink FACTS 2019[42]

This report documented sales and advertising for children's drinks (i.e., drinks marketed as specifically for children to consume) in 2018, including sweetened drinks (fruit drinks and flavored water) and drinks without added sweeteners (100% juice and juice/water blends).

Main findings:

- Sales of children's drinks totaled $2.2 billion in 2018, and sweetened children's drinks represented 62% of the total. Fruit drink sales totaled $1.2 billion.
- Companies spent $20.7 million to advertise sweetened children's drinks in 2018, an 83% decline compared to 2010.
- Most of this decline occurred prior to 2013. From 2013 to 2018, exposure to advertising for children's sugary drinks declined by just 2% for preschoolers and 7% for children.
- Advertising spending on children's drinks without added sweeteners totaled $34.4 million in 2018 and did not change from 2010 to 2018.
- Exposure to TV advertising for sweetened children's drinks by preschoolers (2-5 years) and children (6-11 years) also declined by more than 50% from 2010 to 2018.
- Companies continued to advertise sweetened children's drinks directly to children, and sweetened drinks represented 70% of TV ads for children's drinks viewed by children.
- Preschoolers and children saw more ads for sweetened children's drinks than adults saw, but they were less likely to see ads for children's 100% juice compared to adults.
- Black preschoolers and children saw more than 75% more ads for sweetened children's drinks compared to White preschoolers and children.