

The research is clear. Sugary drinks are the leading single source of empty calories in young people's diets<sup>1</sup> and directly contribute to diet-related diseases, including obesity and diabetes.<sup>2</sup> In 2011, the first Sugary Drink FACTS documented how beverage companies market sugary drinks virtually everywhere young people spend their time – including on TV, the internet, social and mobile media, local retailers, and community events.<sup>3</sup>

In recent years, key actors have taken steps to reduce youth consumption of sugar-sweetened soda and other types of sugary drinks. Local communities have launched public health campaigns to increase awareness of the negative health effects of sugary drinks and reduce their availability in public settings. Policy makers have proposed legislation and regulation to limit consumption and raise awareness of the dangers of minors consuming highly caffeinated energy drinks. Major beverage manufacturers have also pledged to develop and promote healthier beverages through industry-led initiatives.

At the same time, beverage companies continue to extensively market their unhealthy products, including sugar-sweetened soda, fruit drinks, sports drinks, iced tea, and flavored water, as well as energy drinks and shots. Three years after the first Sugary Drink FACTS report – using the same methods – Sugary Drink FACTS 2014 examines the current status of the nutritional content of sugary drinks and their marketing to children and teens, documenting changes over the past three years.

### Sugary drink nutrition and marketing in 2011

In 2011, the Rudd Center for Food Policy and Obesity at Yale University issued the first Sugary Drink FACTS.<sup>4</sup> The report examined the nutritional quality of sugary drinks, advertising through traditional, digital, and social media, and marketing in stores and through community events. The report analyzed over 600 sugary drink products from 14 companies and highlighted marketing to children, teens, and black and Hispanic youth. The results documented the poor nutrition quality of sugary drinks, as well as the extensive array of sophisticated marketing tactics used to enhance their appeal among children and teens (see **Table 1**).

**Table 1.** Sugary Drink FACTS 2011: Key findings

#### Sugary drink nutrition quality

- An 8-ounce serving of a full-calorie fruit drink, soda, and energy drink contained 110 calories and 7 teaspoons of sugar. One 12-ounce can of soda contained approximately 10.5 teaspoons of sugar.
- Full-calorie iced teas, sports drinks, and flavored waters typically contained 3 to 5 teaspoons of sugar per 8-ounce serving.
- Sugary drinks and energy drinks often featured positive nutrition messages, including “all-natural” or “real” ingredient claims on 64% of packages.
- Parents believed that drinks like Capri Sun, Sunny D, Gatorade, and Vitamin Water were healthful products to serve their children, despite the high sugar content in these products.<sup>5</sup> Parents also expressed concerns about artificial sweeteners in drinks for their children, but these ingredients were not highlighted on product packaging.
- High levels of caffeine in energy drinks and shots can be dangerous for children and teens,<sup>6</sup> yet caffeine content often was not disclosed on product packages.

#### Traditional advertising to children and teens

- Sugary drinks were heavily promoted to young people on television and radio.
- From 2008 to 2010, children's and teens' exposure to full-calorie soda ads on TV doubled.
- However, changes varied by company. Children's exposure to TV ads for Coca-Cola Co. and Dr Pepper Snapple Group sugary drinks nearly doubled, while children were exposed to 22% fewer ads for PepsiCo products.
- Two-thirds of radio ads for sugary drinks heard by teens promoted high-sugar sodas.
- Two-thirds of the brands analyzed appeared within prime-time programming, totaling almost 2,000 appearances in 2010. Coca-Cola accounted for three-quarters of brand appearances seen by children and teens.
- Sixty-three percent of all full-calorie soda and energy drink ads on national TV included sponsorship of an athlete, sports league or team, or an event or cause.

#### Digital marketing to children and teens

- MyCokeRewards.com was the most-visited beverage company website with 170,000 unique youth visitors per month (42,000 children and 129,000 teens); Capri Sun's website was the second-most viewed site, attracting 35,000 children and 35,000 teens per month.
- Twenty-one sugary drink brands had YouTube channels in 2010 with more than 229 million views, including 158 million views for the Red Bull channel alone.
- Coca-Cola was the most popular of all brands on Facebook, with more than 30 million fans; Red Bull and Monster ranked 5th and 15th, with more than 20 and 11 million fans, respectively.

#### Marketing to black and Hispanic youth

- Black children and teens saw 80% to 90% more TV ads compared with white youth, including more than twice as many ads for Sprite, Mtn Dew, 5-hour Energy, and Vitamin Water.
- From 2008 to 2010, advertising on Spanish-language TV increased. Hispanic children saw 49% more ads for sugary drinks and energy drinks in 2010 than in 2008 and teens saw 99% more.
- Hispanic preschoolers saw more ads for Coca-Cola Classic, Kool-Aid, 7UP, and Sunny D than did Hispanic older children and teens.

Source: Sugary Drink FACTS (2011)

As reported in 2011, one 8-ounce serving of the typical full-calorie soda, energy drink, or fruit drink contained over 1.6 times the recommended amount of sugar that most children and teens should consume in an entire day.<sup>7,8</sup> The beverage industry spent \$948 million to advertise sugary drinks and energy drinks in all measured media, and spending increased by 5% from 2008 to 2010. Even though children and teens should rarely, if ever, consume the drinks analyzed in the report, advertising for many of these products was targeted directly to youth audiences. Moreover, all forms of marketing commonly used strategies to increase their appeal among young people, including celebrity spokespeople, popular music and extreme sporting event tie-ins, and promotions that rewarded young people for purchasing the products. The report also documented aggressive marketing of energy drinks and shots to youth, much of it targeted directly to teens under age 18.

### Continued concerns about sugary drinks and marketing to youth

Since 2011, there has been some evidence of declining sugary drink consumption, but also further evidence of the harmful effects of consuming sugar-sweetened beverages on young people's health. Heavy consumption of sugary drinks among teens (i.e., individuals consuming more than 500 calories per day) has declined, while heavy consumption by children increased somewhat.<sup>9</sup> An estimated 60% of American girls and 70% of boys aged 2 to 19 continue to consume at least one sugary drink per day,<sup>10</sup> and more than one in three high school students consume at least two per day.<sup>11</sup> Although the Dietary Guidelines recommend limiting discretionary calories (including both added sugars and fat) to no more than 15% of total daily caloric intake,<sup>12</sup> approximately 16% of children's and adolescents' total caloric intake comes from added sugars alone,<sup>13</sup> and sugary drinks are the number one single source of added sugars in young people's diet.<sup>14</sup> Children who drink sugary beverages regularly are at risk of becoming overweight<sup>15</sup> and obese,<sup>16</sup> and weekly consumption in kindergarten more than doubles the odds of developing severe obesity.<sup>17</sup>

Recent research also demonstrates further potentially harmful effects from young people's exposure to sugary drink advertising. A recent study used functional MRI to assess brain responses to Coca-Cola advertising. Youth who watched Coca-Cola advertisements versus non-food control ads showed increased activity in reward and taste regions of the brain, indicating that watching these ads may lead to increased desire for the advertised products at a neural level.<sup>18</sup> Enhanced response to unhealthy food ads also predicts adolescents' weight gain in the following year.<sup>19</sup> Another recent study showed that exposure to food advertising in childhood (under age 13) can create a lasting bias towards these products or brands into adulthood, despite adults' greater capacity to counteract advertising effects.<sup>20</sup> A recent study of adolescents' self-reported exposure to sugary

drink advertising showed higher exposure among blacks and those with less educated parents,<sup>21</sup> populations that also face greater risks for obesity and other diet-related diseases.<sup>22</sup> Further, research has identified the reduction of sugary drink consumption as one of the potentially most impactful means to improve population health, with the greatest health benefits for racial, ethnic, and low-income sub-groups.<sup>23</sup>

Also troubling is evidence that consumption of energy drinks continues to grow, including among youth. Energy drink sales are forecasted to increase from \$8.1 billion in 2011 to \$13.5 billion in 2015.<sup>24</sup> A recent study showed that nearly 15% of adolescents (grades 6-12) consumed energy drinks at least once a week,<sup>25</sup> and the proportion of caffeine intake by children and teens from coffee and energy drinks has increased.<sup>26</sup> The high levels of caffeine and other stimulants in energy drinks raise significant concerns about their potentially dangerous effects when consumed by youth.<sup>27,28</sup> Consumption by young people has resulted in life-threatening arrhythmias and increased blood pressure,<sup>29</sup> and emergency room visits associated with energy drink consumption doubled from 2007 to 2011.<sup>30</sup> The American Academy of Pediatrics concluded that because of these potential dangers, highly caffeinated energy drinks "have no place in the diet of children and adolescents."<sup>31</sup> U.S. Senators<sup>32</sup> and state attorneys general<sup>33</sup> have also raised concerns about the health risks of energy drink consumption by minors and marketing practices that target vulnerable youth.

### Policy and advocacy actions to reduce sugary drink consumption

To address concerns about marketing and consumption of sugary drinks, policy makers have taken action. Public health departments have launched campaigns to educate consumers about the health impact of consuming sugary drinks,<sup>34</sup> including New York City's Pour on the Pounds initiative<sup>35</sup> and Philadelphia's Department of Public Health Food Fit Philly.<sup>36</sup> Procurement policies to limit sales of sugary drinks in government-owned facilities and provide healthier beverage choices in vending machines have been enacted around the country as a strategy to improve public health and change social norms regarding beverage choices.<sup>37,38</sup> Sugary drink taxes have been proposed across the country, and Berkeley, California recently passed the first tax in the United States, adding a penny per ounce tax on all sugary drinks sales. Proponents believe that taxes will improve public health by increasing the cost to make sugary drinks less attractive to youth, reducing consumption, preventing obesity and other diet-related diseases,<sup>39,40</sup> and raising revenues to fund health care coverage and obesity prevention programs.<sup>41</sup> Similarly, New York City sought to limit sales of large-sized sugary drinks (more than 16 ounces) as another strategy to reduce consumption.<sup>42,43</sup>

To reduce consumption of sugary drinks specifically by children and teens, the Healthy Hunger-Free Kids

Act of 2010 required that the United States Department of Agriculture (USDA) set standards for all foods and beverages sold in schools. In response, the USDA released the Smart Snacks Standards, which limits the sales of beverages in schools to plain water, fat free and low-fat milk, 100% (diluted or undiluted) fruit and vegetable juice, and flavored and/or carbonated drinks with less than 5 calories per 8 ounces or up to 10 calories per 20 ounces.<sup>44, 45</sup> High schools may also sell calorie-free flavored water and other beverages with up to 40 calories per 8 ounces or up to 60 calories per 12 ounces.<sup>46</sup> In 2014, the USDA proposed that all foods and beverages marketed to children in schools must also meet the nutrition standards for those sold in schools.<sup>47</sup>

Public health advocates and scientists have also taken steps to raise awareness of the harmful effects of consuming sugary drinks. Healthy Eating Research (HER), a program of the Robert Wood Johnson Foundation, convened a national panel of experts to recommend nutrition standards for healthier beverages for children and adolescents.<sup>48</sup> The Center for Science in the Public Interest (CSPI) asked the U.S. Food and Drug Administration (FDA) in 2013 to determine a “safe level of added sugars for beverages”<sup>49</sup> and hosted the National Soda Summit in 2014 to discuss strategies to reduce soda consumption and related diseases.<sup>50</sup> The group also called on the Surgeon General to issue a report on the health impacts of sugary drinks, with a call to action to spur national efforts to reduce consumption.<sup>51</sup> Public health leaders have also called for continued research on the health impact of sugary drinks, warning labels on sugary drink packaging, and removal of sugary drinks from restaurant kids’ meals.

## Beverage industry response

In the Rudd Center’s 2011 Sugary Drink FACTS report, we also recommended several industry actions to improve sugary drink marketing to youth (see **Table 2**).

**Table 2.** Sugary Drink FACTS 2011: Recommendations

- Instead of sugary drinks, develop and market child-friendly products with less added sugar and no artificial sweeteners.
- To ensure that consumers know what’s inside the drinks they buy, make nutrition and ingredient information easily accessible, including disclosing caffeine content online and on product packages, and indicating sugar content and artificial sweeteners on the front of packages.
- Discontinue the potentially misleading practice of highlighting nutrition-related claims on the front of packages, without similarly disclosing information about nutrients to limit (including sugar) and other less desirable ingredients.
- Remove all sugary drinks, including sports drinks, from sale in elementary, middle, and high schools, as well as other locations visited disproportionately more often by children and teens.
- Stop targeting teens with marketing for sugary drinks and other caffeinated products.

Recent industry initiatives position beverage companies as partners in solving the obesity crisis.<sup>52</sup> For example, in 2013

Coca-Cola placed a full-page article in the New York Times with the headline “Beating obesity will take all of us.”<sup>53</sup> The company committed to taking action globally, including offering “low or no calorie beverage options in every market,” providing “transparent nutrition information, featuring calories on front of all packages,” and marketing responsibly, “including no advertising to children under 12 anywhere in the world (including TV, radio and print, internet and mobile).” The American Beverage Association (ABA) notes a number of positive changes in recent years.<sup>54</sup> For example, all major beverage companies now offer smaller 7.5- or 8-ounce size cans to reduce portion sizes, and they have committed to be “clear on calories,” adding calorie labels to the front of packages sized 20 ounces or smaller.<sup>55</sup> The ABA launched a Calories Count vending program in 2013 in Chicago and San Antonio to remind consumers (via a large label on vending machines and selection buttons with calorie information) that “Calories COUNT: Check then choose.”<sup>56</sup> In September 2014, the ABA announced a nationwide pledge, in partnership with the William J. Clinton Foundation and its Alliance for a Healthier Generation, that by 2025, the soda industry will reduce beverage calories consumed per person nationally by 20%.<sup>57, 58</sup> They pledged to accomplish this objective by offering more low- and no-calorie drinks and smaller portions, and using promotional tactics to educate and encourage consumers to reduce their calorie consumption.

In support of these promises, major soda brands have introduced new lower-sugar products with fewer calories (i.e. mid-calorie sodas).<sup>59</sup> For example, Dr Pepper Snapple Group introduced its “Ten” line of sodas in 2012, including Dr Pepper Ten, 7UP Ten, and Sunkist Ten, which contain a blend of caloric and non-caloric sweeteners.<sup>60</sup> PepsiCo introduced Pepsi NEXT in 2012, with approximately half the calories of regular Pepsi<sup>61</sup> and sweetened with a blend of sugar, stevia, and sucralose.<sup>62</sup> In 2014, Coca-Cola introduced Coca-Cola Life, which contains sugar and stevia and one-third less calories than regular Coke.<sup>63</sup> Beverage industry analysts question whether these products will succeed given consumers’ taste preferences.<sup>64</sup> Further, it is not clear how much marketing support companies have dedicated to these products or whether they intend to market them to youth in place of full-calorie sodas.

The ABA also has promised to improve beverage marketing to youth. Prior to implementation of the USDA guidelines for beverages sold in schools, the ABA together with the Alliance for a Healthier Generation established nutrition standards for beverages sold in elementary, middle and high schools.<sup>65, 66</sup> ABA companies have committed to only advertise juice, water, and milk-based drinks to children under the age of 12.<sup>67</sup> Coca-Cola Co., PepsiCo, Kraft Foods, and Campbell Soup Company belong to the Children’s Food and Beverage Advertising Initiative (CFBAI) and pledge to market only healthier dietary choices in child-directed media.<sup>68</sup> In 2014, Coca-Cola Co. and PepsiCo pledged that they would not market any beverages to children under 12,<sup>69, 70</sup> while Kraft Foods has pledged to only market Capri Sun Roarin’ Waters,

Capri Sun 100% juice, and Kool-Aid Singles drink mix to children.<sup>71</sup> Further, ABA companies have donated money to improve neighborhoods, schools, and communities they serve and participate in anti-obesity initiatives, including promotion of healthy lifestyles through efforts such as building playgrounds or providing access to safe play-spaces.<sup>72</sup> They have also promised to support First Lady Michelle Obama and the Partnership for a Healthier America's Drink Up campaign to increase water consumption.<sup>73</sup>

## Measuring progress

At the same time, beverage companies continue to extensively market their unhealthy products. In response to investor concerns about PepsiCo's profits and declining market share following a period of investment in new healthier products, the company announced in 2012 that it would spend another \$500 to \$600 million in marketing, including on its core brands.<sup>74</sup> In 2014, Coca-Cola Company followed with a pledge to invest \$1 billion in "media spending and brand-building initiatives" to support declining soft drink sales.<sup>75</sup>

Independent evaluation of industry's promises to the public health community versus promises to their shareholders is necessary. The purpose of this report is to quantify changes in the nutrition content and marketing of sugary drinks to children and teens over the past three years, highlight companies' progress, and identify opportunities for further improvement.

As in 2011, we examined sugar-sweetened soda, fruit drinks, sports drinks, energy drinks, flavored waters, and iced teas, as well as diet children's drinks and diet energy drinks and shots. We have expanded our nutrition content analyses to include brands with the highest U.S. sales in 2013: 106 brands from 47 companies, totaling more than 900 different products. Product nutrition was obtained in March through

June 2014. Marketing analyses examine brands from 23 different companies that purchased advertising in measured media in 2013 and/or promoted their products on the internet and in social media. These analyses primarily evaluate data through 2013.

Utilizing the same methods as the first Sugary Drink FACTS report, we examine differences by drink category, company, and brand, and changes in the past three years when possible. Analyses include:

- Sales of sugary drinks, energy drinks, and non-sugar-sweetened drinks;
- Nutrition content of sugary drinks, including comparisons between children's and other drinks;
- Marketing messages on product packages;
- Advertising spending and TV advertising exposure, including advertising targeted to children and teens;
- Brand appearances on prime-time TV programming;
- Child and teen visits to beverage company websites;
- Advertising on third-party websites, including children's sites, youth websites, Facebook, and YouTube;
- Social media marketing on Facebook, Twitter, YouTube, Vine, and Instagram;
- Smartphone apps offered by beverage companies; and
- Marketing to black and Hispanic youth, including Spanish- and English-language TV advertising and beverage company websites.

The findings in this report serve to evaluate beverage companies' commitment to reducing consumption of unhealthy beverages that can harm young people's health and improving the marketing environment that surrounds today's children and teens.