Since the Children's Food and Beverage
Advertising Initiative (CFBAI) food industry selfregulatory program was introduced in 2007,
research has documented some improvements
in food advertising to children. However, public
health experts have also identified limitations of
industry self-regulation and the need for further
improvements. In this report, we assess food
advertising to children in 2016 and quantify
opportunities for continued improvement in industry
self-regulation of food advertising to children.

Unhealthy food marketing to children remains a major public health concern. In 2006, the Institute of Medicine (IOM) published a comprehensive review of the relevant research and concluded that food and beverage marketing to children contributes to "an environment that puts their health at risk." 1 The IOM committee called on food and beverage companies to reassess their marketing practices and instead "develop and promote food, beverages, and meals that support healthful diets for children and youth." In response to this call to action, the Council of Better Business Bureaus (CBBB) launched the Children's Food and Beverage Advertising Initiative (CFBAI) industry self-regulatory program in 2006 with the goal to "shift the mix of foods advertised to children under 12 to encourage healthier dietary choices." Initially, 11 participating companies pledged to advertise only healthy dietary choices in childdirected advertising, implementing their pledges by the end of 2007. As of January 2017, 18 of the largest food and beverage companies belonged to the Initiative. In 2016, the CBBB in partnership with the National Confectioners Association launched another self-regulatory initiative, the Children's Confection Advertising Initiative (CCAI), with eight participating candy companies pledging not to advertise directly to children under 12.3

Since the launch of the CFBAI, researchers have conducted independent evaluations of the impact of food industry selfregulation and found some positive developments. Food-related TV advertising viewed by children (2-11 years) has begun to decline. Following an 8% increase in children's total exposure to food, beverage, and restaurant (i.e., food-related) advertising from 2007 to 2013, the number of food-related TV ads viewed by children has consistently declined since 2013.^{4,5} In 2016, children viewed 7% fewer of these ads compared to 2007. In contrast to the overall trends, ads for healthier product categories have increased substantially. For example, TV ads for fruits and vegetables viewed by children under 12 have increased 151% since 2007, although the number of ads viewed remained low (approximately 1% of all food ads viewed in 2016). There has also been a modest improvement in the overall nutritional quality of advertised food and beverages; in 2009, 86% of food-related TV ads viewed by children (2-11 years) were high in sugar, saturated fat and/or sodium compared to 94% of ads viewed in 2003.6 In addition, the largest food company-sponsored websites aimed

at children have been discontinued, including Millsberry.com, Postopia.com, and McWorld.com. In 2009, on average 280,000 children visited Millsberry.com and spent more than sixty minutes on the site per month.⁷

Despite these improvements, the continued magnitude and poor nutritional quality of the majority of food and beverage advertising remain significant contributors to the unhealthy food environment that surrounds children. In 2016, children (2-11 years) viewed on average 11.3 food-related ads on TV every day, and teens (12-17 years) viewed 11.8 ads-per-day (including advertising on national and spot TV).8 Primarily unhealthy product categories, including fast food and other restaurants, cereal, candy, snacks, and carbonated and other sugary beverages, represented nearly three-quarters of TV ads viewed by children and teens (72% and 73%, respectively). In contrast, generally healthier food and beverage categories, including yogurt, other dairy, bottled water, and fruits and vegetables, represented just 9% of food-related ads viewed by both age groups. In 2009, food companies spent \$1.8 billion in marketing aimed at children and adolescents, including \$1 million in marketing to children under age 12, but just \$7 million (0.4% of the total) was spent marketing fruits and vegetables.9 A comprehensive report by the Federal Trade Commission (FTC) in 2012 highlighted improvements in the nutritional quality of products advertised to children through reformulation of existing products and replacement of products that are no longer advertised to children or not available on the market.¹⁰ However, reported improvements were minimal and unlikely to contribute to noticeable improvements in children's diets in the context of US Dietary Guidelines.11

Recommendations for improvements in CFBAI voluntary pledges

Research conducted since 2007 has also identified numerous limitations in industry-led voluntary actions that further limit the potential effectiveness of industry self-regulatory initiatives. Citing these findings, a report by the White House Task Force on Childhood Obesity in 2010¹² and a follow-up report by the IOM in 2012¹³ expressed concerns about this lack of substantial progress in improving food marketing to children and recommended further improvements in industry self-regulatory efforts. In addition, an expert panel convened by Healthy Eating Research (HER), a national program of the Robert Wood Johnson Foundation, specified a comprehensive set of definitions to identify food marketing practices directed to children that should be covered by CFBAI pledges.¹⁴

Table 1 summarizes these expert recommendations for improving food marketing to young people in general, as well as specific recommendations for industry self-regulation. Recommendations regarding industry self-regulation focus primarily on four areas: 1) improving the nutrition standards used to identify healthier dietary choices; 2) expanding the ages of children covered by pledges; 3) expanding the types of marketing and definitions of child-directed advertising covered by pledges; and 4) expanding participation in voluntary programs.

Table 1. Recommendations for improvements in food marketing to children and industry self-regulatory pledges

White House Task Force (2010) ¹⁵	Recommended improvements				
	Improve nutrition standards	Expand child ages covered	Expand types/ definitions of marketing covered	Expand voluntary participation	
Recommendation 2.5: The food and beverage industry should extend its self-regulatory program to cover all forms of marketing to children, and food retailers should avoid in-store marketing that promotes unhealthy products to children.			V		
Recommendation 2.6: All media and entertainment companies should limit the licensing of their popular characters to food and beverage products that are healthy and consistent with science-based standards.	~		~	V	
Recommendation 2.7: The food and beverage industry and the media and entertainment industry should jointly adopt meaningful, uniform nutrition standards for marketing food and beverages to children, as well as a uniform standard for what constitutes marketing to children.	V		V	V	
Recommendation 2.9: If voluntary efforts to limit the marketing of less healthy foods and beverages to children do not yield substantial results, the U.S. Federal Communications Commission (FCC) should consider revisiting and modernizing rules on commercial time during children's programming.				V	
	Recommended improvements				
Institute of Medicine (IOM) (2012) ¹⁶	Improve nutrition standards	Expand child ages covered	Expand types/ definitions of marketing covered	Expand voluntary participation	
Strategy 3-2: Implement common standards for marketing foods and beverages to children and adolescents.					
The food, beverage, restaurant, and media industries should take broad, common and urgent voluntary action to make substantial improvements in their marketing aimed directly at children aged 2-17.		V		V	
All foods and beverages marketed to this age group should support a diet that accords with the Dietary Guidelines for Americans.	V				
Children and adolescents should be encouraged to avoid calories from foods that they generally overconsume (e.g., products high in sugar, fat, and sodium) and to replace them with foods they generally underconsume (e.g., fruits, vegetables, and whole grains).	V				
The standards set for foods and beverages marketed to children and adolescents should be widely publicized and easily available to parents and other consumers.	V				
They should cover foods and beverages marketed to children and adolescents ages 2-17 and should apply to a broad range of marketing and advertising practices, including digital marketing and the use of licensed characters and toy premiums.		V	~		
If such marketing standards have not been adopted within 2 years by a substantial majority of food, beverage, restaurant, and media companies that market foods and beverages to children and adolescents, policy makers at the local, state, and federal levels					
should consider setting mandatory nutritional standards for marketing to this age group to ensure that such standards are implemented.				V	
Potential actions include:					
All food and beverage companies, including chain and quick-service restaurants, adopting and implementing voluntary nutrition standards for foods and beverages marketed to children and adolescents;				V	
The Children's Food and Beverage Advertising Initiative and National Restaurant Association Initiative, as major self-regulatory marketing efforts, adopting common marketing standards for all member companies, and actively recruiting additional members to increase the impact of improved food marketing to children and			.,	.,	
adolescents; Media companies adopting nutrition standards for all foods they market to young people; and	·		•	<i>V</i>	
The Federal Trade Commission regularly tracking the marketing standards adopted by food and beverage companies, restaurants, and media companies.	•			<i>V</i>	

Table 1. Recommendations for improvements in food marketing to children and industry self-regulatory pledges (continued)

Healthy Eating Research (HER) Recommendations for Responsible Food Marketing to children (2015) ¹⁷	Recommended improvements				
	Improve nutrition standards	Expand child ages covered	Expand types/ definitions of marketing covered	Expand voluntary participation	
The child audience is defined as birth to 14 years of age.		V			
Media and venues are considered child-directed if children constitute 25 percent or more of the audience or if an assessment of the marketing strategies, techniques, characteristics, and venue suggests that children are the target demographic for the advertising or marketing message.			V		
Any marketing that is especially appealing to kids is child-directed.			V		
Brands marketed to children contain only products that meet nutrition criteria.	~				

Nutrition standards for healthier dietary choices

The initial criteria for participation in the CFBAI allowed companies to establish their own nutrition standards for food and beverages that could be advertised to children. Although companies were required to utilize science-based standards, 18 different companies with products in the same categories used different definitions of "healthy." This practice raised numerous concerns. For example, one study found that in 2009, 96% to 97% of ads viewed by children on childdirected TV programming were high in sugar, saturated fat, and/or sodium.19 Furthermore, the nutritional quality of products advertised on child-directed TV was worse than products advertised on other TV programming not covered by company pledges, and products advertised by CFBAI companies on children's TV were worse than products advertised by non-participating companies. Another study found that in 2009 less than 1% of food ads appearing on children's TV were for nutritious products that children should be encouraged to consume, such as fruit, vegetables and whole grains.20

In 2011, the CFBAI addressed this critique by introducing new category-specific uniform nutrition criteria to be fully implemented by the end of 2013.21 These criteria included specific limits on calories, saturated fat, sodium, and total sugar for 10 different categories of food and drink products and were consistent across all participating companies. In addition to thresholds for nutrients to limit, the criteria also required that eligible products include a specified amount of nutrient components to encourage, including fruit, vegetables, dairy, and/or whole grain, or fortification. Although changes in the nutritional quality of products advertised to children since the new criteria were fully implemented have not been evaluated comprehensively, an evaluation of food ads appearing on one children's TV channel (Nickelodeon) in 2015 found a small improvement: 65% of products featured in food ads in 2015 were unhealthy compared to 69% in 2010.22 However, the same study also found that the total number of ads for unhealthy products increased during this time. Furthermore, the list of products approved for advertising

to children by CFBAI companies as of July 2017 included products with calories consisting primarily of added sugars, such as Popsicles, Fruit Roll-Ups and Fruit Gushers, and Kool-Aid, as well as fried chicken nuggets and french fries from fast-food restaurants, and cereals consisting of approximately one-third added sugar.²³

Another concern that has been raised about the CFBAI nutrition standards is that they only apply to products shown in the advertisements. As a result, children's food and drink brands may specify a subset of products that meet the nutrition standards to be featured in child-directed advertising. Even if the majority of products offered by the brand do not meet the nutrition standards, the brand can advertise directly to children either by only showing products that meet the nutrition standards, or by showing a brand logo without any products (as in banner ads on the internet). Some research has documented the extent of this limitation. In 2013, McDonald's and Burger King specified just 12 kids' meals (i.e., main dish, side, and drink) that met CFBAI nutrition standards and could be featured in their ads, out of 328 possible combinations of kids' meals offered at their restaurants.²⁴ Similarly, in 2013 Kraft Foods offered five varieties of Lunchables that met nutrition standards and could be advertised to children and 37 additional varieties that did not meet the standards.²⁵ A small image of the approved products appeared on the majority of advertisements for the brand, while banner advertising on third-party websites often included a brand logo without a product image. Furthermore, the products that could be advertised received just 15% of the shelf space allocated to Lunchables in supermarkets, and they were significantly less likely to receive prime shelf placement at children's eye level. These findings support the HER expert panel recommendation that "brands marketed to children contain only products that meet nutrition criteria."

Ages of children covered

Another limitation of the CFBAI identified by the IOM and the HER expert panel is that company pledges to market only products that meet nutrition criteria to children apply only to children up to age 11. The IOM recommended that all

voluntary industry actions should address children ages 2 to 17,26 while the HER expert panel specifically recommended that CFBAI should expand its protections to include children ages 12 to 14.27 The HER panel cited several reasons that young teens should be covered. At this age, children may be even more susceptible to influence from unhealthy food marketing due to their unique stage of cognitive development; their greater exposure to forms of marketing that disguise their persuasive intent, such as product placements, social media, and mobile marketing; and their greater independence and higher levels of media consumption.²⁸ Furthermore, following CFBAI implementation, food and beverage companies substantially increased advertising to teens 12 to 17 years old. For example, from 2007 to 2012 teens' exposure to foodrelated TV advertising increased by 25%, while exposure for children (ages 2-11) increased 8%.29

Protections for very young children (ages 2-5) in current CFBAI pledges also raise concerns. Although not required by the Initiative, most participating companies have pledged that they will not direct any advertising to children under 6 years old, even for products that meet CFBAI nutrition criteria.30 These pledges address concerns identified by a large body of research demonstrating that young children (up to age 7 or 8) do not possess the cognitive ability to understand the persuasive intent of advertising. 31,32 As a result, legal scholars have argued that all forms of advertising to very young children are inherently unfair and potentially misleading. 33,34 Yet in 2009, young children 2 to 5 years old viewed just 14% fewer food-related ads on TV compared with children 6 to 11 years old, 35 and from 2009 to 2011, the number of ads viewed by young children increased by 9% to 11.9 food-related ads viewed per day by children under age 6.36

Definitions of child-directed advertising

Additional limitations of CFBAI company pledges noted by the HER expert panel,37 the IOM,38 and the White House Taskforce³⁹ relate to how the Initiative defines "child-directed advertising" and forms of marketing that are not included in that definition. Currently, the Initiative covers "advertising" (defined by the American Marketing Association as the placement of persuasive messages purchased in mass media⁴⁰) and some additional forms of marketing, such as the use of licensed characters and marketing in elementary schools.41 In addition, advertising directed to children is defined as advertising in media where children under age 12 comprise 35% or more of the audience. Specifically, the HER expert panel recommended a broader definition of childdirected marketing that includes 1) media and other venues where children constitute 25% or more of the audience; 2) all marketing strategies, techniques, characteristics, and venues where children appear to be the target demographic for the advertising or marketing message; and 3) any marketing that is especially appealing to kids.

Previous research has documented limitations of the current CFBAI definition of child-directed advertising. Less than one-

half of food-related TV ads seen by children ages 2 to 5 and 6 to 11 appeared during programming that met these criteria in 2009 (46% and 44% of ads viewed, respectively). 42 Much of the advertising that children see appears on programming that is viewed by large audiences, including both children and adults. However, the CFBAI definition does not include programming that is clearly child-directed, but also viewed by adults, such as Disney family movies and animated holiday specials, nor does it include programming that is viewed primarily by children and young teens, such as on Nick-at-Nite and Adult Swim "tween" networks. 43,44 Similarly, an analysis of the most popular food company advergame websites (i.e., online foodbranded games) in 2009 found that not one would qualify as child-directed according to the CFBAI criteria that 35% or more of visitors are children under age 12.45 Furthermore, just because advertising is not exclusively aimed at children does not lessen its influence on children. As has been demonstrated by research on adult products, such as beer and cigarettes, advertising that uses techniques that appeal to children (e.g., Budweiser animated frogs and Joe Camel) affects children's attitudes and preferences for those products. 46-49 As a result, the HER expert committee recommended that CFBAI requirements also apply to advertisements with techniques that appeal to children, such as animated and/or anthropomorphic spokescharacters, regardless of where they appear. 50

The HER expert panel also recommended that other kinds of marketing should be considered child-directed and covered by CFBAI company pledges, including sponsorships of children's sports programming or other activities; cause marketing and other branded forms of philanthropy; mobile game apps for branded food and drinks; merchandising of food brand names and logos on toys and children's clothing; and marketing in theme parks, recreation centers, and other places where children gather, including all forms of marketing in schools.51 Notably, food company expenditures on product placements, athletic and event sponsorships, cross-promotion licenses, celebrity fees, and philanthropic marketing targeted to youth increased by 8% from 2006 to 2009, whereas child-targeted advertising in traditional media declined.52 Furthermore, youth-targeted marketing in digital media, including social media and mobile marketing, increased by 51% from 2006 to 2009, indicating that companies are focusing more of their youth-directed marketing to these newer media that cannot be assessed using traditional audience measurement techniques.

Voluntary participation

A final limitation of the CFBAI and other industry self-regulatory initiatives is that participation is voluntary. The number of companies participating in the CFBAI has increased from 11 initially to 18 in 2017, and now includes the majority of the largest U.S. food and beverage advertisers. The CCAI initiative includes an additional eight confectionary companies. However, evaluations conducted in 2009 showed that less than three-quarters of food-related advertisements

on children's TV programming were from participating companies,53 while participating companies were responsible for 61% and 62% of all food-related TV ads seen by children ages 2 to 5 and 6 to 11 on all types of programming.54 Notable non-participating companies include all fast-food and casual restaurants, except McDonald's and Burger King, and frequent advertisers on children's TV programming, including Chuck E. Cheese's, Topps (manufacturer of Ring Pops and other candy), and Perfetti van Melle (manufacturer of Airheads candy). In addition to expanding the number of food, beverage, and restaurant companies that belong to self-regulatory initiatives, the IOM55 and White House Task Force on Childhood Obesity⁵⁶ recommended that media and entertainment companies should also set nutrition standards for products that can be advertised to children in their media properties.

This report

In this FACTS report, we assess food advertising to children in 2016, measure improvements and other changes since the CFBAI was implemented in 2007, and quantify progress and the continued impact of limitations in industry voluntary pledges to improve food advertising to children. This report focuses on a) measuring the extent and exposure of food, beverage and restaurant advertising viewed by children, using syndicated market research data, and b) assessing the nutritional quality of participating companies' products and brands featured in advertising viewed by children. When data were available, we compare 2016 results to 2007 and two intermediary years (2010 and 2013).

As the purpose of this report is to assess industry selfregulation on its stated goal to advertise only healthier dietary choices in child-directed advertising, we do not address other forms of marketing to children, such as in-store promotions, product packaging, in-school marketing, and sponsorships, not currently covered by the CFBAI. However, we do include advertising by food, beverage, and restaurant companies that do not participate in the CFBAI, as well as CFBAI participants, to identify opportunities to broaden participation in the Initiative. Similarly, we evaluate the extent of children's exposure to advertising that may not specifically target children, but that children nevertheless view frequently, including ads on all types of TV programming, children's visits to food company websites, banner advertising on third-party websites, and social media marketing. Furthermore, we define children as young people 2 to 14 years old, as recommended by the HER expert panel, and compare results for preschoolers (2-5 years), children (6-11 years), and young teens (12-14 years).

Specifically, this report quantifies:

- Advertising spending in all media, including TV advertising, in 2007, 2010, 2013, and 2016 (Nielsen data).
- TV advertising exposure by age group, including exposure to ads on children's TV programming, in 2007, 2010, 2013, and 2016 (Nielsen data).
- Advertising on third-party websites in 2016, including kids' websites and social media sites (comScore data).
- Child and teen visits to food, beverage, and restaurant company websites in 2016 (comScore data).
- Popularity and activity on food company-sponsored social media pages in 2016, including Facebook, Twitter, Instagram, and YouTube (Unmetric data).

In addition, we assess the nutritional quality of CFBAI companies' products and brands according to three nutrition standards: the CFBAI category-specific uniform nutrition criteria,⁵⁷ Smart Snacks nutrition standards for products that can be sold to children in schools,⁵⁸ and NPI score of overall nutrition content used to identify products that can be advertised to children in the United Kingdom.⁵⁹ Nutrition data were collected from company websites (if available) and other sources as of May 2017.

We analyzed the nutritional quality of three types of products:

- Products that CFBAI companies included on their lists of products than can be featured in child-directed advertising as of January 2017 (i.e., listed products);
- Other available products offered by the same brands (i.e., non-listed products); and
- Products offered by other CFBAI company brands that ranked among the top-50 brands in amount of TV advertising viewed by children on all types of TV programming.

The findings in this report serve to evaluate progress and identify further opportunities to improve industry self-regulatory efforts to reduce unhealthy food advertising to children in a way that encourages meaningful improvements in children's diets and their long-term health. The food industry should be applauded for any measurable improvements in food advertising directed to children. However, the food and media industries should also be held accountable for lack of progress in addressing concerns about the harmful effects of food and beverage marketing on children's diets and health that have been raised by public health experts.