

Branded Marketing and Media Campaigns to Support a Healthy Diet in the United States, 1990-2016

Insights to Inform the Partnership for a Healthier America's Fruits & Veggies (FNV) Campaign



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Table of Contents

Acknowledgments	2
Acronyms and Abbreviations	3
Figures and Tables	4
Executive Summary	5
Introduction	9
Background on marketing and media campaigns	13
Behavioral theories and conceptual frameworks	16
Methods	18
Results	20
Campaigns to promote fruit and vegetable sales and consumption	20
Campaign to promote whole-grain sales and consumption	27
Campaign to promote nut and legume sales and consumption	28
Campaigns to promote fluid milk sales and consumption	29
Campaign to promote water sales and consumption	33
Campaign to promote environmental sustainability and reduce meat consumption	34
Discussion	52
Future Research	58
Conclusions	59
Glossary of Terms	60
References	62



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Acronyms and Abbreviations

AFFI	American Frozen Food Institute
CDC	Centers for Disease Control and Prevention
CMI	Can Manufacturers Institute
DGA	Dietary Guidelines for Americans
FNV	Fruits & Veggies Campaign
HFSS	High-fat, -sugar and -sodium
IMC	Integrated marketing communications
LEAD	Locate, evaluate, and assemble evidence to inform decisions
MilkPEP	Milk Processor Education Program
NCD	Non-communicable diseases
NCI	National Cancer Institute
PBH	Produce for Better Health Foundation
PHA	Partnership for a Healthier America
RWJF	Robert Wood Johnson Foundation
SNAP-Ed	Supplemental Nutrition Assistance Program Education
SSB	Sugar-sweetened beverages
TV	Television
US	United States
USDA	United States Department of Agriculture
WGC	Whole Grains Council



Figures and Tables

- Figure 1** Timeline of U.S. marketing and media campaigns to promote foods and beverages to support a healthy diet, 1990 to 2016
- Figure 2** Integrated marketing communications
- Figure 3** Definitions used for target marketing of different generations
- Figure 4** IMC strategies used by Bolthouse Farms to promote the *Eat 'Em Like Junk Food* Baby Carrots Campaign in 2010
- Figure 5** Values ladder model that connects the attributes and benefits of canned foods to mothers' emotions used in the *Cans Get You Cooking* Campaign
- ES Table** Summary of health-branding framework factors used by the diet-related marketing and media campaigns
- Table 1** Strategies used by companies and organizations to promote a brand
- Table 2** Behavioral theories, frameworks and models used to inform the design of health promotion, marketing and media campaigns
- Table 3** Methodologic approach to acquire, organize and analyze the evidence for the U.S. marketing and media campaigns
- Table 4** National U.S. marketing and media campaigns used to promote healthy food and beverage groups to Americans
- Table 5** Variables of interest for the national, diet-related marketing and media campaigns related to brand development, marketing execution, and monitoring and evaluation
- Table 6** Demographic profile of key informants interviewed for the selected U.S. diet-related marketing and media campaigns
- Table 7** Key informant interview questions
- Table 8** Key informant quotes by health-branding theme



Executive Summary

In 2014, more than two thirds (70.7 percent) of American adults were overweight or obese and about one third (32.4 percent) of American children and adolescents, ages 2-19 years, were overweight or obese. An unhealthy diet is linked to obesity and several non-communicable diseases (NCD) including cardiovascular diseases, type 2 diabetes, and certain types of cancer that cause premature disability and death.

The promotion of a healthy diet is an essential component of a multi-faceted, population-based strategy to encourage all Americans to achieve a healthy weight. A healthy diet is rich in whole grains, fruits and vegetables, and lean meats or plant-based protein. Since the 1980s, the United States (U.S.) government has encouraged the Dietary Guidelines for Americans (DGA) to help all people reduce their risk of obesity and diet-related NCD. The DGA 2015-2020 recommend that Americans consume at least 4.5 cup equivalents of fruits and non-starchy vegetables each day for a 2,000-calorie diet. Yet only eight percent of American adults and children eat the recommended daily target for fruits and only four percent of American adults and children eat the recommended daily target for vegetables. The DGA 2015-2020 also recommend that Americans consume a diet rich in whole grains, lean meats and plant-based protein (i.e., beans and legumes) and limit their consumption of processed high-fat, -sugar and -sodium (HFSS) food and beverage products.

The U.S. government, private-sector businesses and non-governmental organizations have used marketing and media campaigns over the past 25 years to encourage people to consume a healthy diet consistent with DGA to reduce their risk of obesity and diet-related NCD. Insights for many diet-related marketing and media campaigns are not available in the published peer-reviewed literature or through systematic reviews. Thus, it is difficult to provide promising strategies that public health practitioners can use to promote a healthy diet.

This report describes the evidence available for 12 national diet-related marketing and media campaigns launched in the U.S. between 1990 and 2016 to promote the sales and consumption of nutrient-dense food groups (e.g., fruits and vegetables, whole grains, and nuts/legumes); healthy beverages (e.g., milk and water); and to eat less meat to reduce saturated fat intake. The campaigns reviewed in this report include: *Five a Day for Better Health, Fruits & Veggies—More Matters, Eat 'Em Like Junk Food, Cans Get You Cooking, Frozen. How Fresh Stays Fresh, Just Ask for Whole Grains, Energy for the Good Life, The Perfectly Powerful Peanut, Got Milk? and Milk Mustache, Milk Life, 1% or Less, Drink Up and Meatless Mondays.*

We used a health-branding framework to examine the brand development, marketing execution, and monitoring and evaluation metrics and results for selected campaigns to inform the expansion, scaling up, and sustainability of the Partnership for a Healthier America's (PHA) *Fruits & Veggies* (FNV) Campaign as well as other future healthy eating campaigns. The FNV Campaign was launched in 2015 to promote the sales and consumption of fruits and vegetables among Generation Z teens and Millennial moms in Norfolk/Hampton Roads, Virginia and Fresno, California. In 2016, the PHA announced the expansion of the FNV Campaign to cities across 13 U.S. states. During that same year, the U.S. Department of Agriculture (USDA) identified the FNV Campaign as an example of an evidence-based social marketing program and permitted state Cooperative Extension staff to apply for Supplemental Nutrition Assistance Program Education (SNAP-Ed) funding to implement this campaign to reach low-income audiences. The findings in this report may can inform the FNV Campaign as it expands to other U.S. cities and states. The results may also be used to inform state SNAP-Ed programs that choose to adopt the FNV Campaign to promote fruits and vegetables among low-income audiences.

The study described in this report used a three-step, mixed-methods research process to identify relevant evidence. The first step undertook a scoping review of branded, diet-related marketing or media campaigns launched in two or more states or nationally in the U.S. between 1990 and 2016. The second step undertook a comprehensive review of the evidence for these campaigns.



The third step conducted key informant interviews (n=11) with stakeholders who were knowledgeable about the planning and design, implementation, monitoring and evaluation of nine of 12 diet-related marketing or media campaigns described in this report.

For step two, we used the LEAD principles (e.g., locate, evaluate, and assemble evidence to inform decisions) developed by the Health and Medicine Division of the National Academy of Medicine to establish the evidence selection approach, criteria, search terms and search strategy for the 12 selected marketing and media campaigns. The evidence (n=62 sources) included: published articles (n=24), gray-literature reports (n=12), and media releases or stories (n=26) categorized into two evidence tables. For step three, the key informants were identified through a snowball sampling procedure. The interviews were conducted between July 1, 2016 and October 31, 2016 either in-person or over the telephone. The interviews were transcribed and analyzed using NVivo 11.0 software for emergent themes. The variables of interest were coded and organized into a health-branding framework and combined with the desk review of the 12 diet-related marketing or media campaigns.

Brand development

Half of the campaigns (n=6) used various theoretical frameworks to inform the brand development and design. Four campaigns (i.e., *Five a Day for Better Health, Fruits & Veggies—More Matters, 1% or Less, and Meatless Mondays*) used either a component or a full application of a cognitive or behavioral theory (i.e., theory of planned behavior, theory of reasoned action, and/or the health belief model) to enhance the campaign's influence to change behavior. *Cans Get You Cooking* used a newly developed communications model to guide the brand development. Two campaigns (i.e., *1% or Less and Drink Up*) used the marketing-mix strategies (i.e., product, price, promotion and place) for the campaign brand development. Three campaigns (i.e., *Just Ask for Whole Grains, The Perfectly Powerful Peanut, and Got Milk?*) did not use any explicit theory or conceptual framework to guide the campaign development. Nine of the 12 campaigns used the expertise of a creative advertising firm to inform the campaign design. Three quarters (n=9) of the campaigns had formative research conducted to inform their brand development.

Brand marketing execution

Ten of the 12 campaigns of the campaigns reviewed used a combination of images, logos, slogans, taglines or graphics to develop the integrated marketing communications (IMC) strategy and promotional materials. The two campaigns that did not use IMC were *Frozen. How Fresh Stays Fresh* and *Just Ask for Whole Grains*. However, there was considerable variation across the 12 campaigns. Six campaigns used co-branding or co-promotion. Five campaigns (i.e., *Five a Day for Better Health, Cans Get You Cooking, Drink Up, Got Milk? or Milk Mustache, and Meatless Mondays*) used a celebrity component that included either an association or endorsement related to the campaign marketing and/or implementation. Three campaigns (i.e., *Got Milk? or Milk Mustache, 1% or Less and Meatless Mondays*) used brand mascots or licensed media characters in their promotions. Ten campaigns used paid mass media as part of their IMC activities. Unpaid media was a common feature of all 12 campaigns that were promoted through outlets such as: social media, websites, and press releases. All campaigns received earned media through media outlet reporting and word of mouth. Audience segmentation was used in two thirds (n=8) of the campaigns.

Campaign monitoring and evaluation

Monitoring and evaluation metrics and results were available for nine of the 12 campaigns reviewed. The *Just Ask for Whole Grains* campaign organizers did not evaluate outcomes. Moreover, data were not available for *Frozen. How Fresh Stays Fresh* and *Milk Life*. Five campaigns (i.e., *Five A Day for Better Health, Fruits & Veggies—More Matters, Cans Get You Cooking, Got Milk? and Meatless Mondays*) measured consumer awareness. Two thirds of the campaigns (n=8) collected either sales or consumption data based on national or market-specific information. Three campaigns (i.e., *Fruits & Veggies—More Matters, Cans Get You Cooking and The Perfectly Powerful Peanut*) gathered information on American consumers' attitudes and perceptions of the brand, and/or products promoted in the campaign.



ES Table: Summary of health-branding framework factors used by the diet-related marketing and media campaigns

Branding Framework	Results Across 12 Campaigns	Campaign Brands
Brand Development		
1. Used a theory or conceptual framework	Campaigns (n=6) used various theories or frameworks (i.e., theory of planned behavior, theory of reasoned action, marketing mix, means ends values ladder model, or health belief model)	<i>Five A Day for Better Health, Fruits & Veggies—More Matters, Cans Get You Cooking, 1% or Less, Drink Up and Meatless Mondays</i>
2. Conducted formative research	Campaigns (n=8) used formative research to guide the brand and campaign development	<i>Five A Day for Better Health, Fruits & Veggies—More Matters, Cans Get You Cooking, The Perfectly Powerful Peanut, Got Milk?, 1% or Less, Milk Life and Meatless Mondays</i>
3. Used a creative advertising firm	Campaigns (n=9) used a creative advertising firm to guide brand development and creative execution	<i>Five A Day for Better Health, Fruits & Veggies—More Matters, Eat 'Em Like Junk Food, Frozen. How Fresh Stays Fresh, The Perfectly Powerful Peanut, Got Milk?, 1% or Less, Milk Life and Drink Up</i>
Brand Marketing Execution		
4. Used diverse campaign design elements (n=12 elements)	All campaigns used aspirational images, logos and graphics (n=12) in their materials	<i>Five A Day for Better Health, Fruits & Veggies—More Matters, Cans Get You Cooking, Eat 'Em Like Junk Food, Frozen. How Fresh Stays Fresh, Just Ask for Whole Grains, The Perfectly Powerful Peanut, Got Milk?, 1% or Less, Milk Life, Drink Up and Meatless Mondays</i>
	All campaigns (n=12) used a variety of taglines and common messages in their promotional materials	<i>Five A Day for Better Health, Fruits & Veggies—More Matters, Cans Get You Cooking, Eat 'Em Like Junk Food, Frozen. How Fresh Stays Fresh, Just Ask for Whole Grains, The Perfectly Powerful Peanut, Got Milk?, 1% or Less, Milk Life, Drink Up and Meatless Mondays</i>
	Campaigns (n=6) used either co-promotion (n=4) or co-branding (n=2) with other products or brands	Co-promotion: <i>Fruits & Veggies—More Matters, 1% or Less, Drink Up and Meatless Mondays</i> Co-branding: <i>Cans Get You Cooking, Got Milk?</i>
	Campaigns (n=5) used celebrity endorsement or participation in their materials and promotions	<i>Five A Day for Better Health, Cans Get You Cooking, Got Milk?, Drink Up and Meatless Mondays</i>
	Campaigns (n=3) used brand mascots and/or media characters in their materials	<i>Got Milk?, 1% or Less and Meatless Mondays</i>
5. Used diverse marketing channels or platforms (n=12)	Campaigns (n=10) used paid mass media in their marketing	<i>Five A Day for Better Health, Fruits & Veggies—More Matters, Cans Get You Cooking, Eat 'Em Like Junk Food, Frozen. How Fresh Stays Fresh, The Perfectly Powerful Peanut, Got Milk?, 1% or Less, Milk Life and Drink Up</i>
	Campaigns (n=12) used earned and unpaid mass media in their marketing	<i>Five A Day for Better Health, Fruits & Veggies—More Matters, Cans Get You Cooking, Eat 'Em Like Junk Food, Frozen. How Fresh Stays Fresh, Just Ask for Whole Grains, The Perfectly Powerful Peanut, Got Milk?, 1% or Less, Milk Life, Drink Up and Meatless Mondays</i>
	Campaigns (n=9) used social media in their marketing that was not available when the other three campaigns were implemented	<i>Fruits & Veggies—More Matters, Cans Get You Cooking, Eat 'Em Like Junk Food, Frozen. How Fresh Stays Fresh, The Perfectly Powerful Peanut, Got Milk?, Milk Life, Drink Up and Meatless Mondays</i>
	Campaigns (n=8) used audience segmentation in their marketing efforts	<i>Five A Day for Better Health, Fruits & Veggies—More Matters, Eat 'Em Like Junk Food, The Perfectly Powerful Peanut, Got Milk?, 1% or Less, Drink Up and Meatless Mondays</i>
Campaign Monitoring and Evaluation		
6. Used an evaluation design (n=9)	Campaigns (n=5) measured brand or campaign awareness	<i>Five A Day for Better Health, Fruits & Veggies—More Matters, Cans Get You Cooking, Got Milk? and Meatless Mondays</i>
	Campaigns (n=5) measured changes in consumption	<i>Five A Day for Better Health, Fruits & Veggies—More Matters, The Perfectly Powerful Peanut, 1% or Less and Drink Up</i>
	Campaigns (n=6) measured changes in sales	<i>Cans Get You Cooking, The Perfectly Powerful Peanut, Got Milk?, 1% or Less, Drink Up and Meatless Mondays</i>



Future research

The strategic design and implementation of multi-faceted interventions can be used to promote a healthy diet to individuals and populations in the U.S. Insights from several national diet-related marketing and media campaigns can inform the expansion, scaling up and sustainability of the FNV Campaign, and other future campaigns to promote a healthy and sustainable diet for Americans.

A one-size fits all approach to communicating messages to audiences is too simplistic. With the proliferation of information available to consumers through print, broadcast and social media, it is increasingly difficult to know whether target groups trust a source. It is important that the PHA support independent evaluations of the FNV Campaign as it expands across U.S. cities and states to assess whether it is truly effective to promote fruits and vegetable sales and consumption among multi-racial, -ethnic and -cultural Generation Z teens, Millennial moms and other targeted groups.

Future research should:

- Conduct rigorous formative, process and outcomes research to guide and improve the relevance, awareness, attitudes and understanding of the FNV Campaign's graphics, logos, and use of celebrities and other IMC elements to encourage consumers to interact with and build an emotional bond with the FNV brand to buy and eat fruits and vegetables.
- Identify diverse media platforms and test communication messages that resonate with diverse populations to buy and consume fruits and vegetables based on existing consumer values and market trends.
- Analyze the effectiveness of advertising to consumers versus more embedded forms of marketing such as partnerships and supply-chain activities or market research to inform the fruit and vegetable marketing expenditures of businesses.
- Explore the benefits that commercial partners can receive through co-branding and co-promotional efforts to create mutually beneficial healthy eating campaigns.
- Identify policies and actions that government, private-sector actors, and non-governmental organizations can use to encourage a healthy diet and healthy food environments and to increase the proportion of healthy food and beverage products marketed to Americans as the norm and not the exception.
- Explore how government, industry actors and non-governmental organizations can co-develop effective behavioral messages based on a health-branding framework that the commercial sector can adopt and amplify.
- Describe the purchase and consumption patterns of fruits and vegetables for SNAP-Ed participants and identify opportunities for using the FNV Campaign effectively within the context of SNAP-Ed.
- Provide detailed evaluations of future marketing and media campaigns that promote a healthy diet to contribute to the knowledge base and develop adaptable evidence based practices for future efforts.
- Raise awareness about how dietary choices influence sustainability goals given the increasing importance of supporting a healthy and sustainable diet and food systems in the U.S. and globally. Future marketing and media campaigns could incorporate actionable messages to highlight the interconnections between a healthy and sustainable diet for people and planet.

An in-depth review and discussion of certain issues were beyond the scope of this report.

Future research should:

- Examine the body of research on how counter-advertising and media advocacy campaigns can be used to discourage HFSS food and beverage products or nutrients of concern such as saturated fat, sodium and added sugars in order to create an enabling environment for healthy food and beverage promotion.
- Determine how government, industry and non-governmental organizations can work together to reduce the exposure of unhealthy HFSS food and beverage products marketed to children and teens while increasing the promotion of healthy food and beverage groups and products.
- Evaluate how diverse industry stakeholders have responded to improve the landscape of responsible food and beverage marketing practices that target young Americans.



Introduction

Obesity and diet-related non-communicable diseases (NCD) are serious public health challenges that have created an enormous financial burden on the United States (U.S) health care system.

The United States spends an estimated \$190 billion annually on obesity-related costs, representing about 20 percent of all medical spending. Childhood obesity is responsible for more than \$14 billion dollars in direct medical costs.¹

In 2015, 25 states had an adult obesity rate of 30 percent or higher, and nine of 11 states with the highest obesity rates were located in the Southern U.S. region.¹ National surveillance data show that in 2014, more than two thirds (70.7 percent) of American adults are overweight (32.8 percent) or obese (37.9 percent) and nearly one third (32.4 percent) of American children and adolescents, ages 2-19 years, are overweight or obese.^{2,3,4}

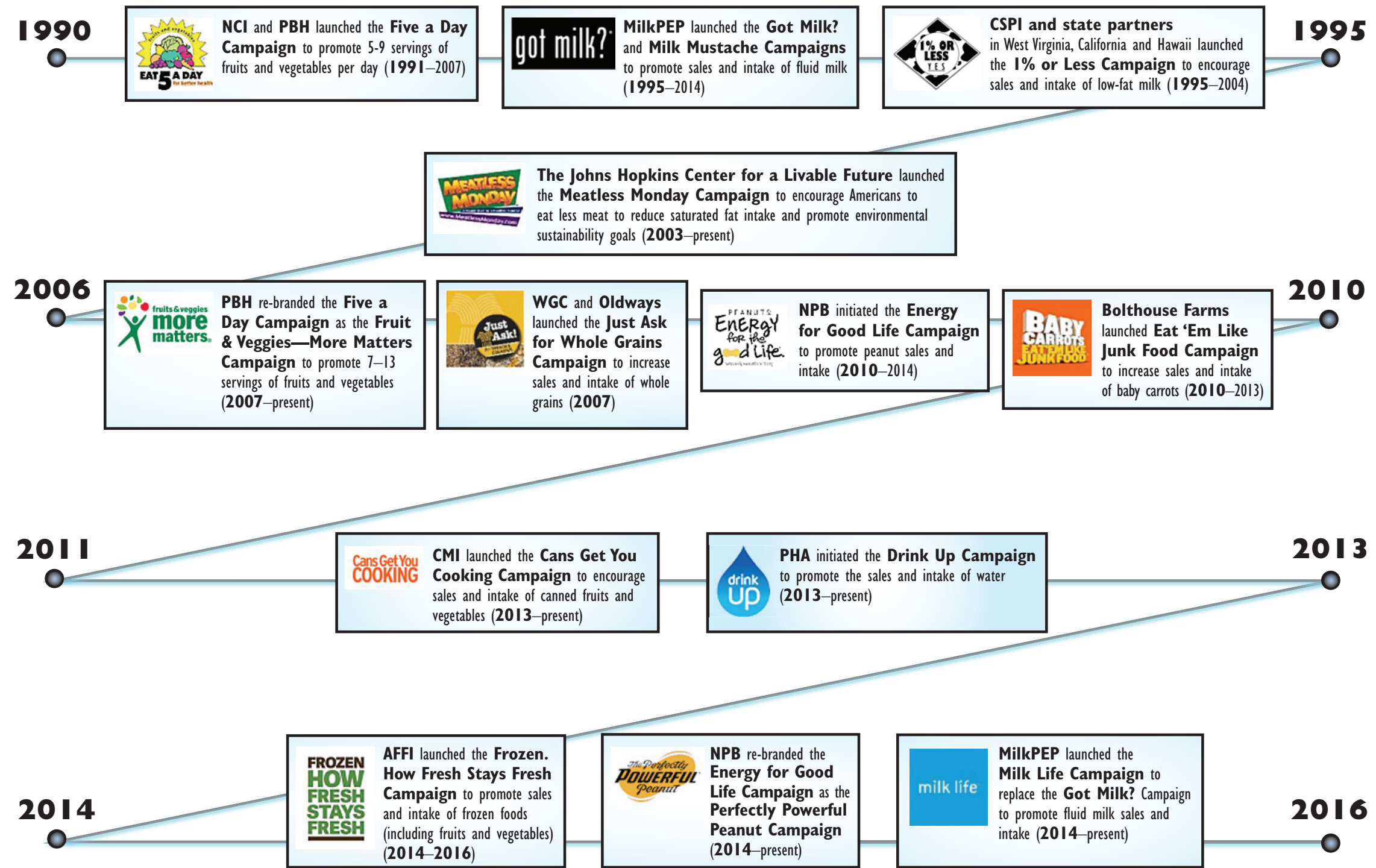
The Dietary Guidelines for Americans (DGA) 2015-2020 recommend that people consume a diet rich in whole grains, fruits and vegetables, and lean meats or plant-based proteins (i.e., beans, nuts and legumes) to reduce their risk of obesity and diet-related NCD.⁵ A healthy diet is also associated with reducing the consumption of processed meats and food and beverage products that contain excessive amounts of added sugars, fat, saturated fat and sodium. An unhealthy diet is linked to three of the four most common NCD that cause premature disability and death including: cardiovascular diseases, type 2 diabetes, and certain types of cancer.⁶

The U.S. government, private-sector businesses and non-governmental organizations have used a variety of campaigns over the past 25 years to encourage people to consume a healthy diet consistent with the DGA. Between 1990 and 2016, several campaigns encouraged Americans to consume fruits and vegetables, whole grains, nuts and legumes, milk, water and to reduce meat consumption. These campaigns used strategic branding,⁷ multi-media platforms, integrated marketing communications (IMC)⁸ and cross-sectoral partnerships to promote the sales and consumption of food and beverage groups or products to support a healthy diet.

Figure 1 describes a timeline of the 12 campaigns examined in this report. Five campaigns were used to promote fruits and vegetables (i.e., *Five a Day for Better Health*, *Fruits & Veggies—More Matters*, *Eat 'Em Like Junk Food*, *Cans Get You Cooking*, *Frozen. How Fresh Stays Fresh*);^{9,10,11,12} One campaign promoted whole grains (e.g., *Just Ask for Whole Grains*);¹³ two campaigns promoted nuts and legumes (e.g., *Energy for the Good Life* and *Perfectly Powerful Peanut*);^{14,15} three campaigns promoted milk (e.g., *Got Milk?*, *Milk Life* and *1% or Less*);^{16,17} one campaign promoted water (e.g., *Drink Up*);¹⁸ and one campaign encouraged eating less meat (e.g., *Meatless Monday*).¹⁹

Several of these diet-related marketing and media campaigns have used commercial marketing insights to inform the brand development, marketing execution, and monitoring and evaluation activities. However, information about many of these campaigns is not available in systematic reviews of peer-reviewed journal articles to inform current or future campaigns to influence healthy-lifestyle behaviors to reduce obesity and diet-related NCD rates.^{20,21,22,23}

Figure 1: Timeline of U.S. marketing and media campaigns to promote foods and beverages that support a healthy diet, 1990 to 2016



Acronyms

AFFI: American Frozen Food Institute CMI: Can Manufacturers Institute CSPI: Center for Science in the Public Interest MilkPEP: Milk Processor Education Program NCI: National Cancer Institute
 NPB: National Peanut Board PBH: Produce for Better Health Foundation PHA: Partnership for a Healthier America WGC: Whole Grains Council



In February 2015, the Partnership for a Healthier America (PHA) based in Washington, DC²⁴ launched a branded marketing campaign called FNV (*Fruits & Veggies*)²⁵ in two test cities—Fresno, California and Norfolk/Hampton Roads, Virginia—to target racially, ethnically and culturally diverse populations with low fruit and vegetable intakes (Figure 1). The initial target populations were Millennial moms, ages 21 to 34 years²⁶ and Generation Z teens that overlap with the youngest Millennials ages 15 to 20 years.²⁷

The FNV Campaign has used creative commercial and behavioral branding principles and strategies such as: *pro bono* celebrity endorsement; interactive social media; print and broadcast media; sponsored community events; and in-store food-retail marketing to make fruits and vegetables attractive and “cool” to increase sales and consumption among targeted populations.

In October 2016, the PHA announced the expansion of the FNV Campaign to cities across 13 U.S. states including: Fresno, Los Angeles and San Francisco, California; Boise, Idaho; Dallas, Texas; Chicago, Illinois; Mason City, Iowa; Syracuse, New York; Washington, DC; Boston and Springfield, Massachusetts; Norfolk/Hampton Roads, Virginia; Raleigh, North Carolina; Atlanta, Georgia; Miami, Florida; and Madison, Wisconsin. By December 2016, the PHA reported that 20 public- and private-sector partners supported the FNV Campaign.²⁸

This report is part of series that comprise an independent evaluation of the FNV Campaign funded by the Robert Wood Johnson Foundation (RWJF) and conducted by a Virginia Tech research team between September 2015 and August 2017. This paper complements a formative evaluation underway to explore relevant stakeholders’ views and expectations about the FNV Campaign, and factors needed to increase fruit and vegetable sales and consumption among ethnically, racially and culturally diverse Americans. This report has five objectives:

- 1) Define relevant marketing terms and discuss how commercial and social marketing and media campaigns can be used to influence social norms, and the attitudes, knowledge and behaviors of individuals and populations.
- 2) Describe various theories and conceptual frameworks used to design, implement, and monitor and evaluate marketing and media campaigns to influence the attitudes and behaviors of targeted populations.
- 3) Examine the available evidence for 12 national, branded, diet-related marketing and media campaigns launched between 1990 and 2016 to encourage Americans to consume nutrient-dense food groups (e.g., fruits and vegetables, whole grains, and nuts/legumes), beverages (e.g., milk and water), and to reduce meat intake to support dietary health and sustainability goals.
- 4) Describe how the findings can inform the future expansion and sustainability of the FNV Campaign to reach its target populations.
- 5) Suggest design innovations for marketing and media campaigns to encourage all Americans to consume a healthy diet.

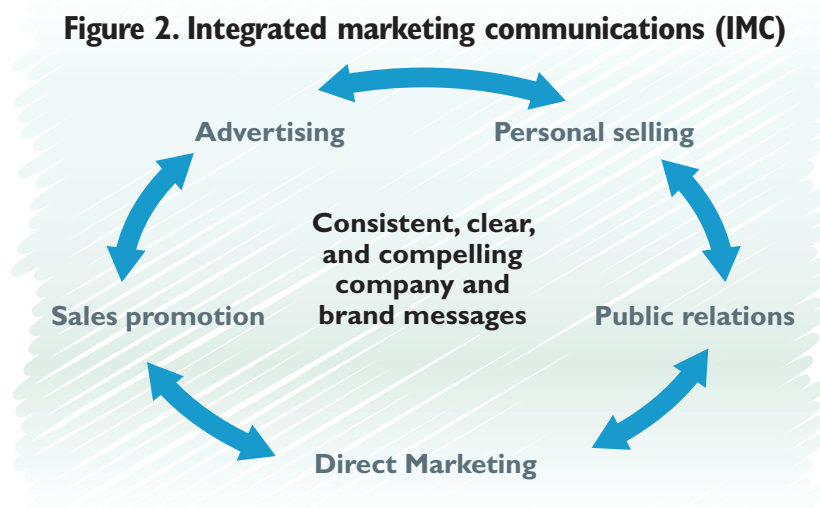


Background on marketing and media campaigns

Media campaigns are organized activities that use various print, broadcast and digital media platforms to influence social norms and inform, persuade or motivate populations to change their awareness, knowledge or behaviors.²⁹ Commercial marketing campaigns are used by for-profit firms that feature a corporate brand or line of products in order to influence sales and purchasing behaviors among a particular segmented population to maximize revenue for businesses. Social marketing applies commercial marketing principles to the analysis, planning, execution and evaluation of programs or interventions to influence voluntary behaviors of target populations in order to improve their personal welfare.³⁰

Public health practitioners have used commercial marketing principles to design social marketing campaigns to encourage desirable behavioral changes among individuals and populations. Six criteria are used to design a social marketing program. These include to: (1) design an intervention to seek behavior change with specific and measurable objectives; (2) conduct consumer research to understand people's experiences, needs and values; (3) segment audiences into target populations; (4) tailor an intervention based on the marketing mix (i.e., product, place, price and promotion); (5) consider factors that will motivate the target population to engage voluntarily with an intervention or provide a benefit that is either tangible (i.e., rewards) or intangible (increased satisfaction); and (6) analyze the competition with the intervention to appeal to the target audiences.³⁰






IMC strategies are used by commercial businesses and non-governmental organizations in marketing and media campaigns to reach target populations. IMC strategies combine advertising, public relations, sales promotion, direct marketing, sponsorships, celebrity endorsement, and point-of-purchase with many communication techniques to provide clarity, consistency and maximum impact to build brand awareness, loyalty, and equity among consumers for products, services or ideas (Figure 2).⁸



Marketing and media campaigns can be evaluated for increasing awareness, knowledge, salience, self-efficacy, behavioral intent, purchasing habits, product sales, dietary behaviors and health outcomes of target populations. Marketing and media campaigns can also be evaluated for their process, impact, cost-effectiveness and sustainability as part of a broader environmental change strategy to influence social norms, business practices, and population health outcomes.^{17,18}

Each generation has unique expectations, experiences, values and demographic characteristics that influence their purchasing and consumption behaviors.³¹ Generational differences can influence the exposure to, and receptivity of messages in an evolving marketing and media landscape. Nielsen marketing research suggests that younger segmented audiences, including Generation Z (ages 15-20 years) and Millennials (ages 21-34 years), are willing to pay more for healthy foods (i.e., free of artificial coloring or flavoring); prefer high-energy and action-oriented advertising themes; and trust celebrities more than older generations.^{32,33} Millennials also have been exposed to a lifelong experience of digital communications and media technologies that they use confidently when they shop for groceries.³⁴ U.S. millennials spend about \$1.3 trillion dollars annually and influence the preferences and purchases of their peers through social media.³⁵ Figure 3 shows the different target populations defined by Nielsen marketing research in 2015 based on their age and generation that influence their psychographic characteristics.

Figure 3: Definitions used for target marketing of different generations

				
Generation Z	Millennials	Generation X	Boomers	Silent Generation
15-20 years Born 1995-2005	21-34 years Born 1981-1994	35-49 years Born 1966-1980	50-64 years Born 1951-1965	65+ years Born 1950 or earlier

A *brand* is a proprietary visual, emotional and cultural image associated with a company, organization or product. Branding represents a name or symbol that legally identifies a company, organization, product or service to help consumers differentiate it among marketplace competitors,³⁶ and is the total experience that customers have with a business or organization.

A brand is neither inherently healthy nor unhealthy. The nutrient profile of a food or beverage group or product category will determine whether a branded product will meet healthy or unhealthy guidelines that are consistent with the DGA 2015-2020.

Co-branding refers to a marketing relationship, partnership or collaboration between two or more companies, or a company or other entity (i.e., government or non-governmental organization or government organization) or individual (i.e., celebrity) that associates a single product or service with two or more brands to create marketing synergy. Examples of co-branding include sponsorships, cause-marketing arrangements and endorsements. Table 1 summarizes the various strategies used by companies or organizations to promote a brand or engage in co-branding to raise awareness, build loyalty and maximize revenues.³²



Health branding involves the application of marketing principles to promote behavior changes through brand associations that influence people’s knowledge, attitudes, beliefs and behaviors.²⁰ One challenge of health branding is that people may not respond positively to messages that promote the benefits of a health-related behavior. A second challenge related to health branding is that public health researchers often lack the training and resources to apply branding principles effectively to design, implement, and monitor and evaluate marketing, health communication or social marketing campaigns. Public health professionals could collaborate with marketing experts to create recognizable brand identities for public health programs, and use new evaluation frameworks to show the effects of branding on diet-related health outcomes.²⁰

Table 1: Strategies used by companies and organizations to promote a brand

Component	Purpose
Brand personality	<i>To develop image attributes and raise consumer awareness about a brand and its competition</i>
Brand differentiation	<i>To distinguish one brand from another in the same product or service line</i>
Brand philanthropy	<i>To support community initiatives that advance the interests of a company or organization</i>
Brand performance Brand advantage	<i>To build consumer familiarity and perceived quality and to determine whether customers think a brand is improving or whether their interest in a specific brand is declining</i>
Brand loyalty Brand equity	<i>To sustain the degree to which consumers will consistently purchase the same brand within a product category or select the same service over time</i>

The promotion of positive dietary behaviors by diverse stakeholders to support a healthy diet is a formidable challenge given the current unhealthy food environments in the U.S. Experts recommend various actions to enhance the success of marketing and media campaigns that are described below.^{37,38,39}

- (1) Apply communication and marketing theories and strategies to inform the design and evaluation of dietary change campaigns.
- (2) Use marketing and consumer behavior insights including the use of emotional appeals and endorsement to enhance the credibility of a campaign.
- (3) Use IMC strategies relevant to target audiences and communities.
- (4) Recognize the potential communication inequalities among groups to access and act on information.
- (5) Integrate actions at many levels.
- (6) Think broadly about evaluation design for campaigns.

Another important principle that underlies effective mass media and marketing campaigns is to ensure that target groups have adequate exposure to a campaign’s messages through various marketing and media platforms and settings where people live, work and play in order to promote repetition, memorability, and to influence social networks and social expectations about a desirable behavior.⁴⁰

Behavioral theories and conceptual frameworks

A theory describes principles and insights about variables that may influence health-promotion interventions.⁴¹ Theories, frameworks and models are used to inform the design of policies, programs, and campaigns to reach target populations. Table 2 summarizes the features of selected behavioral, communication and marketing theories, models or frameworks^{20,29,41,42,43,44} that have been used to design, implement, and monitor and evaluate health-promotion programs or marketing and media campaigns that are discussed in this report.

Table 2: Behavioral theories, frameworks and models used to inform the design of health promotion, marketing and media campaigns

Theory or Framework	Description
<i>Cognitive and behavioral theories, framework or models</i>	
Diffusion of innovations	A theory that maintains behavior change requires the application of constructs such as knowledge (exposure), persuasion (attitudes), decision (commitment), implementation (use) and confirmation (reinforcement).
Health belief model	Behavioral change model that is driven by balancing a person’s perceived barriers and benefits, or a risk-benefit ratio, to adopt a certain behavior.
Social cognitive theory	This theory suggests that behavior change is predicted by the interactions among the behavior, personal factors and the environment, and is influenced by modeling, skills training, contracting and self-monitoring.
Social ecological model	This model suggests that behavior change is influenced by complex relationships among personal, cultural and environmental factors. Behavioral change is based on five levels of influence: <i>intrapersonal</i> (i.e., taste preferences, habits and nutrition knowledge and skills); <i>interpersonal</i> (i.e., micro-environments in which culture, social traditions, and role expectations influence eating practices); <i>social networks</i> (i.e., patterns within peer groups, family and friends); <i>settings</i> (i.e., meso-environments) and <i>sectors</i> (i.e., macro-environments) where government, business and institutional policies and social norms influence food availability and access.
RE-AIM framework	This framework is designed to accelerate the translation of research findings into public health practice through five steps: <i>reach</i> the intended target population; <i>efficacy</i> or <i>effectiveness</i> ; adoption by staff, settings or institutions; <i>implementation</i> consistency, costs and adaptations made during delivery of the intervention; and <i>maintenance</i> of the intervention’s effects for individuals or populations and settings over time.
Theory of reasoned action or Theory of planned behavior	These theories suggest that behavior change is affected by behavioral intent, which is influenced by a person’s attitudes and expectations. The theory of planned behavior includes perceived control over one’s behavior to lead to a desirable behavior change.
Transtheoretical model	A stages of change model used that influences the likelihood of a person adopting a specific behavior. The six stages of change include: pre-contemplation, contemplation, preparation, action, maintenance and termination.



Theory or Framework	Description
<i>Communication and marketing theories, frameworks or models</i>	
Dual process theory or Elaboration likelihood model of persuasion	This theory and model propose two routes to motivate or persuade a person to adopt a specific behavior: a central route and the peripheral route. <i>Central route persuasion</i> results from a person considering the source and value of information at a high level of cognitive awareness. <i>Peripheral route persuasion</i> results from a lower level of awareness that is may be unrelated to the logic of an assertion or claim, and influenced by cues such as the credibility (i.e., trust, expertise or attractiveness) of a message source.
Health branding framework	This framework helps to determine behavioral choices by understanding and developing consumer relationships and affinities for health behaviors and their benefits. The stages of health branding include: brand development, brand marketing execution, and monitoring and evaluation.
Hierarchy of effects	A model used by marketers to design advertisements based on a six-step process that customers go through to make a purchase. The steps include awareness, knowledge, liking, preference, conviction and purchase.
Marketing-mix model	This model is comprised of strategies, tactics and activities used by a business firm to reach targeted customers. The commercial marketing mix includes product, place, price and promotion.
Social marketing theory	This theory is focused on how socially valuable information can be used to promote or discourage various behaviors. Social marketing theory applies commercial marketing principles to the analysis, planning, execution and evaluation of programs or interventions to influence voluntary behaviors of target populations in order to improve their personal welfare.
Values ladder model	Used to connect the attributes and benefits of canned foods to the existing emotions and personal values of targeted moms for the <i>Cans Get You Cooking</i> Campaign.



Methods

The evidence for this review was acquired using a three-step, mixed-methods research process that involved: (1) undertaking a scoping review to identify 12 branded marketing and media campaigns launched in two or more states or nationwide in the U.S. between 1990 and 2016; (2) evidence for these campaigns between 1990 and 2016; and (3) conducting interviews with key informants (n=11) who were knowledgeable about the various campaigns' design, implementation and evaluation. For step one, we used the LEAD principles (e.g., *locate, evaluate, and assemble evidence to inform decisions*) recommended by the Health and Medicine Division of the National Academy of Medicine (formerly called the Institute of Medicine) in 2010 to establish the evidence selection approach, criteria, search terms and search strategy.⁴⁵ Table 3 describes the methodologic approach used to acquire, organize and analyze the evidence for the diet-related marketing and media campaign review.

Between March and August 2016, we conducted a review of eight electronic databases (i.e., ABI/INFORM, Business Source Complete, CINAHL, Communication & Mass Media, Health Source, Medline, PsycInfo and PubMed) to identify peer-reviewed articles relevant to diet-related national media campaigns. We also searched the bibliographies of published systematic reviews to identify studies that had included diet-related national media campaigns. Second, we conducted an extensive search of the Internet using several browsers (i.e., Google, Firefox and Explorer) and LexisNexis to identify relevant gray-literature reports, case studies, and websites of industry trade associations, foundations, non-governmental organizations and news releases related to the national diet-related marketing and media campaigns. We used five qualitative-research criteria⁴⁶ (i.e., data relevance, research design quality, professional judgment, contextual analysis, and validation or credibility through data and investigator triangulation) to select and categorize 62 evidence sources including published articles (n=24), gray-literature reports (n=12), and media stories or news releases (n=26) into two evidence tables.

For step two, we used a snowball sampling procedure to identify key informants to contact who were knowledgeable about the planning and design, implementation, monitoring and evaluation of the 12 marketing or media campaigns. The Virginia Tech Institutional Review Board approved the human subjects component of this research in June 2016. The key informant interviews were conducted between July 1, 2016 and October 31, 2016 either in-person or over the telephone. The average interview lasted for 51 minutes. The interviews were transcribed, coded, input into NVivo 11.0 software, and coded variables of interest were organized into a health-branding framework. Evidence from the desk review and the informant interviews for each diet-related marketing or media campaign are described in a narrative review in the results section.



Table 3: Methodologic approach to acquire, organize and analyze the evidence for the U.S. marketing and media campaigns

<p>Scoping review of published literature for branded diet-related marketing and media campaigns launched between 1990 and 2016. The search strategy used the LEAD approach (i.e., locate, evaluate and assemble evidence to inform decisions)</p> <p>Search terms and syntax</p> <ul style="list-style-type: none"> The search used both free-text terms and subject headings (i.e. media or marketing or campaign or advertising AND health or diet or nutrition AND national or United States) <p>Inclusion criteria</p> <ul style="list-style-type: none"> Published journals and reviews, gray-literature reports, and media and news releases about national diet-related marketing and media campaigns that promoted healthy dietary components between 1990 and 2016 Targeted groups: adolescents (12-18 years) and adults <p>Exclusion criteria</p> <ul style="list-style-type: none"> Non-U.S. and non-diet-related marketing and media campaigns Children (ages 0 to < 12 years) Business reports or individual company documents that were proprietary and not available in the public domain <p>Evidence selection criteria</p> <ul style="list-style-type: none"> Qualitative-research criteria (i.e., data relevance, research-design quality, professional judgment, contextual relevance and credibility by data verification) Investigator and data triangulation were used for evidence convergence 	
LOCATE evidence	<p>A literature review was conducted between January 1, 1990 and December 31, 2016 among the following sources:</p> <ul style="list-style-type: none"> Eight electronic databases (i.e., ABI/INFORM, Business Source Complete, CINAHL, Communication & Mass Media, Health Source, Medline, PsycInfo and PubMed) Gray-literature studies, reports and websites of government, industry, non-governmental organizations, private foundations and academic institutions Media stories or news releases (i.e., Lexis Nexus and Google)
EVALUATE evidence	<p>Evidence sources (n=62) were selected and categorized into two tables</p> <ul style="list-style-type: none"> Variables of interest for the brand development, marketing execution, and campaign monitoring and evaluation metrics. Key informant quotes by health-branding theme for each campaign
ASSEMBLE evidence	<p>A health-branding framework was used to analyze the evidence</p> <ul style="list-style-type: none"> See Tables 4, 5, 7 and 8
Inform DECISIONS	<p>Findings were used to inform the following</p> <ul style="list-style-type: none"> Design, reach, effectiveness, impact, expansion and sustainability of the Partnership for a Healthier America's FNV Campaign Actions for diverse stakeholders to use branded marketing and media campaigns to encourage a healthy diet



Results

Table 4 summarizes the features for each marketing or media campaign by goal, sponsors, estimated funding, and implementation timeline. Table 5 lists the variables of interest for the diet-related marketing and media campaigns related to brand development, marketing execution, and monitoring and evaluation metrics and results. Table 6 provides a demographic profile of the key informants who participated in an interview about the selected U.S. diet-related marketing and media campaigns. Table 7 summarizes the questions used for the key informant interviews. Table 8 provides key informant quotes by the health-branding theme. Given the diverse nature and breadth of the evidence acquired, we used a narrative summary to present the synthesized findings.

Campaigns to promote fruit and vegetable sales and consumption

Five campaigns reviewed were used to promote fruit and/or vegetable sales and consumption: *Five a Day, Fruit & Veggies—More Matters, Eat ‘Em Like Junk Food, Cans Get You Cooking, and Frozen. How Fresh Stays Fresh.* These efforts are part of a 25-year effort to encourage Americans to consume more fruits and vegetables daily to support a healthy eating pattern to reduce the risk of NCD. The DGA 2015-2020 recommend that Americans consume at least 4.5 cup equivalents of fruits (2 cups) and non-starchy, dark green, red and orange vegetables (2.5 cups) daily for a 2,000 calorie diet.⁵ Fresh, frozen, dried, juiced or canned forms of fruits and vegetables can contribute to their intake. Americans across all age groups do not consume adequate amounts of vegetables and only children ages 1 to 8 years consume the recommended daily fruit targets. Public health practitioners, dietitians, food retailers, and media have used these campaigns to influence Americans’ fruit and vegetable intake to improve their diet quality and health.



½ cup portion of strawberries = ½ cup equivalent fruit



¾ cup portion of 100% orange juice = ¾ cup equivalent fruit



¼ cup portion of raisins = ¼ cup equivalent fruit



Five a Day Campaign (1993–2007)

The National Cancer Institute (NCI) initiated the *Five a Day for Better Health* Program in 1991 to achieve the *Healthy People 2000* objective that encouraged Americans to consume five or more servings of fruit and vegetables daily.⁴⁷ A 1991 baseline telephone survey of 2,811 adults documented that the average American consumed 3.4 servings of fruit and vegetables daily that was below the recommended five or more servings/day.⁴⁸ The NCI funded nine research studies in 1993 in several states to promote fruit and vegetable intake through a multi-sectoral effort called the *Five a Day* Campaign that involved churches, worksites, schools and the Special Supplemental Program for Women, Infants and Children.⁴⁹ By 1994, more than 700 industry organizations and 48 states, territories and the District of Columbia were licensed to participate in the *Five a Day* Campaign⁵⁰ that ran nationally for 14 years.^{51,52}



An awareness survey of the *Five a Day* Campaign conducted in 1997 found that slightly over a quarter (25.8 percent) of adults (n=2,544) reported consuming five or more servings of fruit and vegetables daily, and consumption was higher among people who were knowledgeable about it.⁵³ In 1999, only 17 percent of participants (n=15,060) across seven study centers reported consuming five or more servings of fruits and vegetables/day.^{54,55}

In 1999-2000, only 40 percent of Americans consumed an average of five or more half-cup servings of fruits and vegetables/day; less than one percent of adolescent boys, aged 14 to 18 years (whose combined fruit and vegetable recommendation was 5 cups) and 48 percent of children aged 2 to 3 years (whose combined recommendation was 2 cups) met the minimum recommendation for fruit and vegetable intake.⁵⁶

Trend data from 1988 to 2002 found that only 28 percent and 32 percent of adults met the recommended fruit and vegetable guidelines, respectively. Higher income and higher education were significantly associated with meeting the guidelines for consuming both fruits and vegetables.⁵⁷ The NCI's *Five a Day* Campaign evaluation documented that Americans reported understanding the benefits of consuming fruits and vegetables for health and many could afford to purchase produce.⁵⁸ However, evaluations for the *Five a Day* Campaign suggest that prescriptive advice and one simple message to encourage fruit and vegetable intake was not reaching ethnically, racially and geographically diverse populations who had the lowest intake and were at different stages of dietary behavior change.^{53,54,55,56}

Fruit & Veggies—More Matters Campaign (2007–present)

The Produce for Better Health Foundation (PBH) conducted extensive marketing communications research that led to the re-branding of the *Five a Day* Campaign to the *Fruit & Veggies—More Matters* Campaign in 2007. The changes were intended to make the campaign more compelling to target audiences, and to leverage the existing message dissemination infrastructure and public-private partnerships to foster the campaign's sustainability.⁵⁹ The Campaign is part of a broader National Fruit and Vegetable Alliance Action Plan designed to: (1) increase the availability, accessibility and desirability of all types of fruits and vegetables by making them tasty, attractive, convenient and affordable at all eating and snacking occasions; (2) provide information to consumers through a website, social media, supermarkets, packaging, educators and health professionals to increase their ability to obtain and prepare meals and snacks rich in a variety of fruits and vegetables; and (3) communicate the benefits of consuming fruits and vegetables in an exciting way to influence Americans' to purchase and consume the recommended daily servings.⁶⁰



A 2007 survey of adults (n=3,021) found that only two percent of respondents were aware of the *Fruit & Veggies—More Matters* Campaign and six percent were aware of the recommended seven to 13 servings/day of fruits and vegetables for adults. More adults were aware of the *Five a Day* Campaign (29 percent) and fruit and vegetable recommendations (30 percent). The adults surveyed were more likely to report consuming five or more servings of fruits and vegetables/day if they were aware of either the *Five a Day* or *Fruit & Veggies—More Matters* Campaigns.⁶¹ However, 61 percent of participants surveyed did not consume five or more servings/day of fruits and vegetables. In 2010, the PBH found that awareness of the *Fruit & Veggies—More Matters* Campaign increased only slightly from an average of 12 percent in 2007 to 18 percent in 2010.⁶⁰

Between 2008 and 2013, targeted moms became familiar with the *Fruits & Veggies—More Matters* brand and campaign through supermarkets (35 percent), food packages (17 to 22 percent), television (TV) (16 to 20 percent), the Internet (10 to 20 percent), schools (7 to 17 percent) and health care providers (5 to 16 percent).⁶⁰ Between 2007 and 2014, the *Fruit & Veggies—More Matters* brand motivated moms as the household gatekeeper to increase consumption of fruits and vegetables from 24 percent to 39 percent.⁶⁰



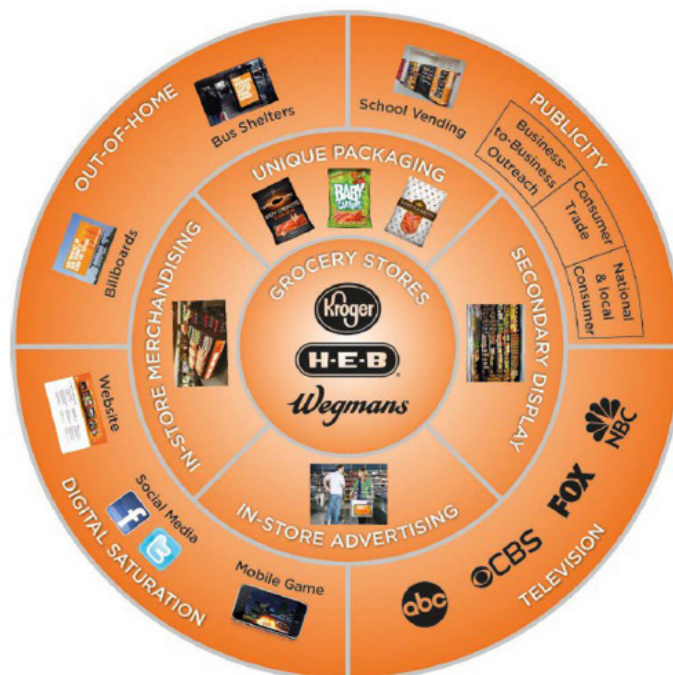
Eat 'Em Like Junk Food Campaign (2010–2013)

In 2010, a \$25 million dollar branded marketing and media campaign called *Eat 'Em Like Junk Food* was launched by the former Coca-Cola Company executive, Jeffrey Dunn, and the creative advertising firm, Crispin, Porter & Bogusky to promote the sales and consumption of baby carrots to Americans in two cities—Syracuse, New York and Cincinnati, Ohio. The goals of the campaign were to use commercial branding and IMC strategies to change the way people thought about baby carrots and to create a new brand to build brand awareness and establish brand loyalty to increase sales and consumption of baby carrots among American children, teens and adult women.^{6, 61, 62, 63}



Figure 3 shows the IMC components used to promote the *Eat 'Em Like Junk Food* Campaign. The strategy included the use of quirky, entertaining, satirically humorous, futuristic and indulgent features delivered through IMC to build brand awareness and sales for baby carrots.^{62,63} The campaign generated 740 million public relations impressions worldwide during the first month.⁶² Bolthouse Farms received positive recognition as the recipient of a prestigious Effie award for this creative IMC campaign.⁶⁴ After 2013, the campaign was changed to *Baby Carrot ShakeDowns* and used to encourage the purchase of single-serving, freshly cut baby carrots with natural ranch seasoning.⁶¹ A preliminary evaluation suggests that this campaign may have contributed to an increase in baby carrot sales by 10-12 percent in the two test markets during the first three months of the launch.^{62,63} However, there is no robust evidence to support the finding that the campaign increased awareness or sustained the purchasing or consumption of baby carrots among the target populations.

Figure 4 IMC strategies used by Bolthouse Farms to promote the *Eat 'Em Like Junk Food Baby Carrots* Campaign in 2010



Source: Cun C. *If You Can't Beat 'Em, Eat 'Em Like Junk Food*. Case Study. April 4, 2013.



Cans Get You Cooking Campaign (2013–present)

Research has shown that about 10 percent of Americans consume canned vegetables or fruits each day that contributes to improved diet quality in children and adults.⁶⁵ Canned fruits, vegetables, and beans or legumes can provide people with nutrients at a lower cost compared to fresh, frozen or dried foods.⁶⁶ In 2013, the Can Manufacturers Institute (CMI) launched a multi-year IMC campaign to increase the awareness among American shoppers about the benefits of purchasing and consuming canned foods to achieve the DGA.⁷ A 2013 CMI consumer survey found that canned foods contribute to Americans' fruit consumption, especially peaches, pineapples, fruit cocktail and pears. Moreover, canned foods also contribute to Americans' vegetable intake including corn, green beans and tomatoes.⁶⁷

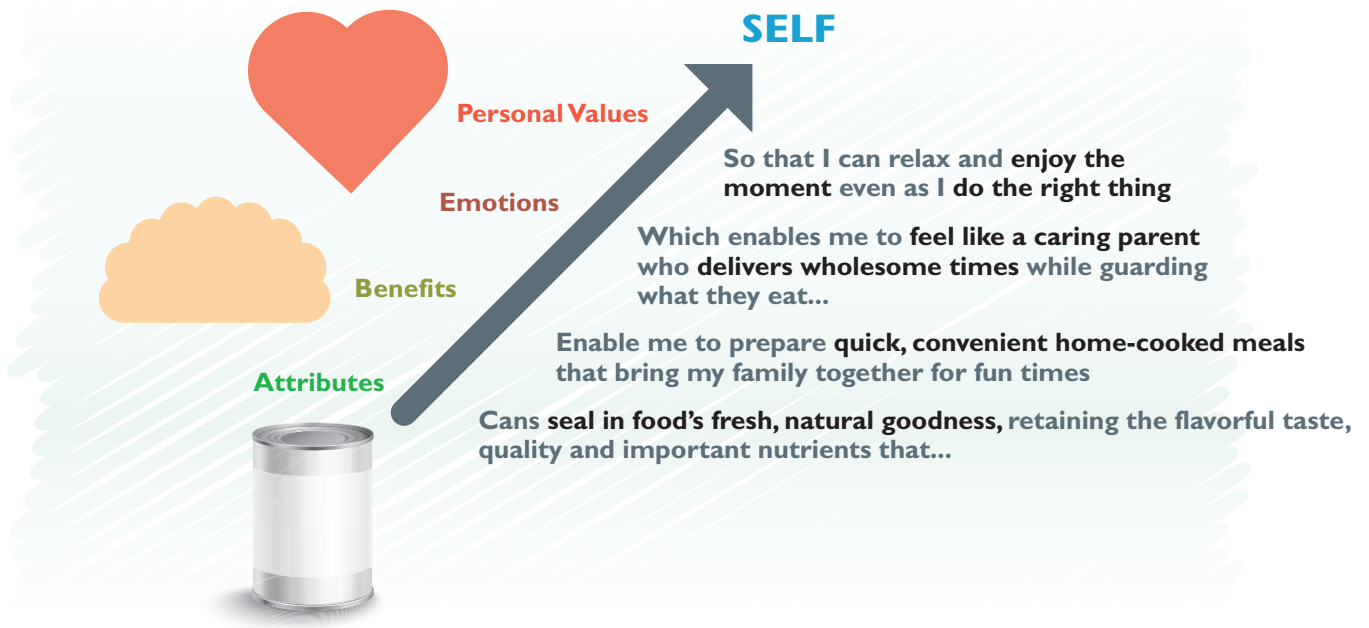
**Cans Get You
COOKING**



The *Cans Get You Cooking* Campaign used online, digital and social media to reach consumers between 2013 and 2015.¹¹ The CMI partnered with 30 different retailers across 6,110 stores that represented branded and private-label food and beverage manufacturers that reached more than 1.3 billion people through print, broadcast and digital media.⁶⁷ The CMI used a consumer-tracking survey to evaluate whether there was a positive correlation between the campaign exposure and shoppers' reported use of canned foods between 2013 and 2015.⁶⁸ A values ladder model was developed to guide the campaign messages to connect the attributes and benefits of canned foods to the emotions and values of mothers (Figure 4). The campaign messages were disseminated through owned, paid and earned media, as well as through outreach to dietitians and food retailers or grocery chains.^{67,68}



Figure 5 Values ladder that connects the attributes the attributes and benefits of canned foods to mothers' emotions used in the *Cans Get You Cooking* Campaign



Source: National Academies of Sciences, Engineering, and Medicine. *Food Literacy: How Do Communications and Marketing Impact Consumer Knowledge, Skills, and Behavior?* Workshop Summary. Washington, DC: The National Academies Press, 2016.

Frozen. How Fresh Stays Fresh Campaign (2014–2016)

In May 2014, the American Frozen Food Institute (AFFI) launched a \$30 million dollar campaign to change the way Americans think and feel about frozen foods, including fruits and vegetables.⁸ The campaign used print, TV and digital advertising, social media, and public relations to change consumers' perceptions about the benefits of buying and consuming frozen foods, including produce.⁶⁹ Research has shown that the nutrient profile of frozen fruits and vegetables are either equivalent to, or may be superior to, fresh fruits and vegetables.⁷⁰

The *Frozen. How Fresh Stays Fresh* Campaign engaged consumers to encourage freezing fruits and vegetables to preserve freshness. This campaign reached about 2.2 billion media impressions by the time it ended in 2015.³⁵ The campaign was supported by several large U.S. food manufacturers including: ConAgra Foods, General Mills, Hillshire Brands, Jasper Wyman & Son, Kellogg's, Kraft Heinz, Lakeside Foods, Nestle USA, Schwan's Foods and Seneca Foods.⁷¹ No evaluation data are available to assess the influence of the campaign on consumers' attitudes or behaviors. The campaign was awarded an American Society of Association Executives Power of a Silver Award for the AFFI's unique use of resources to solve problems, advance performance, and drive innovation in 2015.⁷²

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STAYS
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Campaign to promote whole-grain sales and consumption

Whole grains are an important source of dietary fiber and minerals including iron, zinc and manganese. Refined grains often have lower levels of these nutrients. The DGA 2015-2020 recommend that Americans consume six-ounce equivalents with at least half of these servings being whole grains for a 2000-calorie/day diet. Americans' whole grain intake falls below the recommended amounts for all age groups, and refined grains comprise most of the grain consumption that are consumed in the form of HFSS food products.⁵

Just Ask for Whole Grains Campaign (2007-2008)

In 2007, the Whole Grains Council (WGC) launched the *Just Ask for Whole Grains Campaign* with two major goals: (1) increase the demand among American consumers for whole grains when they purchased foods away from home; and (2) encourage the U.S. restaurant sector and major food-service operations to offer at least one whole-grain choice on their menus.¹³ Consumers were encouraged to report restaurants that offered whole grain options and to



take whole grain report cards to restaurant managers showing their approval or desire for more whole grain choices. "Just Ask" buttons were available for non-profits and healthcare organizations and educators to promote consumer requests for whole grains. The *Just Ask for Whole Grains Campaign* ran only for one year. However, the WGC has continued to promote whole grains through various retail settings and consumer interactions.

By 2015, the International Food Information Council's Food and Health Survey reported that two-thirds (67 percent) of Americans stated that seeking whole grains was among the decisions they made when purchasing packaged foods.⁷³ The populations most likely to have reported selecting whole-grain food products were college educated adults and older women from higher-income households. A separate 2015 survey found that cost (39 percent) and the limited availability of whole grains served in restaurants (28 percent) remain significant barriers for Americans for not consuming the recommended 48 grams of whole grains every day. Moreover, there is a need to build trust to support effective public-private partnerships involving diverse stakeholders who engage in growing, producing, marketing, and regulating whole-grain products, and to create alliances with public health professionals involved in educating Americans to purchase and consume whole-grain products.⁷⁴

Campaign to promote nut and legume sales and consumption

Peanuts are a legume that is considered to be both a vegetable and protein food. While the average American consumes the recommended amount of proteins, The DGA recommend that teens and adult men could reduce their intake of meat, poultry and eggs and replace these with plant-based proteins such as beans and legumes.⁵ The DGA 2015-2020 recommend that Americans' consume 5.5-ounce equivalents of protein foods for a 2000 calorie/day diet. A half an ounce of peanuts is one protein equivalent. Peanuts are also a source of beneficial monounsaturated fat that can replace saturated fats in the diet to help to reduce cardiovascular disease risk.⁵

The Perfectly Powerful Peanut Campaign (2014–present)

In 2014, the National Peanut Board initiated *The Perfectly Powerful Peanut Campaign* to replace the 2010 *Energy for the Good Life Campaign* and promote the sale and consumption of peanuts among Americans.¹⁵ The nearly \$2 million campaign is funded through a one percent assessment of the U.S. peanut crop sales. The campaign uses print, online and paid advertising including botanical drawings of a peanut plant with taglines that promote the power of peanuts through photographs of target populations including women, mothers, children and older consumers.¹⁵



The new campaign targets health-conscious Americans who are interested in consuming more plant-based dietary protein and nutrient-dense foods. The campaign was also designed to compete with the promotional campaigns of other nut commodity boards (e.g., almonds and pistachios) and food companies that market peanut products such as Kraft Foods' *P3 Portable Protein Packs* campaign that advertises meat, cheese and nuts.¹⁵ No evidence was available to assess the campaign's effectiveness to raise awareness or change purchasing or consumption behaviors of Americans. However, the National Peanut Board uses USDA national per capita consumption data for evaluation purposes that has reported an increase in U.S. annual per capita consumption of peanuts since 2012, representing an increase from 6.72 pounds of peanuts per person in 2012 to 7.42 pounds per person in 2016.⁷⁵



Campaigns to promote fluid milk sales and consumption

The DGA 2015-2020 recommend that Americans consume 2-3 cups of dairy products daily depending on their age, gender, and physical activity level.²² Fat-free and low-fat dairy products supply lower amounts of fat and calories than higher fat options, while still providing equivalent amounts of other nutrients. Fluid milk comprises about half (51 percent) of Americans' dairy and is consumed mostly as a beverage or on cereal. Americans' whole milk consumption declined from 1970 to 2010 (reduced from 25 to 6 gallons of milk/person/year); and low-fat milk consumption remained stable (about 15 gallons/person/year) between 1990 and 2010, which represented less than 2 cups/person per day in 2012.⁷⁶ The desire for milk producers to increase sales was a motivation for the development of the *Got Milk?* Campaign and its replacement, the *Milk Life* Campaign, to improve both sales and intake of fluid milk among Americans. The *1% or Less* Campaign aimed to switch Americans consumers to purchase and consume low-fat milk to reduce their saturated fat intake to help reduce their risk of cardiovascular disease.

Got Milk? Campaign (1993-2015)

In 1993, the California Milk Processor Board funded the creation of the *Got Milk?* Campaign to promote fluid milk sales and consumption among Californians that had been steadily declining.



Jeff Manning co-created the *Got Milk?* Campaign with the creative advertising firm called Goodby, Silverstein & Partners. Rather than using the "good for you" health messages, the campaign's formative research focused on how much milk was consumed by Americans, and with which foods at what hours of the day to track people's reported behaviors^{12,77} The campaign was expanded nationwide in 1995 and used a 'milk deprivation' strategy based on the formative research that milk was mostly consumed with other foods rather than alone, and people were most passionate about milk when they ran out of it. The campaign designers turned the catchy *Got Milk?* mantra into a memorable message, created partnerships with industry sectors including recognized food brands, and used innovative licensing deals and multicultural marketing to promote fluid milk sales.⁷²

The *Milk Mustache* print campaign was designed by the creative firm, Bozell, and launched by the National Fluid Milk Processor Promotion Board in 1995.¹² While it was separate from the *Got Milk?* Campaign, both campaigns used co-branded taglines (e.g., *Got Milk?* and *Where's your mustache?*). The latter campaign used photographs taken by Annie Leibowitz of more than 300 popular entertainment, sports, political and media celebrities used in print, online, broadcast and TV commercials to target ethnically and racially diverse audiences to promote a milk mustache associated with drinking a glass of milk.^{77,78}

The *Got Milk?* Campaign was supported nationally for more than 20 years by the Milk Processor's check-off program and coordinated by the national Milk Processor Education Program (MilkPEP) that dedicated a percentage of U.S. fluid milk sales to promotional activities.⁷⁹

After the *Got Milk?* Campaign was launched in 2013 in California, the largest milk and dairy producer state,⁸⁰ fluid milk sales increased during the first year.⁷⁷ During the 20-year period that the campaign ran nationally (1995-2015), there was a steady decline in national fluid milk sales and consumption, which was attributed to Americans drinking milk on fewer occasions throughout the day and marketing competition from other beverages including sweetened soda, fruit juices, water, soy milk, coconut water and nut milks.⁸¹

While the *Got Milk?* Campaign did not increase fluid milk sales and consumption, it is still considered to be a successful marketing and media campaign for several reasons: (1) it used a message that was simple, powerful and actionable and that reflected the reality of how people consume milk; (2) it was inclusive of all ages and culturally adapted to appeal to different ethnic groups; (3) it was clever, funny and captured people's attention; (4) it used a differentiating competitive strategy to separate itself from other beverages; (5) it used co-branding strategies to associate with other recognized food brands (e.g., Nabisco's Oreo cookies, Nestlé's Nesquik, and Dole bananas) including cross-promotions with media characters (Sesame Workshop's *Cookie Monster*) and brand mascots (*Trix Rabbit* and *Snap, Crackle Pop*); (6) it led to increased revenue through licensing of the *Got Milk?* trademark to other groups and businesses to promote non-milk products (e.g., T-shirts and baby clothes) that helped to transform the tagline into an asset; (7) it leveraged publicity strategically; and (8) it received many marketing awards and earned media attention for working with popular celebrities.^{16,77,78}



Milk Life Campaign (2015–present)

In 2015, MilkPEP launched the *Milk Life* Campaign to replace the national Got Milk? Campaign that will be funded through a U.S. domestic check-off program and combine IMC (e.g., TV, print, digital and retail promotions and public relations) to increase fluid milk sales and consumption that have plateaued.⁸⁴ This campaign uses a nutritional message (e.g., “the power of protein”) to depict liquid milk powering regular people in running, playing in a rock band, or playing basketball. The MilkPEP reported in 2015 that it planned to continue to use the *Got Milk?* message in the *Milk Life* Campaign, although the details of this plan are unclear.⁸⁴



1% or Less Campaign (1995–2004)

The *1% or Less* Campaign was a theory-based mass media campaign developed by the Center for Science in the Public Interest to encourage Americans to switch from purchasing and consuming high-fat milk (whole and 2 percent) to low-fat milk (1 percent or skim) to reduce their saturated fat intake and cardiovascular disease risk.⁸⁵ The media campaign was implemented in several communities and states (e.g., California, Hawaii and West Virginia) between 1995 and 2004 and used paid advertising, public relations, and community-based education programs in schools, worksites and supermarkets to promote low-fat milk sales.



In 1995, the campaign was evaluated in Clarksburg and Bridgeport, West Virginia over seven weeks.⁸⁶ Results suggested that the campaign increased low-fat milk sales by 16 percent, and low-fat milk's market share increased from 18 percent (baseline) to 41 percent of total milk sales that was sustained six months after the campaign finished.⁸⁴ In 1996, the *1% or Less* Campaign was launched in Wheeling, West Virginia to compare the campaign's influence on milk sales at supermarkets compared to a control city. Four weeks after the Wheeling campaign launch, low-fat milk sales increased from 29 percent of total milk sales (baseline) to 46 percent of total milk sales and maintained six months after the campaign ended.⁸⁷

A separate cost-effectiveness evaluation was conducted for four West Virginian cities (i.e., Clarksburg, Wheeling, Parkersburg and Beckley), which found that the combination of paid advertising and media relations (57 cents per person) was the most cost-effective strategy to influence the target population to switch from high-fat to low-fat milk; and the combination of media relations and community-based education activities (\$11.85 per person) was the least cost-effective strategy to influence a switch to low-fat milk purchases.⁸⁸ However, the use of paid advertising in the absence of other media or community programs was not effective to sustain the increases in low-fat milk purchases and consumption after the advertisements stopped airing.⁸⁹

In 2000, the *1% or Less* Campaign was implemented in East Los Angeles, California that targeted low-income Latino residents.⁹⁰ The formative research revealed that Latino residents believed that 2% milk was low fat, and a limited number in the target group drank plain milk. Therefore, the Campaign messages and activities were adapted for the audience including the use of banana liquidos (a blend of milk, ice, bananas and water) for taste testing. Results suggested that whole-milk purchases had dropped from 66 percent to 24 percent of overall sales, low-fat milk sales doubled, and milk purchases increased by 30 percent.⁹¹ In 2004, the *1% or Less* Campaign was launched in Hawaii over six weeks and used culturally adapted multi-marketing including TV advertising, public relations and taste tests. Results suggest that low-fat milk sales increased from 32.7 percent to 39.9 percent, and that low-fat milk consumption increased among milk drinkers from 30.2 percent to 40.8 percent that was sustained at three months after the campaign ended.⁹²



Campaign to promote water sales and consumption

Water consumption is vital to health, and can be accomplished through a variety of foods and beverages. Water helps the body to regulate temperature, lubricate and protect tissues, manage weight and expel wastes. Plain drinking water does not have standardized recommendations for intake due to the varying needs of populations and the contribution of food and other beverage sources to total fluid intake. While total fluid intake in the U.S. is not a public health concern, the content of fluids including the excessive amount of calories consumed from sugar-sweetened beverages (SSB) and subsequent risk for obesity and type 2 diabetes has become a target for intervention. Research has shown that replacing SSB with plain water can reduce caloric intake and the risk of unhealthy weight gain and obesity.⁹³

Drink Up Campaign (2013–present)

The PHA initiated the *Drink Up* Campaign in 2013 as a partnership among more than 50 businesses, foundations and organizations to encourage more Americans to drink more water more often.⁹⁴ This campaign tagline was used intentionally because the PHA did not want to use educational messages to promote the health benefits of drinking water. The *Drink Up* Campaign has partnered with popular celebrities to promote water consumption, including First Lady Michelle Obama and musicians, John Legend and Ashanti, and used engaging marketing strategies to form an emotional connection with the target audiences. A preliminary evaluation conducted by Nielsen-Catalina Solutions reported that the *Drink Up* Campaign may have contributed to a four percent rise in incremental sales of bottled water among people who had viewed the campaign online between October and December 2014,^{95,96} and an increase in bottled water and tap water consumption in restaurants between 2013 and 2014.⁹⁷ In 2015, following years of steady growth, U.S. bottled water sales by volume achieved a record high of more than 11.7 billion gallons sold compared to SSB and other soft drinks. The factors that may have increased water sales are consumer interest in and association of bottled water with a healthy lifestyle, convenience, safety and value for the money spent.⁹⁸



Campaign to promote environmental sustainability and reduce meat consumption

The DGA 2015-2020 recommend 5.5 ounce-equivalents of protein for a 2,000 calorie diet.⁵ A healthy eating pattern includes a variety of protein foods in nutrient-dense forms, which include foods from animal and plant sources such as seafood; lean meats, poultry, eggs, nuts, seed, legumes and soy products.⁵ The scientific advisory committee report that was used to inform the DGA 2015-2020 recommended that Americans consume less red and processed meats for health reasons and also to support food security and planetary health.⁶ However, the DGA 2015-2020 did not include a specific recommendation for Americans to reduce their red meat intake.

Meatless Monday Campaign (2003–present)

The *Meatless Monday* Campaign was initiated in 2003 to raise Americans' awareness about the relationships among human, environmental and ecological health and sustainability of the U.S. and global food system. The Campaign was created by Sid Lerner, a retired advertising executive, and Bob Lawrence, Director of the Johns Hopkins Center for a Livable Future. The *Meatless Monday* Campaign is coordinated by the Center for a Livable Future's Monday Campaigns. The *Meatless Monday* Campaign was based on the U.S. Surgeon General's Healthy People 2010 goal to reduce saturated fat consumption in Americans' diet by 15 percent, and also was designed to inspire Americans to engage in a behavior to support planetary health.^{99,100,101}



The tradition of not eating meat on Mondays in the U.S. dated back to World Wars I and II to conserve food for the U.S. troops overseas.⁹⁹ The campaign's messages have continued to use a weekly cue to encourage Americans to take a Meatless Monday pledge by not eating meat once a week to support personal health and planetary health goals. The campaign messages encouraged organizations and businesses to use the message to support their own goals. IMC components were effectively incorporated into the campaign including celebrity endorsement (e.g., Oprah, Michael Pollen, Dr. Oz, Paul McCartney, Leonardo DiCaprio and celebrity chefs) to deliver a positive and fun message about making dietary choices (i.e., selecting vegetarian options) across many media platforms.^{100,101}

The *Meatless Monday* Campaign messages were deemed to be effective to influence dietary behaviors because they were simple, memorable and adaptable to many different circumstances and people could make a small change without sacrificing total meat consumption. The messages allowed people to synchronize their actions for personal health and also to support planetary health.¹⁰⁰ The concept has been adapted across U.S. schools, college campuses, worksites, government institutions, restaurants and hospital cafeterias. There are also *Meatless Monday* cities (e.g., Aspen, Colorado; Los Angeles, California; and Philadelphia, Pennsylvania) that have passed local ordinances to support the campaign. It has also become a global movement across 30 countries. An evaluation suggested that Americans' awareness of the campaign rose from zero percent in 2003 to 46 percent in 2013.¹⁰¹ FGI Research and Analytics conducted an online tracking survey to assess the awareness of the campaign in 2012, and found that 36 percent of Americans reported that the *Meatless Monday* Campaign had influenced them to reduce their red meat consumption.¹⁰¹



Sodexo was the first major food service and management company to implement the *Meatless Monday* Campaign at selected universities and in healthcare settings. Sales data collected by Sodexo revealed that 40 percent of the participating food-service facilities recorded an increase in vegetable purchases and about a quarter reported a decrease in meat purchases over a full year of implementing the campaign starting in January 2011.¹⁰³ A recent trend analysis of U.S. meat consumption suggested that Americans are consuming more lean and organic red meat and poultry since the 1970s through 2015.¹⁰⁴



Table 4: National U.S. marketing and media campaigns used to promote healthy food and beverage groups to Americans

Branded Campaign (Website)	Goal	Sponsor(s)	Timeline Implemented	Estimated Funding (U.S. Dollars)
FRUIT & VEGETABLE PROMOTION				
1. Five a Day	Promote 5-9 servings of fruits and vegetables/day for all Americans	National Cancer Institute and Produce for Better Health Foundation (PBH)	California (1988) Nationwide (1991-2007)	\$2 to \$5 million/year x 16 years
2. Fruits and Veggies—More Matters www.fruitsandveggiesmorematters.org	Promote 7-13 servings of fruits and vegetables/day for all Americans	Centers for Disease Prevention and Control (CDC) and PBH and other	Nationwide (2007-present)	\$2.5 to \$4 million/year
3. Eat 'Em Like Junk Food www.babycarrots.com	Change the way people think about carrots by creating a new brand and building brand awareness and loyalty for baby carrots Increase sales and consumption of baby carrots among children, teens and adult women	National Fruit & Vegetable Alliance members (15 members)	Syracuse, NY (2013) Cincinnati, OH (2010)	\$25 million x 3 years
4. Cans Get You Cooking www.cansgetyoucooking.com	To inform, educate, and inspire current canned food users to use canned food more often	Bolthouse Farms (acquired by Campbell's Soup Company in 2012) and an alliance of carrot producers comprised of 50 members	Nationwide (2013-present)	\$5.2 million x 3 years \$4 million x 2016 year
5. Frozen. How Fresh Stays Fresh www.howfreshstaysfresh.com	Change the way people think about frozen foods by changing negative perceptions around frozen foods to increase sales and consumption	American Frozen Food Institute	Nationwide (2013-present)	\$30 million x 3 years
WHOLE GRAINS PROMOTION				
6. Just Ask for Whole Grains www.wholegrainscouncil.org	U.S. restaurant and foodservice operations will offer at least one whole grain choice on their menus to increase consumer demand, sales and intake of whole grains	Whole Grains Council, Oldways (150 members)	Nationwide (2007)	\$10,000 x 1 year
NUT/LEGUME PROMOTION				
7. Energy for the Good Life and The Perfectly Powerful Peanut www.perfectlypowerfulpeanut.com	Promote the sales and consumption of peanuts among Americans	National Peanut Board	Nationwide (2010-2014) Nationwide (2014-present)	\$2 million x 2 years \$4.7 million in 2014 \$5.2 million in 2015
FLUID MILK PROMOTION				
8. Got milk? www.gotmilksales.org	Promote the sales and consumption of fluid milk among Americans	California Milk Processor Board Milk Processor Education Program (MilkPEP) National Fluid Milk Processor Promotion Board	California (1993-1994) Nationwide (1995-2014)	The National Fluid Milk Processor Promotion Board's check-off program, about \$100 million dollars/year x 20 years
9. 1% or Less www.cspinet.org	To encourage Americans to switch from drinking high-fat (whole and 2% milk) to low-fat (1% or skim) to reduce saturated fat consumption and reduce cardiovascular disease risk	Center for Science in the Public Interest and West Virginia University California Adolescent Nutrition and Fitness program University of Hawaii at Manoa	West Virginia (1995-1996) Los Angeles, CA (2000) Hawaii (2004)	\$51,000 in Beckley, WV \$51,000 in Parkersburg, WV \$61,000 in Clarksburg, WV \$50,000 for CA campaign \$140,000 x 6 weeks in Hawaii
10. Milk Life www.milklife.com	Promote the sales and consumption of fluid milk among Americans	Milk Processor Education Program, National Milk Processor Board	Nationwide (2015-present)	Not Available
WATER PROMOTION				
11. Drink Up www.youarewhatyoudrink.org	Promote the sales and consumption of water among Americans	Partnership for a Healthier America	Nationwide (2013-present)	Not Available
REDUCE MEAT CONSUMPTION				
12. Meatless Monday www.meatlessmonday.com	Encourage Americans' to skip eating meat once a week to reduce saturated fat intake and decrease diet-related NCD Raise Americans' awareness about the relationships among human, environmental and ecological health and sustainability of the U.S. and global food system	Johns Hopkins University Lerner Center for Health Promotion and Maxwell School of Citizenship and Public Affairs, Syracuse University	Nationwide (2003-present)	No money spent on advertising, only staffing and evaluation



Table 5: Variables of interest for the national, diet-related marketing and media campaigns related to brand development, marketing execution, and monitoring and evaluation

	Five a Day	Fruits & Veggies More Matters	Eat 'Em Like Junk Food	Cans Get You Cooking	Frozen. How Fresh Stays Fresh	Just Ask for Whole Grains	The Perfectly Powerful Peanut	Got Milk or Milk Mustache	1% or Less	Milk Life	Drink Up	Meatless Mondays
BRAND DEVELOPMENT												
Variables of Interest												
Theory or conceptual framework	Yes <i>Behavior change</i>	<i>Theory of Planned Behavior</i>	N/A	<i>Means-ends ladders</i>	N/A	No	No	No	<i>Theory of Reasoned Action</i> <i>4ps of marketing mix in CA campaign</i>	<i>Not available</i>	<i>Marketing based theory</i> <i>Some 4P marketing mix elements</i>	<i>Weekly que to action, a component of the Health Belief Model</i>
Formative research	Yes	Yes	N/A	Yes	N/A	No	Yes	Yes	Yes	Yes	No	Yes
Creative advertising firm	<i>Porter Novelli</i>	<i>Sterling Brands (NYC)</i>	<i>Crispin Porter & Bogusky (Miami, FL)</i>	None	<i>McCann</i>	None	<i>Lawler Ballard Van Durand (Birmingham, AL)</i>	<i>Goodby, Silverstein & Partners (San Francisco, CA)</i> <i>Bozell (NYC)</i>	<i>Pacy Markman for creative</i> <i>West Virginia ads through Zimmerman and Markman</i>	<i>Lowe Campbell Ewald (NYC)</i>	<i>Young and Rubicam</i>	None
BRAND MARKETING EXECUTION												
Campaign design elements												
Aspirational images, logo or graphics	<i>Sun with F&V in center</i>	<i>F&V juggler</i>	<i>Exciting/action oriented images and graphics</i>	<i>Images of picking cans out of a tree</i> <i>Attractive images of canned foods</i>	<i>Attractive images of meals made with frozen ingredients</i>	<i>Just ask for whole grains with plant</i>	<i>Peanut with USA brand; botanical drawings and photos of target populations</i>	<i>Milk mustache</i> <i>Black and white</i> <i>Got Milk? logo</i>	<i>Cow with sunglasses</i>	<i>Active scenes of milk in life</i>	<i>Drink Up drop</i>	<i>Global logo & a variety of other logos available for adaptable use</i>
Taglines and Common Messages	<i>Strive for five</i> <i>Eat 5 a day for better health</i> <i>Eat 5 to 9 a day for better health</i>	<i>Fruits and veggies more matters</i>	<i>Baby. Carrots. Extreme.</i> <i>Baby Carrots: The original orange doodles</i> <i>Eat them like there's no tomorrow (maybe there won't be)</i> <i>Our crunch can beat up your crunch</i>	<i>Field to sealed, and sealed to meal</i>	<i>Frozen. How Fresh Stays Fresh</i> <i>Freezing: Nature's Pause Button</i>	<i>Just Ask for Whole Grains</i>	<i>Energy for the Good Life</i> <i>Perfectly powerful peanut</i> <i>Not just good. Powerful good.</i> <i>Nothing beats a handful a day for heart health</i> <i>The most preferred nut in America</i> <i>Over 30 essential vitamins and nutrients</i> <i>Seven powerful grams of plant protein</i>	<i>Got Milk?</i> <i>Where's your mustache?</i>	<i>1% or less, yes</i>	<i>What 8 grams of protein looks like...</i>	<i>Drink Up</i> <i>You are what you drink</i>	<i>One day a week, cut out meat.</i> <i>Good for you, good for the planet.</i> <i>Less meat, less heat.</i> <i>Don't have a cow today...</i> <i>Meatless Monday!</i> <i>Get the beef off your buns</i>
Co-branding or co-promotion	No	<i>Co-promotion</i>	N/A	<i>Co-branding</i>	N/A	No	No	<i>Co-branding</i>	<i>Co-promotion</i>	N/A	<i>Co-promotion</i>	<i>Co-promotion</i>
Celebrity endorsement	Yes	No	N/A	<i>Celebrity component, not full endorsement</i>	N/A	No	No	Yes	No	N/A	Yes	<i>Celebrity component, not full endorsement</i>
Brand mascots and/or media characters	No	No	N/A	No	N/A	No	No	Yes	Yes	N/A	No	Yes



	Five a Day	Fruits & Veggies More Matters	Eat 'Em Like Junk Food	Cans Get You Cooking	Frozen. How Fresh Stays Fresh	Just Ask for Whole Grains	The Perfectly Powerful Peanut	Got Milk or Milk Mustache	1% or Less	Milk Life	Drink Up	Meatless Mondays
BRAND MARKETING EXECUTION												
Campaign design elements												
Sponsorships	PBH financially supported NCI supported through media effort	PBH Growers, Grocery Stores	N/A	Silken, Crown and Ball Can Manufacturers	ConAgra Foods, General Mills, Heinz, Hillshire Brands, Jasper Wyman & Son, Kellogg's, Lakeside Foods, Nestlé USA, Schwan's Foods and Seneca Foods	Oldways Whole Grains Council	National Peanut Board	Milk Pep	None	Milk Pep	Water brands and companies	Monday Campaigns
Partnerships	NAACP	F&V companies and retailers	N/A	Canned food brands, companies and retailers	Frozen food producer and retailers	Restaurant magazines, trade press	Partnered with brands for consumer events	Diversified Consumer Goods Beanstalk	Local supermarkets	N/A	NPD, convenience stores, water brands	Johns Hopkins School of Public Health Over 40 food and foodservice brands and companies
Public-private partnerships	Yes	Yes	N/A	No	N/A	No	No	Yes	No	Yes	No	No
Outreach and Education	Yes	Yes	N/A	Yes	N/A	Yes	Yes	N/A	Yes	N/A	No	Yes
Other marketing strategies	Yes	Yes	N/A	N/A	N/A	N/A	Work with influencers in foodservice	N/A	Tasting demonstrations	N/A	Talking fountain when people drink water	N/A
Marketing channels or platforms used												
Paid mass media	Yes, minor amount	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Unpaid mass media	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Earned media	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Social media	Unavailable at time of campaign	Facebook, Pinterest, Instagram, Twitter	Facebook, Twitter	Twitter, Facebook, Pinterest	Twitter	Unavailable at time of campaign	Twitter	Facebook Twitter	Unavailable at time of campaign	Facebook, Twitter, Instagram, Pinterest	Facebook, Twitter, Instagram	Facebook, Twitter, Instagram, Pinterest
Sponsored activities	No	No	N/A	N/A	N/A	No	N/A	No	N/A	N/A	Quicksilver surfing competition	No
Audience segmentation	Yes	Yes	Yes	Yes	N/A	No	Yes	Yes	Yes	N/A	Yes	No
Message tailoring	Yes	Yes	N/A	Yes	N/A	No	Yes	Yes	Yes	N/A	Yes	No
Integrated marketing communications (IMC)	Print, radio, communications through partners such as NAACP	Print, online, social media, food-retail settings, PR, school vending, cross-movie promotions and public transit	TV, online, retail promotions and advertising, school vending	No marketing but integrated communications TV, digital, print, retail, and online engagement	N/A	No	Print, online, transit	TV, print, online, billboards	TV, PR, supermarket materials, community promotions	TV, print, digital, retail promotions and PR	Retail, packaging, digital online, mobile	PR, social media, promotional materials, many open source driven campaigns



	Five a Day	Fruits & Veggies More Matters	Eat 'Em Like Junk Food	Cans Get You Cooking	Frozen. How Fresh Stays Fresh	Just Ask for Whole Grains	The Perfectly Powerful Peanut	Got Milk or Milk Mustache	1% or Less	Milk Life	Drink Up	Meatless Mondays
CAMPAIGN MONITORING AND EVALUATION												
Evaluation Design	Process Evaluation Awareness Knowledge of benefits Consumption	Awareness Attitudes NPD consumption metrics every 5 years	Sales in test markets and sales overall	Purchased IRI data on sales and engagement Awareness Attitudes	N/A	No evaluation	Attitudes Per capita consumption	Awareness Sales	Sales Per capita consumption	N/A	Online tracking from NCS-Brand lift Consumer behavior post exposure Consumption Sales Platform effectiveness	Awareness measured by online FGI survey Sodexo sales of vegetables and meat
Campaign Insights	Clearly state recommendation and reinforce benefits Show what F&V servings look likes Provide simple and clear suggestions about how to eat F&V	Emotional benefits needed to motivate Americans to eat more F&V Appeal to moms to be nurturing and responsible parent Focus on small steps and don't try to quantify 'enough'	To turn baby carrots into an identifiable brand Don't promote the health benefits	Inform, educate and inspire to show that cans make it quick and easy to eat a healthy and tasty meal Earned, owned and paid media combine to a substantial reach even without traditional marketing Use existing consumer values to create value in the product	Address misconceptions around frozen food Promote flavor and nutrition preservation	Consumers and restaurants had misperceptions of each other's views on whole grains	Need to "own" a unique space in the market, the focus materials switched from promoting health to focusing on consumer relevance	Development of the unseen portions of marketing (not advertising) was important to develop early on in the campaign to slow the decline in sales	Frequent message delivery Used clear language Price promotions are more powerful than advertising Paid advertising was the least expensive method to change behavior Uptake of campaign in other communities was limited due to lack of public health funding for advertising	N/A	Psychographic rather than demographic audience segmentation can have better effects Exposure can be wide reaching by piggybacking on existing materials and promotions by other water companies	Develop open source materials and provide them to organizations and people with larger reach to more effectively promote the message Use multiple benefits (human health, animal well-being, planetary well-being) in messaging Allowing open access to campaign materials can create a diluted campaign
Brand Awareness	Adult more likely to consume 5 or more servings of F&V if they were aware of the campaign and servings suggested	Campaign awareness up in moms to 30% in 2011	Campaign generated buzz and interest	Reached over 1.3 billion people through media, 65% of canned food companies engage with the campaign, in 33% all commodity volume	N/A	N/A	N/A	High level of awareness, considered an iconic campaign	N/A	N/A	N/A	FGI report—46% of Americans were aware of campaign
Brand Personality	Depended on audience Some tied to music, sports, science but overall fun	Passionate, vital, optimistic and straight talking	N/A	Uplifting, positive, inspiring	N/A	N/A	Interesting, rational	Simple, striking, charming, and fun	Straightforward	N/A	Friendly, practical, understanding and fun	Easy, friendly, simple
Brand Philanthropy	N/A	No	N/A	N/A	N/A	Provided some materials to schools and organizations for free	Partnered with Which Which's Project PB&J Supported Peanut Butter for the Hungry	N/A	No	N/A	N/A	Supports scholarship for Careers for Culinary Arts Professionals
Awards	N/A	N/A	Gold, Silver, and Bronze Effie Awards	N/A	2015 ASAE Power of A Silver Award	N/A	N/A	N/A	N/A	N/A	N/A	N/A



	Five a Day	Fruits & Veggies More Matters	Eat 'Em Like Junk Food	Cans Get You Cooking	Frozen. How Fresh Stays Fresh	Just Ask for Whole Grains	The Perfectly Powerful Peanut	Got Milk or Milk Mustache	1% or Less	Milk Life	Drink Up	Meatless Mondays
CAMPAIGN MONITORING AND EVALUATION												
Sales Outcomes	N/A	N/A	N/A	Increased sales in stores with retail activations	N/A	N/A	Peanut sales have been rising per capita in the US the past 3 years	Nationally over the course of the campaign sales declined	Increased sales of low-fat milk in target markets	N/A	Sales increased in test markets 3-4% incremental brand lift nationally over three years Market and retail specific campaigns also resulted in increased water sales	Of participating Sodexo facilities that implemented the campaign, half saw an increase in vegetable purchases and 30% a decrease in meat purchases
Knowledge, Awareness, Attitudes and Behavioral Outcomes	The 5 A Day message saw increases in awareness (18%) and understanding of its message (8% baseline to 20%) Elementary school and adult site interventions increased fruit and vegetable intake	49% of moms find the campaign motivating, 71% (2% increase from 2007) intend to serve more fruits and veggies to her family, and 30% of moms are aware of the logo up from 11% in 2007 Since launch, 100 billion consumer impressions	N/A	Consumer tracking found increased degrees of behavior change with campaign exposure Campaign awareness has increased	Over 2.2 billion consumer impressions	Consumer anecdotes that campaign motivated them to try whole grain options	Consumer brand tracking	Awareness of the campaign was increased but overall consumption did not	Sales and consumption of low-fat milk increased	N/A	Able to attribute viewing campaign ads to increased water purchases	FGI Tracking: 46% of Americans say they are aware of the campaign, 40% say it has influenced their decision to cut back on meat or consider cutting back



Table 6: Demographic profile of key informants interviewed for selected U.S. diet-related marketing and media campaigns

Characteristics	Informants N=11 (100%)
Professional affiliation	
Government agency	1 (9%)
Private-sector company or firm	1 (9%)
Industry trade association or business-interest organization	4 (36.4%)
Public-interest organization or consumer advocacy group	5 (45.4%)
Sex	
Male	3 (27.3%)
Female	8 (72.7%)
Age	
40-50 years	2 (18.2%)
51-60 years	5 (45.4%)
61-70 years	4 (36.4%)
Race/ethnicity	
White	10 (90.9%)
African American	1 (9.1%)
Highest level of education completed	
Bachelor's degree	5 (45.4%)
Master's degree	3 (27.3%)
Doctoral degree	3 (27.3%)



Table 7: Key informant interview questions

<p>Questions related to the evidence review</p>	<ul style="list-style-type: none"> ■ <i>What was the major goal of xx national media campaign?</i> ■ <i>Who were the major sponsor(s) and coordinators for the xx media campaign?</i> ■ <i>When did the xx campaign start/end (years or months)?</i> ■ <i>What was the estimated funding budgeted and used to support the development, implementation and/or evaluation of the xx media campaign (\$US dollars/year or \$US dollars/week or month).</i>
<p>Questions related to brand development</p>	<ul style="list-style-type: none"> ■ <i>What type of formative research was conducted to develop xx campaign?</i> ■ <i>What specific theory or conceptual framework was used to develop xx campaign?</i> ■ <i>Which creative advertising firm(s) were hired to develop or design the xx campaign?</i>
<p>Questions related to brand marketing execution</p>	<ul style="list-style-type: none"> ■ <i>What types of images, logos, or graphics were used in this campaign?</i> ■ <i>What tagline(s) were used in the xx campaign? If multiple taglines were used, which were the main/most popular and effective taglines?</i> ■ <i>Which companies or businesses did the xx campaign partner with or products in co-branded relationships?</i> ■ <i>Please describe whether brand mascots or media characters were used by xx campaign.</i> ■ <i>Please describe whether celebrities were used in endorsements for the xx campaign.</i> ■ <i>Please provide details for whether the xx campaign was involved in any sponsorships.</i> ■ <i>Please describe whether the xx campaign is/was involved in public-private partnerships.</i> ■ <i>What are the details (i.e., location, audience, type of education) used for any community-based initiatives supported through the xx campaign?</i> ■ <i>Are there any other key marketing strategies used in the xx campaign design that you have not yet mentioned?</i>
<p>Questions related to marketing channels or platforms used by the campaign</p>	<ul style="list-style-type: none"> ■ <i>What types of paid mass media did the xx campaign use?</i> ■ <i>Can you provide an estimate in U.S. dollars/year?</i> ■ <i>What types of unpaid mass media did the xx campaign use?</i> ■ <i>What types of earned media did the xx campaign receive?</i> ■ <i>What types of social media does the xx campaign use?</i> ■ <i>What community outreach does the xx campaign participate in?</i> ■ <i>How has the xx campaign used audience segmentation in its marketing strategy?</i> ■ <i>How did the xx campaign tailor its messages and images to reach different target audiences?</i> ■ <i>How is/was integrated marketing communications (IMC) used in the xx campaign?</i>



<p>Questions related to brand marketing and evaluation</p>	<ul style="list-style-type: none"> ■ <i>What was the evaluation design used for xx campaign?</i> ■ <i>What insights can you share about the effectiveness of the xx campaign?</i> ■ <i>How would you describe the personality of the xx campaign?</i> ■ <i>What was the effect of the xx campaign on brand loyalty and/brand equity?</i> ■ <i>Has xx campaign been associated with any philanthropic work? (Example: donating funding to a charity or non-profit organizations.)</i> ■ <i>What was the period in which the campaign ran in weeks, months or years?</i> ■ <i>What outputs have resulted in xx campaign? (Example: # people reached)</i> ■ <i>Did the campaign result in increased sales of the food or beverage items promoted?</i> ■ <i>What evidence is available to show that xx campaign influenced behavioral outcomes of targeted groups? (Example: purchasing or dietary behaviors changed as a result of the campaign.)</i>
<p>Conclusion and wrap up</p>	<ul style="list-style-type: none"> ■ <i>Are there any other important issues, questions or concerns that you want to comment on that we have not covered?</i>



Table 8: Key informant quotes by health-branding theme

Health Branding Theme	Quote, Key Informant and Campaign
<p>Brand Development</p>	<p><i>‘So we really honed in on specific population groups and developed media and communications to reach that target audience. ..because we focused on health disparities, we were able to increase our budget for that very significantly because it was a focus at NIH.’ [Informant 1, Five a Day]</i></p>
	<p><i>“So as a comparison between Five a Day and More Matters, we learned [that] everybody treated Five a Day like it was just a logo, and we learned to treat More Matters as a brand...how it talked, it was meant to have an emotional connection with consumers, not just an intellectual connection.” [Informant 3, Fruits and Veggies—More Matters]</i></p>
	<p><i>‘We really looked at who was the influencer in that decision-making process and who were we really trying to target...it ended up being busy millennial moms... who [are] trying to get dinner on the table and [may feel] guilty because they don’t understand anything about the canning process. [she] gets that aha moment when she learns about how that peach was picked within hours of being sealed and [canned] and about the nutrition and taste.’ [Informant 4, Cans Get You Cooking]</i></p>
	<p><i>“The structure is not only to translate communication into sales [but] in the case of Cans Get You Cooking, the initial strategy going in was to create a communications program that would be attractive to retailers and brands so that they would come into the program as partners and adopt and amplify the messages with their own money. This created a multiplier effect.” [Informant 5, Cans Get You Cooking]</i></p>
	<p><i>‘We had used Energy for the Good Life since 2009 and we thought that it was effective and it had a good run. But in 2009 when we launched it, there weren’t a lot of [businesses] that used energy to promote their brands...so the space became crowded around energy and we wanted to come up with something that was unique to peanuts that wasn’t being used. So the idea of the Perfectly Powerful Peanut came into play.’ [Informant 7, The Perfectly Powerful Peanut]</i></p>
	<p><i>“These other beverage brands are basically running Ferraris...they’re racing Ferraris around the track. If you think that you can build a Ferrari and race with them, you’re probably nuts. So instead of trying to build a Ferrari, let’s build the bumper sticker, and put it on everybody else’s Ferrari, and have them race around the track with our bumper sticker on their car...that’s what you see for Drink Up.” [Informant 10, Drink Up]</i></p>
	<p><i>“It’s every seven days, so it’s a periodic que [that] fits in with the promotional platforms of business. Supermarkets and restaurants promote things on a weekly basis. [Meatless Monday] is tapping into that natural recurring cycle of the week [because] Monday is the beginning of the week when people are wanting a fresh start and they are more open to healthy behaviors. All people that use it whether it’s media, supermarkets, advocates ...use it incorporated in their own weekly cycle of communications and promotions.” [Informant 11, Meatless Mondays]</i></p>
<p><i>“Before we began the campaign, we found [out] where people were buying their milk...we went to small stores and talked to the owners about stocking the 1% milk...we talked to the owners about why it this was important [for] their families’ health, how many their family members have diabetes, and how this was something for the community for them to stock the 1% milk when we did this campaign.” [Informant 9, 1% or Less]</i></p>	



Health Branding Theme	Quote, Key Informant and Campaign
<p>Brand Marketing Execution</p>	<p>“We know in order to get the message to consumers this has been a mainstay of our efforts... to license industry members to use the logo, to get it to consumers through product labelling or in-store point of purchase. We’ve worked very closely with supermarkets at point of sale, and we have learned through our research that consumers have learned about Five a Day and now More Matters largely through the supermarket and packaging...that is the main way we’ve partnered with companies.” [Informant 3, Fruits and Veggies—More Matters]</p> <p>“In the case of Got Milk... it’s more like 70 percent of the spending is on advertising. [It is] one of the inherent weaknesses of [the] Got Milk Campaign. But with Cans Get You Cooking it was about 50%... and the rest are what I would say is the unseen part of the iceberg, essentially the elements of traditional marketing infrastructure. It’s trade promotion, sales, research and product development...all sorts of things that go into a successful marketing program.” [Informant 5, Cans Get You Cooking and Got Milk?]</p> <p>“In other communities, with all of the [promotional] materials, people could decide whether to brand it themselves, and we encouraged them to [use] their own logos...we like when people plagiarize from us if they are local community folks.” [Informant 8, 1% or Less]</p> <p>“We had a special website page where we encouraged consumers to tell us when they found interesting whole grain options at a restaurant...every month we would choose winners and send them prizes to get consumers interested in the whole grains program.” [Informant 6, Just Ask for Whole Grains]</p> <p>“We are going to piggy back on all of the water concepts that are out there...we want our mark, our drink up drop, on as much stuff as we can in a beverage setting, which means that we are on a label, package, at retail, on boxes, filters, at fountains, and just as many places where we can put that drop so that people get visual acuity...” [Informant 10, Drink Up]</p> <p>“This is really a completely different model that is actually radical...when it started the idea was to just give it away and be open source for anyone to do it. The global version [is] in 22 different languages...I think that’s a key part of any budget or the execution of it to [let] other people pick it up.” [Informant 11, Meatless Mondays]</p>
<p>Monitoring and Evaluation</p>	<p>“We have [had] an annual survey every year to understand attitudes and reported behavior around fruits and vegetables...Every five years we also purchase [consumption] data from the NPD Group. We ask what it says when [consumers] see the logo on the product. We ask how seeing the logo on the product affects [their] decision to purchase the product.” [Informant 3, Fruits and Veggies—More Matters]</p> <p>“All the [surveys] track are attitudes, awareness, behavior...[but] what they should be tracking is behavior...all the various components of behavior that lead to changed outcomes...If you are delivering your messages and you are getting value chain partners to change their marketing behavior in ways that get you to where you want, then you can evaluate the extent to which consumers are changing their behavior. We did that with Got Milk...there is an econometric model that would show consumption really did get better for a while when we were promoting the weight loss benefits of milk for a while.” [Informant 5, Got Milk?]</p> <p>“What we look at is increasing per capita consumption over time...an indicator that you have to wait a while for [in order] to get feedback. But we can break it down and get information about how well we are doing more quickly by looking at the U.S. peanut stocks and processing reports published by USDA that come out quarterly.” [Informant 7, The Perfectly Powerful Peanut]</p> <p>“These were small media markets and we spent a couple of years. But we chose small markets on purpose so that we could have a defined area to test out the ads.” [Informant 8, 1% or Less]</p> <p>“Bottled water [is] the only thing we can track cleanly. Sales [data] are great, because [if] I ask you a question, you are not going to tell me you intend to buy more.” [Informant 10, Drink Up]</p> <p>“What we’re doing now is working with the three big food service providers, Compass, Aramark, and Sodexo...to develop best practices and a more granular evaluation of the campaign effectiveness.” [Informant 11, Meatless Monday]</p>



Health Branding Theme	Quote, Key Informant and Campaign
<p>Monitoring and Evaluation</p>	<p><i>"We have done research every year now, and consumers are feeling more confident than ever, [they] are aware of the messages that we're getting out there but [also] the canning process, and about cans being nutritious, and so we are slowly building those numbers up to have better awareness and purchase intent." [Informant 4, Cans Get You Cooking]</i></p> <p><i>"We did not do any formal evaluation and I suppose if we were dependent on grant funding, we would need to do that, but because we have a steady stream of income from the administrative fees from the Whole Grains Stamp, it helps fund our educational work." [Informant 6, Just Ask for Whole Grains]</i></p>



Discussion

This section summarizes insights about the common elements used across the 12 marketing and media campaigns to reach target populations. It explores how the findings for brand development, marketing execution, and monitoring and evaluation can be used to inform the FNV Campaign and future healthy eating campaigns.

Common elements across the 12 marketing and media campaigns

Brand development

Four campaigns (i.e., *Five a Day for Better Health*, *Fruits & Veggies—More Matters*, *1% or Less*, and *Meatless Mondays*) used a cognitive or behavioral theory (i.e., theory of planned behavior, theory of reasoned action, and/or the health belief model) to enhance the campaign's influence to change behavior. The *Cans Get You Cooking* Campaign organizers used a newly developed communications model to guide its brand development. Two campaigns (i.e., *1% or Less* and *Drink Up*) used the marketing-mix strategies (i.e., product, price, promotion and place) for the campaign brand development. Three campaigns (i.e., *Just Ask for Whole Grains*, *The Perfectly Powerful Peanut* and *Got Milk?*) did not use any explicit theory or conceptual framework to guide the campaign development. The informants consulted for these three campaigns cited expertise and specific goals to guide the campaign development. The use of theoretically grounded conceptual models or frameworks can help campaign designers to reflect on the factors that influence the dietary behaviors of a target population. The combination of behavioral, communications and marketing theories may help future marketing and media campaigns in all phases of the design, execution, and monitoring and evaluation. Nine of the 12 campaigns used the expertise of a creative advertising firm to inform the campaign design.

Of the 12 campaigns reviewed, three quarters (n=9) conducted some type of formative research to inform the brand development. Formative research involves testing messages, identifying and segmenting the target audiences, implementing surveys and convening focus groups to understand consumers' perceptions or misperceptions about specific brands and products.

Of the two campaigns that did not use formative research, *Just Ask for Whole Grains* was based on the goal of addressing misconceptions about whole grains among consumers and restaurant owners) and *Drink Up* was based on the goal to remind people to drink more water.

All of the campaigns used a combination of images, logos, or graphics in their promotional materials (Table 5). Two of the 12 campaigns (e.g., *1% or Less* and *Meatless Mondays*) allowed communities to adapt and customize the campaign images and messages that served to attract local partners and improve community awareness and recognition of the campaigns. All of the campaigns used one or more taglines or common messages based on different themes such as consumption (e.g., *Strive for Five*, *Drink Up*, *One Day a Week Cut Out Meat* and *Eat Them Like There's No Tomorrow*); product promotion (e.g., *Baby Carrots. Extreme.* and *The Most Preferred Nut in America*); generating need in the absence of a product or commodity (e.g., *Got Milk?* and *Where's Your Mustache?*); and to promote the health aspects of the product (e.g., *Eat 5 a Day for Better Health* and *What 8 grams of Protein Looks Like*).



Only five of 12 campaigns included either celebrity endorsement or some promotional materials that featured a celebrity. Examples ranged from the *Got Milk?* Campaign's use of more than 300 celebrities over 20 years in print materials, to lesser known celebrity chefs who provided education and cooking demonstrations for specific campaign-related products. The *Got Milk?* Campaign was the only one that used a formal co-branding relationship. A quarter of the key informants interviewed reported less formal partnerships in the form of co-promotions rather than co-branding.

Brand marketing execution

Many of the campaigns reviewed used a combination of images, logos, slogans, taglines or graphics to develop the IMC strategy and promotional materials. However, there was considerable variation across the 12 campaigns. Six campaigns used co-branding or co-promotion. Five campaigns (i.e., *Five a Day for Better Health*, *Cans Get You Cooking*, *Drink Up*, *Got Milk?* or *Milk Mustache*, and *Meatless Mondays*) used a celebrity component that included either an association or endorsement related to the campaign marketing and/or implementation. Three campaigns (i.e., *Got Milk?* or *Milk Mustache*, *1% or Less* and *Meatless Mondays*) used brand mascots or licensed media characters in their promotions. Ten campaigns used paid mass media as part of their IMC activities. Unpaid media was a common feature of all 12 campaigns that were promoted through outlets such as: social media, websites, and press releases. All campaigns received earned media through media outlet reporting and word of mouth. Audience segmentation was used in two thirds (n=8) of the campaigns and IMC strategies were used in 10 campaigns reviewed. The two campaigns that did not use IMC were *Frozen. How Fresh Stays Fresh* and *Just Ask for Whole Grains*.

Most of the campaigns reviewed used a combination of images, logos, slogans, taglines or graphics to develop the IMC strategy and promotional materials. However, there was considerable variation across the 12 campaigns. The brand marketing execution of the campaigns included the promotion of the brand through various channels, as well as different techniques or strategies to improve the awareness, effectiveness and uptake of the different brands. Ten of the 12 campaigns used paid mass media in their marketing efforts. Unpaid media use was a commonality between all 12 campaigns; venues included social media, websites, and press releases, among other forms of unpaid media. Eight campaigns that had used social media acknowledged its value as a targeted and diverse communication platform. Earned media was also used frequently by the campaigns. Including: media-outlet reporting and word of mouth to disseminate messages. Six of the 12 campaigns used community outreach to educate consumers about the attributes of a product, or to address misconceptions about a food or beverage category or product. For example, *The Perfectly Powerful Peanut* campaign educated the public about peanut farming through pop-ups in major cities, and also provided education about peanut allergies to staff at schools and professional associations.

Marketing strategies and techniques used by some campaigns included audience segmentation and IMC to influence behavioral outcomes and improve impact. Audience segmentation was reported in two thirds (n=8) of the campaigns. Seven of these eight campaigns were segmented by demographic characteristics whereas the *Drink Up* Campaign segmented audiences by psychographic characteristics. IMC was used in 10 campaigns through the comprehensive use of various marketing strategies (i.e., public relations and in- and out-of-store promotions) and integrated across media platforms (i.e., print, broadcast and online). The *Cans Get You Cooking* Campaign used IMC elements to reach consumers through in-store, radio, and online media platforms' and the *Just Ask for Whole Grains* Campaign did not use IMC strategies.

Campaign monitoring and evaluation

Nine campaigns had reported monitoring and evaluation metrics to assess their effectiveness. According to the key informant, the *Just Ask for Whole Grains* Campaign did not evaluate outcomes because the organizers preferred to spend resources on promoting whole grains for health rather than to earmark resources for an evaluation of effectiveness. Monitoring and evaluation data were not available for two campaigns (i.e., *Frozen, How Fresh Stays Fresh* and *Milk Life*). Brand awareness, attitudes toward both products and brands, and brand engagement were metrics collected by the campaign organizers to compliment sales and consumption data. Five campaigns measured awareness among target populations; however, no campaign relied exclusively on awareness measures, and eight campaigns collected either sales or consumption metrics either nationally or in specific markets. A quarter of the campaigns gathered information about consumers' attitudes and perceptions of the brand and products promoted. The organizers of four campaigns purchased proprietary data (i.e., sales, online consumer awareness and engagement tracking, and/or consumption data) from external marketing research companies such as Nielsen and Information Resources, Inc. Market Research.



Insights to inform the expansion and sustainability of the FNV Campaign

This study identified a variety of health-branding strategies used across the 12 national diet-related marketing and media campaigns. These findings can guide the FNV Campaign's expansion and impact, as well as future campaigns that promote a healthy diet and healthy food environments to Americans. We found that no campaign used a comprehensive set of all health-branding strategies. There is a lack of empirical evidence to support long-term behavioral changes influenced by these national branded diet-related marketing and media campaigns. Moreover, it is often difficult to determine whether behavioral changes can be attributed to a national campaign versus its synergistic influence combined with other activities or even secular trends.

Between 2015 and 2016, the FNV Campaign has used visually stimulating graphics and creative commercial and behavioral branding principles to encourage consumers to buy and eat fruits and vegetables. Unlike many of the campaigns in this review, FNV has not explicitly promoted the health-related aspects of fruits and vegetables. The FNV Campaign has used IMC elements including: edgy advertising messages; pro bono celebrity endorsement; interactive social media; print and broadcast media; sponsored community events; and in-store food-retail marketing to make fruits and vegetables attractive and "cool" to increase sales and consumption among Generation Z teens and Millennial moms. The FNV Campaign's messages are edgy and promote the taste or the unique characteristics of fruits and vegetables. While these messages are fun and memorable, they are not necessarily actionable and do not highlight value within the products' unique attributes.

There is a need to conduct comprehensive evaluations for health-branding campaigns. The *Milk Mustache* and *Got Milk?* Campaigns were implemented during a 20-year period to encourage Americans to buy and drink more milk. Despite a high level of consumer awareness and exposure to these campaigns,^{16,77} fluid milk sales and consumption decreased over this period.⁸¹ Some evidence from the key informant interviews suggest that there were modest increases in the sales of targeted commodities or products promoted through many of the campaigns reviewed in this report. However, it is very difficult to attribute these increases to the campaigns without examining other contextual factors. In conjunction with brand awareness, highly specific sales outcomes can provide more detailed and useful information on the effectiveness of components used than national and large-scale market data.

Insights from the IMC campaigns reviewed in this report suggest that the FNV Campaign could benefit from diversifying the focus of its messages. The campaigns reviewed focused their messages on the relevance to consumers, convenience, actions, and the health benefits of consuming a product or food and beverage group. The PHA may not want the FNV Campaign to be perceived as a traditional health promotion campaign. However, fruits and vegetables offer unique benefits to consumers in contrast to a majority of HFSS food and beverage products that are aggressively marketed especially to young people. These issues are relevant to the FNV Campaign's target populations of Millennial mothers and Generation Z teens. It is important to highlight the qualities and benefits of many forms of fruits and vegetables (e.g., frozen, dried, and canned), and the convenience and cost-saving strategies to address barriers that prevent mothers from buying and eating fruits and vegetables.¹⁰⁷

There is potential for the further development of beneficial attributes of fruits and vegetables into messages, and to use a framework guide behavioral changes. The lack of empirical research and impact evaluations of national diet-related marketing and media campaigns presents a unique opportunity for the FNV Campaign to address an evidence gap. The PHA's partners who support the FNV Campaign could collaborate with researchers to build the evidence base to support the campaign. The new FNV Campaign markets across U.S. cities and states are viable sites to conduct evaluations for different IMC and health branding strategies, while collecting multiple sources of process and outcomes data. Some campaigns included in this report used sales outcomes from smaller markets including individual stores, and providers, which enabled them to report large sales improvements during campaign duration. Narrowing the focus of the intervention and evaluation could benefit the FNV Campaign by attributing specific qualities, strategies and contexts to changes in the sales and consumption of fruits and vegetables.

Insights to promote a healthy diet to Americans

Community-based and individual interventions to improve diet quality can show promising results but are often hindered by large-scale environmental challenges. Macro-level environmental influences such as social norms and values, media platforms and food marketing practices have the potential to influence population-level diet changes. U.S. generic agriculture commodity promotion programs as a whole have shown to be a profitable investment, driving a median benefit-cost ratio of 6.0.¹⁰⁹ If proven effective, the FNV Campaign could support actions for an industry-wide generic promotion of fruit and vegetable commodities that have not yet been effective.¹⁰⁹ The collective results from the *Five a Day* and *Fruit & Veggies—More Matters* Campaigns suggest that well-funded national media campaigns may influence awareness and knowledge of a small proportion of Americans but have not yet translated into long-term dietary behavior changes over 25 years.

Few U.S. media and marketing campaigns have promoted the links between a healthy and environmentally sustainable diet. *Meatless Monday* is a rare example of a campaign designed to raise Americans' awareness about the relationship between reducing meat consumption to not only reduce their risk of diet-related NCD but also to promote environmental sustainability goals and planetary health. This campaign is comparable to the United Kingdom's *Eating Better* Campaign for a fair, green and healthy future.¹¹⁰

In 2016, the USDA identified the FNV Campaign as an example of an evidence-based social marketing program that can be used by state Cooperative Extension staff to promote healthy eating messages to reach low-income audiences using SNAP-Ed funding.¹¹¹ However, the FNV Campaign has not been evaluated formally to demonstrate that it is an effective social marketing program that can be replicated or adapted in states to justify the use of SNAP-Ed funding to reach limited-income U.S. populations.

Finally, healthy food and beverage marketing is obscured by a disproportionate marketing of branded HFSS food and beverage products. Nevertheless, there are unique characteristics and strengths of healthy food and beverage marketing and media campaigns described below.

1. The field of public health is on the side of healthy food and beverage marketing. Governmental, business, nonprofit, and community groups are all trying to improve the public's health. Future campaigns could benefit from cross-sectoral partnerships to leverage resources to support and sustain them over many years. Healthy-eating initiatives and healthy food marketing campaigns can also secure access to programs and settings, such as schools and food assistance programs, where commercial marketing practices are regulated.
2. Conducting and disseminating high-quality evaluations to improve the effectiveness and sustainability of marketing and media campaigns is paramount. Public and private funding to support large-scale improvements in the American diet through media efforts is limited and should be focused on strategies that have a demonstrated effective evidence-base.
3. Promoting the specific qualities of healthy food and beverage products can "piggyback" on existing consumer trends and social change movements.¹¹² These campaigns can focus on credibility to build consumer trust.
4. As consumers become more health conscious, companies will develop food and beverage products with healthy nutrient profiles. By leveraging existing consumers' values and tapping into their emotions, future marketing and media campaigns can focus on the relevance of products to consumers through the qualities and benefits that the campaign messages convey.



5. By promoting commodities as a component of a larger marketing effort or brand, healthy diet-related campaigns can partner with diverse companies and brands throughout the food-supply chain to increase sales and consumption. Cross-sectoral partnerships can magnify a campaign's brand or messages beyond what any single stakeholder could achieve.

Public health practitioners know how to communicate the health aspects of products but changing and sustaining desirable behaviors has proven to be very difficult. Training and collaboration with marketing professionals can help the public health workforce increase the applicability and effectiveness of their efforts through health branding. The extensive use of IMC can drive brand awareness and sales through the interplay of product development, promotional efforts, and research. Media usage costs vary; however, the cost-effectiveness over community and educational efforts to change behavior have been shown by the *1% or Less Campaign* evaluation.⁸⁸ There is a need for government and non-governmental organizations to partner with private-sector actors, including food retailers, food and beverage manufacturers, restaurants, and private foundations, to support and sustain marketing and media campaigns to promote a healthy diet and healthy food environments in the long-term.



Future Research

To our knowledge, all available relevant literature on this subject has been included in this review. However, our findings were constrained by the considerable lack of peer-reviewed published literature. For certain campaigns, we relied exclusively on the gray literature and/or news reports that were used to inform this review. The key informant interviews complemented the desk review to supplement evidence that was not available in the peer-reviewed or gray literature. We requested but were not able to interview key informants for three campaigns including: *Eat 'Em Like Junk Food*, *Frozen. How Fresh Stays Fresh* and *Milk Life*. For certain campaigns that were supplemented with interview responses, there were no published evaluations that described the campaign development, strategies and effectiveness.

Future research should:

- Conduct rigorous formative, process and outcomes research to guide and improve the relevance, awareness, attitudes and understanding of the FNV Campaign's graphics, logos, and use of celebrities and other IMC elements to encourage consumers to interact with and build an emotional bond with the FNV brand to buy and eat fruits and vegetables.
- Identify diverse media platforms and test communication messages that resonate with racially, ethnically and culturally diverse populations to buy and consume fruits and vegetables based on existing consumer values and market trends.
- Analyze the effectiveness of advertising to consumers versus more embedded forms of marketing such as partnerships and supply-chain activities or market research to inform the fruit and vegetable marketing expenditures of businesses.
- Explore the benefits that commercial partners can receive through co-branding and co-promotional efforts with health brands to create mutually beneficial healthy eating campaigns.
- Identify policies and actions that government, private-sector actors, and non-governmental organizations can use to encourage a healthy diet and healthy food environments and to increase the proportion of healthy food and beverage products marketed to Americans as the norm and not the exception.
- Explore how government, industry actors and non-governmental organizations can co-develop effective behavioral messages based on a health-branding framework that the commercial sector can adopt and amplify.
- Describe purchases and consumption of fruits and vegetables for SNAP-Ed participants and identify opportunities for using the FNV Campaign effectively within the context of the SNAP-Ed program.
- Provide detailed evaluations of future media and marketing campaigns that promote a healthy diet to contribute to the knowledge base and develop adaptable evidence based practices for future efforts.
- Given the increasing importance of the healthfulness and sustainability of food systems and diets in the U.S. and globally, raise citizens' awareness about how their dietary choices influence sustainability goals, and future marketing and media campaigns could incorporate actionable messages to highlight the interconnections between a healthy and sustainable diet for people and planet.



An in-depth review and discussion of certain issues were beyond the scope of this report but should be prioritized for future research. These issues include:

- Examine the body of research on how counter-advertising and media advocacy campaigns can be used to discourage HFSS food and beverage products or nutrients of concern such as saturated fat, sodium and added sugars in order to create an enabling environment for healthy food and beverage promotion.
- Determine how government, industry and non-governmental organizations can work together to reduce the exposure of unhealthy HFSS food and beverage products marketed to children and teens while increasing the promotion of healthy food and beverage groups and products.
- Evaluate how diverse industry stakeholders have responded to improve the landscape of responsible food and beverage marketing practices that target young Americans.

Conclusions

The adoption of effective and innovative health-branding strategies by the FNV Campaign will be important to achieve its goals to increase sales and consumption of fruits and vegetables among Generation Z teens, Millennial moms, and other targeted groups of Americans. The findings from this report may be valuable to inform the FNV Campaign as it expands to other U.S. cities and states. The results can inform existing and future partnerships, the use of celebrity marketing and endorsement, and other assets as the FNV Campaign expands nationwide. The results will be relevant to inform the efforts of state SNAP-Ed programs that adopt the FNV Campaign across the U.S. to promote fruit and vegetable consumption to low-income consumers.

The evidence reviewed in this report suggests a need to create an emotional connection between a brand and targeted groups. Consistent messages from many sources are more likely to have an influence on the fruit and vegetable purchasing and consumption behaviors of targeted groups. We conclude that comprehensive evaluations are needed for marketing and media campaigns that use of health-branding strategies to promote a healthy diet to Americans. Insights from previous national diet-related media and marketing campaigns can inform comprehensive strategies for the FNV Campaign to encourage Americans to buy and consume more fruits and vegetables to meet the DGA recommendations. The PHA and its partners have a unique opportunity to support independent and rigorous evaluations to build an evidence base to demonstrate whether the FNV Campaign is effective to encourage targeted populations to purchase and consume fruits and vegetables to support a healthy diet as the campaign expands to other U.S. cities and states nationwide.

Glossary of Terms

Term	Definition
Brand	Represents a name, symbol, logo, slogan or design that helps consumers identify a company, product or service to differentiate it from its competition in the marketplace. <i>Branding</i> is a process by which a product has attributes that increases its appeal to consumers.
Brand development	The analysis and planning activities related to how a brand is perceived by consumers in the marketplace.
Co-branding	A marketing relationship, partnership or collaboration between two or more companies, or a company or other entity (i.e., government or non-governmental organization or government organization) or individual (i.e., celebrity) that associates a single product or service with two or more brands to create marketing synergy. Co-branding combines the strength of the brands to increase the premium that consumers are willing to pay, or to influence the perceptions of consumers. Examples of co-branding include: sponsorships, cause-marketing arrangements and endorsements.
Evaluation reporting and outcomes reported	Description of the study design for evaluation and its components, statistics, and outcomes reported.
Environmental sustainability	Promotion of programs or efforts that support human and environmental well-being and compatibility over time.
Formative research	Research conducted before the design and implementation of a program or campaign in order for implementers to understand the specific needs of a targeted population or community and to adjust the program or campaign to contextual factors that may influence its effectiveness.
Healthy diet	An eating pattern that promotes a healthy body weight and also prevents and reduces the risk of chronic disease throughout the lifespan.
Health branding	An application of marketing principles to promote and produce behavior change as a public good by identifying how brand associations and beliefs can influence behavior.
Integrated marketing communications	Used by commercial businesses and non-governmental organizations to reach target populations by combining advertising, public relations, sales promotion, direct marketing, sponsorships, celebrity endorsement, and point-of-purchase with many communication techniques to provide clarity, consistency and maximum impact to build brand awareness and loyalty among consumers for products, services or ideas.
Marketing execution	The act of promoting or implementing coordinated marketing efforts to target consumers to increase sales and consumption of products or services.
Marketing mix	Refers to the strategies, tactics and activities used by a business firm to reach targeted customers. The commercial marketing mix includes product, place, price and promotion.
Media	An industry that uses various forms of print, broadcast, digital and interactive platforms to communicate with the public and other stakeholders. <i>Owned media</i> refers to communication channels within the control of a company or organization such as websites, blogs, email or social media sites such as Facebook or twitter to promote one's brand. <i>Paid media</i> refers to publicity gained through traditional advertising, sponsorships or owned media. <i>Unpaid or earned media</i> refers to when customers become the communication channel such as viral marketing or user-generated content.



Term	Definition
Non-communicable diseases	Conditions that result from behavioral, metabolic or physiologic risk factors (non-infectious or non-transmissible) rather than infectious agents. The leading lifestyle-related NCD in the U.S. and worldwide are cardiovascular diseases (i.e., heart attacks and stroke), type 2 diabetes, cancers and chronic respiratory diseases (i.e., chronic obstructive pulmonary disease and asthma).
Obesity	A condition when an individual has an excessive amount of body fat in proportion to lean body mass that increases the risk of developing other diet-related non-communicable diseases (i.e., cardiovascular diseases, type 2 diabetes and certain types of cancer) and premature mortality.
Planetary health	A term used to describe the interdependencies of human and natural systems in an interconnected globalized world. Also called "one health," it highlights the linkages among human, animal, environmental and ecological health to promote health for people and planet.
Psychographic segmentation	The application of commercial marketing principles to analyze, plan, execute and evaluate programs designed to influence voluntary behaviors of target audiences in order to improve their personal welfare and society.
Social marketing	The application of commercial marketing principles to the analysis, planning, execution and evaluation of programs or interventions to influence the voluntary behaviors of target populations in order to improve their personal welfare.
Sustainable diet	A diet that has low environmental impacts and contributes to food and nutrition security to support a healthy life for present and future generations to foster planetary health.



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