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Development of *2010 Dietary Guidelines for Americans* Consumer Messages and New Food Icon

Executive Summary of Formative Research

Background and Introduction

As mandated by Congress, the *Dietary Guidelines for Americans (DGA)* are developed and released jointly by the U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services (HHS) every five years to ensure the public receives the most current, scientifically sound nutrition advice available [Public Law 101-445, Section 301 (7 U.S.C. 5341), the National Nutrition Monitoring and Related Research Act of 1990, Title III]. The DGA are evidence-based Federal recommendations designed to prevent and reduce diet-related chronic diseases, while promoting good health and healthy weight among Americans ages two and older. In addition to the DGA policy document, which is written for use by policymakers and health/nutrition professionals, USDA and HHS also develop DGA-based consumer messages and tools for the general public. This formative research project was undertaken by USDA to develop nutrition messaging, based on the 2010 *Dietary Guidelines for American (2010 DGAs)*, and a “next generation” food icon.

Dietary Guidelines Messages. The 2010 *Dietary Guidelines* encompass two overarching concepts: 1) maintain calorie balance over time to achieve and sustain a healthy weight and 2) focus on consuming nutrient-dense foods and beverages. Guidelines recommendations are further categorized as follows for the DGA policy document chapters and consumer messages:

- Balancing calories to manage weight
- Foods and food components to reduce
- Foods and nutrients to increase

Food Icon. The Food Guide Pyramid (1992-2005) became one of the most recognized, used, and influential food guides in history. It was widely adopted and used by nutrition educators, food industry, Federal food and nutrition programs, schools, among others, and a large majority of the American public was familiar with the graphic. However, qualitative research in 2002 and 2004 indicated that, while key concepts of the Pyramid were understood, specific knowledge about it was limited. Because consumers preferred images and messages that were perceived as new, personal, and active, and desired some continuity with the original Pyramid shape, USDA simplified the Food Guide Pyramid infographic to create the MyPyramid graphic in 2005.

MyPyramid was designed as a simple icon to represent the MyPyramid Food Guidance System and to direct consumers to information, resources, and tools on MyPyramid.gov, recognizing the difficulty of teaching all pertinent nutrition concepts through a graphic alone.

Over time, confusion arose with some still using the “old Pyramid” and others the “new Pyramid”. The Pyramid became simultaneously critiqued for being too complicated and too simplistic. Additionally, concern remained that consumers were so familiar with the Pyramid, that they were not paying attention and implementing its advice. In May of 2010, the White House Childhood Obesity Task Force released a report entitled, “Solving the Problem of Childhood Obesity Within a

Generation: White House Task Force on Childhood Obesity Report to the President”. This report recommended “The Federal government, working with local communities, should disseminate information about the 2010 *Dietary Guidelines for Americans* through simple, easily actionable messages for consumers and a next generation Food Pyramid.” While it was recognized that the Pyramid has significant brand equity among nutrition education intermediaries and consumers, some felt that an entirely new image was needed to refocus attention on healthy eating. A plate was identified as a potential alternative image to the food pyramid due to its association with eating and its frequent use in the marketplace to demonstrate to consumers how to build a healthy meal.

Formative Research Plan. USDA undertook an iterative consumer research approach to develop consumer nutrition messages and test potential next generation food icons. The intent was to build on best practices and lessons learned throughout the nutrition education field; garner consumer reaction to the aforementioned areas of emphasis in the 2010 DGAs; and determine most preferred language and pictorial depiction for communicating Federal dietary guidance to the public. The research plan included interviews with Federal nutrition education staff; analysis of 2005 DGAs media coverage, environmental scan, and literature review; qualitative focus groups; and quantitative validation.

Methodology and Scope of Content

The following research components were implemented as a complementary package to inform consumer focus groups. These are not intended to serve as a comprehensive reviews or standalone reports.

Interviews. Meetings and one-on-one interviews provided opportunity to query Federal partners responsible for nutrition-related messages and communication related to the Dietary Guidelines. Participants represented a broad range of Departments, agencies, and programs within the U.S. Departments of Agriculture, Defense, Education and Health & Human Services, as well as the U.S. Fire Administration, the U.S. Office of Management and Budget, Office of Personnel Management, and the U.S. Domestic Policy Council.

Media Analysis. The analysis was based on a review of 278 news articles and transcripts from January 2004 through December 2005 mentioning “dietary guidelines” and the U.S. Department of Agriculture (USDA) and/or the U.S. Department of Health and Human Services (HHS). It reviewed messages and quotes from internal and external stakeholders and spokespeople and examined the topics driving news coverage about DGA 2005.

Environmental Scan. The scan was a review of six communication programs intended to change consumers’ awareness, understanding, attitudes and behavior in the area of dietary habits and physical activity. The programs were selected to help identify promising practices in communication and had a focus on media outreach, online communication, and communication through partners as strategies for behavior change. Additional selection requirements included indicators of success in changing awareness, understanding, and/or consumer behavior. The six programs reviewed were: VERB, We Can!, 1% or Less , Small Steps, America on the Move, and 5-4-3-2-1 GO!

Literature Review. The literature review analyzed 25 reports and articles from nonprofit and other relevant organizations; commercial research on consumer food preferences, attitudes and habits, (e.g., as Mintel and Yankelovich); and previous research conducted to support the DGA.

Consumer Focus Groups. A total of 14 focus groups were conducted in October, 2010. To ensure geographic diversity, as well as socioeconomic and attitudinal diversity, the focus groups were held in four markets across the U.S.: Bethesda, MD; Sacramento, CA; Chicago, IL; and Philadelphia, PA. Each participant satisfied the following requirements: Is a parent with at least one child between the ages of five and 12 residing in the household; has an annual household income (HHI) between \$15,000 and \$100,000; shops at least twice a month for groceries; and has a body mass index (BMI) between 20 and 35. Parents of young children were chosen as the research population to represent families. A validation step with children was build into the quantitative, discussed below.

During the recruitment process, participants were segmented into two groups: “Succeeders” and “Strugglers”, based on their answers to four predetermined screening questions. These screening questions were designed to identify participants’ perception of their success implementing specific eating behaviors in the areas of meal preparation, family meals, and intake of vegetables, as well as perceived healthfulness of eating habits. A total of 112 participants were included in the focus groups, with an equal split of 56 participants in each of the two segments.

Quantitative Survey. To test language in consumer messages and graphic images in support of the 2010 DGA, USDA conducted two surveys, one among children ages 10 to 13 and another among adults. A total of 2045 adults participated in the general population adult online survey in late December, 2010 through early January, 2011. The adult survey oversampled for two additional audience segments: ‘low education’ (n=1,037 adults with less than a high school education) and ‘low income’ (n=1,214 with yearly household incomes less than \$40,000).

Formative Research

Overall, the qualitative research revealed that consumers know the basics about healthy eating. However, notable deficiencies still remain, particularly when it comes to weight management, a key recommendation from the 2010 *Dietary Guidelines for Americans*. Specifically, a lack of knowledge regarding portion sizes and total daily calorie limit may hinder consumer efforts to achieve and maintain a healthy weight, indicating a need for supportive resources and tools on calorie management and portion sizes.

Dietary Guidelines Messages. Several main messages, along with supporting sub-messages, were developed based on the recommendations in the 2010 DGA policy document and information gathered through interviews, media analysis, environmental scan, and literature review. Main messages tested in focus groups were:

- Enjoy what you eat, just eat less of it.
- Save half your plate for fruits and vegetables.
- Snack wisely.
- Cut back on foods with added sugars, salt, and fat.
- Know your personal calorie limit. Depending on your health needs, this may range between 350-700 calories per meal.

- Break the sugary drink habit.
- Switch to 1% or fat-free milk.

In focus groups, consumers were asked to assess messages, with corresponding sub-messages, in terms of how effective they are in helping people make healthier food choices. It's important to note that each participant had personal reasons for certain messages either resonating or not resonating with them, based on their individual priorities and lifestyle. Further, each participant described their individual definition of what "eating healthy" means and several respondents indicated that taste is a hindrance to "eating healthy". However, some trends were seen across markets.

One message consistently emerged as most effective according to participants across geographic regions and eating habit segments. "Enjoy what you eat, just eat less of it" was consistently ranked within participants' top three most effective messages. "Switch to 1% or fat-free milk," was considered the least effective message overall. This message was consistently ranked at the bottom as one of participants' three least effective messages across regions, as well as across eating segments. Focus groups provided direction into ways to utilize sub-messages to help consumers be more receptive to the milk message.

Overall, consumers preferred specific, directive messages about "easy shift" behaviors. Messages conveying recommendations that participants perceived to be the easiest to adopt in the near future and incorporate into their daily routines were favored by the majority of participants. Participants felt messages including "Enjoy what you eat, just eat less of it," "Save half your plate for fruits and vegetables," and "Snack wisely" are realistic and, therefore, appealing. Participants repeatedly noted these messages are "easy," "simple" and "common sense." Furthermore, many participants remarked that their busy schedules would only accommodate small changes that require less preparation time and effort to incorporate. In other words, participants preferred messages with a focus on small, realistic and palatable actions they could pinpoint and take to change their current eating behaviors.

In contrast to easily adoptable messages, those messages participants perceived to be irrelevant or difficult changes to adopt were deemed less effective. The messages considered least effective were "Switch to 1% or fat-free milk," "Break the sugary drink habit," and "Know your personal calorie limit." However, a notable distinction emerged between "Strugglers" and "Succeeders" regarding why they chose these messages as least effective. In general, "Strugglers" viewed these messages to be difficult changes to adopt. Many expressed they disliked the taste of fat-free milk compared to versions with more fat or an aversion to counting calories. They were adamant about not making the suggested change to their diet because of the sacrifice they believed it would take to do so. "Succeeders," on the other hand, felt disconnected from the messages, suggesting they were immaterial and irrelevant since many had already made the switch to low-fat or fat-free milk, cut sodas and sugary drinks from their diets, and were already making choices based on calorie content.

Participants reported that sub-messages were effective in adding novel information to a message they had heard before, and therefore, helped them reconsider a message they previously disregarded. They also felt the sub-messages served to convey specific nutrition details about quantifiable actions they could take from the messages and this was preferable to them. While participants sought specific nutritional information, they did not want to feel as though they were

being told what to do. Feeling empowered by the messages and in control of their own food choices was critical for the majority of the participants. For example, many participants felt “Know your personal calorie limit,” and “Cut back on foods with added sugars, salt and fat,” were too restrictive.

Food group terminology was also tested to determine any necessary changes. Most remained relevant. However, the names of two groups changed as a result of focus group research. “Protein Foods” was tested to reflect the diversity of food products in the previously named “Meat and Beans” group. When provided with the term “Protein Foods”, participants across every focus group correctly named the breadth of foods included in that food group. Additionally, consumers felt that the term “Milk” was too limiting and constrictive as a food group label. They described “Dairy” as more encompassing in representing all the products derived from milk and those products rich in calcium.

Survey instruments were used to fine-tune and validate specific wording used in final messaging, based on focus group research findings.

Food Icon. Consumers were shown images of MyPyramid, an abstract pyramid with a triumphant figure on top, a plate depicting food groups, and a thought bubble depicting food groups. Like messaging, no single graphic appealed to everyone. Participants expressed specific feelings and preferences based on their own lifestyle, perceived limitations, motivations, etc.

When comparing the abstract pyramid, the plate, and the thought bubble, most groups preferred the plate and the thought bubble, for different reasons. Participants felt that the plate icon conveyed a nutrition message to consumers about family mealtime and making half their plate fruits and vegetables and thought it was a good reminder to eat this way at dinnertime and to eat healthy. Participants felt the thought bubble was an effective reminder to think about healthy eating over the course of the day.

The plate and thought bubble also lacked information for consumers. While the plate provided a visual suggestion of how to eat at mealtime, the thought bubble was felt to provide less information on how to eat using the food groups. Additionally, consumers thought a plate applied more to dinner than to breakfast, lunch, or snacks; did not convey what choices are best within each food group; conveyed proportionality between groups, but not the amounts they should be eating; was difficult to apply to combination foods prevalent in various cultures, fit (e.g., fajitas, lasagna, stir-fry); and did not represent a total day or total diet.

Survey instruments were used to fine-tune and validate specific graphic nuances in the icon.

Communicating Messages and Icon. The interviews, environmental scan, and literature reviews served as a road map to prioritizing strategies when communicating the 2010 DGA messages and food icon to consumers. Most suggestions expressed the importance of consistent messaging and providing supportive resources and tools that convey practical advice to consumers. Other recommendations and observations on message delivery from the formative research include:

- Breaking down the information into small, manageable, actionable steps for consumers
- Empowering people to serve as change agents in their communities

- Delivering messages when and where consumers make food choices
- Accommodating a range of reading levels and varying degrees of health literacy
- Sustaining visibility beyond the day of the release

Conclusion

Throughout the formative research process, two seemingly opposing needs emerged. These were simplifying nutrition messaging and providing more information. In addition, across audience segments and markets, qualitatively and quantitatively, it became obvious that no one message, tip, or icon appeals to everyone. This is because there are as many priorities, lifestyles, and perspectives as there are individuals.

Therefore, the breadth of the formative research indicates a comprehensive and layered approach to communicating 2010 DGAs. This starts with a simplified icon that serves to grab attention to eat healthfully at mealtime and prompts consumers to practical tips, how-tos, resources, and tools about how to do this in a way that works for them and their lifestyle.

A plate was chosen as the simple icon because it is a familiar eating symbol for consumers. It suggests how to build a healthy plate. However, as with the Pyramid, an icon will not teach all nutrition concepts, nor will it alone change behavior. Additional resources will be necessary to provide all the information that consumers say they need including what foods to choose within the food groups and amounts of food to eat. Therefore, successful DGA communication will supplement the plate and messages with tools and resources that help consumers manage calories and portion sizes, apply dietary recommendations and patterns to meals and snacks over the course of a day and week, and apply the DGAs with foods that meet their cultural needs. Finally, Stakeholders are critical to achieving *sustained* visibility of the 2010 DGA messaging, new food icon, and practical supporting tips and should be fundamental to a coordinated, consistent, and multi-modal communications effort.