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*Approaches for Promoting Healthy Food
Purchases by SNAP Participants*

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Approaches for Promoting Healthy Food Purchases by SNAP Participants

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EXECUTIVE SUMMARY

The United States is currently experiencing the highest rates of obesity, overweight, and diet-related chronic diseases in its history, causing greater emphasis to be placed on strategies that will help consumers make healthier food choices. Most Americans, including Supplemental Nutrition Assistance Program (SNAP) participants, do not purchase enough whole grains, dark green and orange vegetables, and legumes, and purchase too many items with excess calories from fats and added sugars. The average consumer spends only a small portion of the household food budget on fruits and vegetables, while more is spent on processed and packaged foods (Volpe & Okrent, 2012). At the same time, the food retail environment is saturated with food marketing messages, including health and nutrition claims and information, advertisements, and promotions for many unhealthy food items (Glanz & Yaroch, 2004).

Many products in grocery stores and other food retail environments carry front of package (FOP) and shelf labels that communicate health claims and nutrition information to consumers. While regulations for national nutrition rating systems fall under the authority of the Food and Drug Administration (FDA), the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture (USDA) is interested in exploring how these systems could contribute meaningfully to improving public health, especially for SNAP participants. SNAP is the largest nutrition assistance program in the country, providing food dollars to nearly 47.7 million individuals in 2013, with an average benefit of \$133 per person per month.¹ Given the reach of the program, even small changes to consumer purchasing patterns toward healthier food could have a significant public health impact.

The following research question guides this project: How can nutrition labeling systems be used to direct, encourage, or incentivize healthier food choices by SNAP participants in retail food settings? As such, the research project had three main objectives: (1) to develop a plan for how FOP and shelf-labeling systems could be applied to identify healthy choices across all food categories (packaged, bulk, frozen, fresh) and could be used as a basis for incentivizing healthy choices for SNAP participants, (2) to develop theory-based approaches that leverage FOP and shelf-labeling systems to promote healthier food purchases by SNAP participants in a manner that is consistent with the Dietary Guidelines for Americans (DGA), and (3) to identify two approaches that warranted further exploration, describing a step-wise study design for implementing and testing the impact of each approach through a future pilot study.

This study did not include recommendations for or development of a new FOP or shelf labeling system; rather, the guiding assumption was that the approaches would make use of FOP and shelf-labeling systems that may or may not be currently available for promoting healthy choices by SNAP participants. The task was to assume the existence of a system (not necessarily one that currently exists) that could support the plan and approaches. The project also assumed that the nutrition labeling system that supports the plan and approaches is aligned with the DGA, effectively identifies healthier products (including items across all food categories), effectively communicates this distinction to consumers, and can be implemented across all retail settings.

¹ <http://www.fns.usda.gov/pd/34SNAPmonthly.htm>

The plan for leveraging a nutrition labeling system and the incentive approaches for promoting healthy choices described in this report were developed through a review of the literature, expert consultation, and consideration of ongoing initiatives to help consumers make healthy choices in the retail setting. Expert consultation served to further develop the operational details of potential approaches and to identify challenges, barriers, and opportunities for the likely stakeholders of each approach. The technical expert rankings identified a set of possible approaches that were determined to be both feasible and have substantial potential for impact. From that list, the study team, in consultation with FNS, selected six approaches to develop further. Each of the six approaches was developed to include a full description of the theoretical framework, implementation, and suggested adjunct supports. The study team sought additional input from a midsized regional retailer and a small retailer to refine some of the technical features of these approaches. The six proposed approaches are as follows (Exhibit A-1):

Exhibit A-1. The Six Proposed Incentive Approaches

Proposed Approach	Type of Incentive
EBT rebate	Financial
2-for-1 price promotion	Financial
USDA MyCart	Nonfinancial
USDA Live Better reward card	Financial
Discount coupon	Financial
Targeted merchandizing and concurrent promotions	Nonfinancial

The following criteria were applied to select two as most promising among these six: potential for impact on the SNAP consumer, including potential for impacting the total diet of SNAP consumers; feasibility of the approach; ability of the approach to be responsive to retailers of different sizes and formats; potential for incentive approaches to be implemented across all food categories; and costs.

The two approaches identified as most promising are (1) the discount coupon approach, and (2) a targeted merchandizing and concurrent promotions approach. The first approach, the discount coupon, represents a fairly strong opportunity to provide a financial incentive directly to SNAP consumers and garner the financial support of manufacturers for the discounts offered. The targeted merchandizing and concurrent promotions approach presents an opportunity to alter the retail food environment to promote healthier food items. The appeal of the merchandizing approach lies in its potential for longer-term change in the choices consumers make as the food retail environment promotes healthier options.

The report concludes with a discussion of the main design features and approaches for the pilot study of the discount coupon and merchandizing incentive approaches. Each pilot study has multiple research objectives, including assessing (1) the impact of the incentive approach on consumer behavior; (2) the feasibility, scalability, and sustainability of the approach across retail settings; and (3) the costs associated with implementation and operation. For each incentive approach, we describe the pilot design and evaluation approaches that could be tested.

1. INTRODUCTION

The United States is currently experiencing the highest rates of obesity, overweight, and diet-related chronic diseases in its history, causing greater emphasis to be placed on strategies that will help consumers make healthier food choices. Improving the diet quality of most Americans is an issue of considerable concern to public health officials, primarily due to the role a healthful diet plays in preventing the onset of many chronic diseases (Flegal, Carroll, Ogden, & Curtin, 2010). In response to this concern, the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture (USDA) has revised food packages for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) to support purchase and consumption of more fruits and vegetables (Cole, Jacobson, Nichols-Barrer, & Fox, 2011). USDA is also conducting research on the promotion of farmers markets as an option for increasing the purchasing power of Supplemental Nutrition Assistance Program (SNAP) participants to access fruits and vegetables (Dixit-Joshi, Burke, Das, & Steketee, 2013). However, a current policy concern is whether these initiatives or others are enough to maximize the ability of SNAP participants to make healthy choices, and what additional alternatives should be considered. There is interest in ensuring that SNAP dollars not only continue to provide a safety net against hunger and poverty in America, but that the program explores creative ways to promote the purchase of foods and consumption of a diet that aligns with Federal nutrition guidance.

SNAP is the largest nutrition assistance program in the country, providing food dollars to nearly 47.7 million individuals in 2013. In an average month during Fiscal Year 2013, SNAP provided \$133 in benefits per person (USDA, Food and Nutrition Service). SNAP households can be challenged by limited access to retail locations that sell healthy food and a lack of knowledge about proper nutrition (Center for Budget and Policy Priorities, 2011; Center for the Study of the Presidency and Congress, 2012; Guthrie, Lin, Ver Ploeg, & Frazao, 2007). To counteract these challenges, some State agencies and health advocates have recommended that SNAP implement more-specific strategies to promote healthful food choices among program participants. These include additional nutrition education and promotion, as well as strategies that reward selection of healthful choices (e.g., incentives for the purchase of fruits and vegetables); (USDA, Food and Nutrition Service, 2010; Guthrie, Lin, Ver Ploeg, & Frazao, 2007).

One approach for overcoming some of the barriers SNAP participants face in choosing healthful foods is to leverage nutrition labeling systems. While regulations for national nutrition rating systems fall under the authority of the Food and Drug Administration, FNS is interested in exploring how these systems could contribute meaningfully to improving public health. Many products in grocery stores and other food retail environments carry front-of-package (FOP) labels that communicate health claims and nutrition information to consumers. Some food retailers have also implemented shelf-labeling systems that attempt to summarize the nutritional value of some products in the store. Even small changes that help consumers use a nutrition labeling system to make healthier choices could have a significant public health impact. Thus, it is worthwhile to consider whether strategies could be developed that more effectively communicate and encourage healthy choices through the use of nutrition labeling systems.

Research Objectives

This report describes approaches that use nutrition labeling systems to encourage SNAP participants to make healthier food choices in retail food settings. The project had three main objectives.

The first objective was to develop a plan for how FOP and shelf-labeling systems could be applied to identify healthy choices across all food categories (packaged, bulk, frozen, fresh) and used as a basis for incentivizing healthy choices for SNAP participants. The intent of the plan was to provide a road map on how FOP and shelf-labeling systems could be used to help improve the diets of SNAP participants. The concept paper identifies ways for consumers, food manufacturers, retailers, nongovernmental organizations, or government nutrition assistance programs to use FOP or shelf nutrition labeling systems to promote healthier choices. The plan considered how systems that effectively communicate the healthfulness of products (determined by the DGA) can be used by various stakeholders as a basis for encouraging healthier choices.

The second objective was to develop research-based approaches that leverage FOP and shelf-labeling systems to promote healthier food purchases by SNAP participants in a manner that is consistent with the DGA. These approaches were developed to be feasible across the broad spectrum of SNAP authorized retailers, ranging from supermarkets and superstores to small grocers, specialty stores, and farmers markets. The approaches required a science-based justification, a strong likelihood for affecting SNAP consumers' shopping behavior, and evidence that the approach could be implemented across retail settings.

The third objective was to identify two approaches that warranted further exploration, describing a step-wise study design for implementing and testing the impact of each approach through a future pilot study.

Orienting Assumptions for the Project

The project was developed around some key orienting assumptions. This study did not aim to develop recommendations for or request development of new FOP or shelf-labeling systems. The task was to assume the theoretical existence of a system (or systems) that is aligned with the DGA, effectively identifies healthier products (including items across all food categories), effectively communicates this distinction to consumers, and can be implemented across all retail settings. While such a system may not currently be available, the approaches were designed to make use of such FOP and shelf-labeling systems to promote healthy choices by SNAP participants.

Organization of the Report

This report describes the results of this study. Chapter 2 of the report summarizes the consultative process and resulting research findings used to inform methods for leveraging existing nutrition labeling systems to promote healthier choices for SNAP participants. It also describes the selection criteria used to identify these proposed incentive approaches. Chapter 3 presents the plan for leveraging a nutrition labeling system. It provides a road map for implementing strategies that could take advantage of a nutrition labeling system. Chapter 4 of the report summarizes six proposed incentive approaches that could be used to leverage FOP and shelf-labeling systems and target the shopping behaviors of low-income consumers. From these

incentive approaches, two are identified as most promising for further pilot testing. Chapter 5 describes the stepwise implementation and pilot testing for the two most promising approaches. Chapter 6 summarizes conclusions of the study.

2. SUMMARY OF THE RESEARCH AND CONSULTATIVE PROCESS TO INFORM DEVELOPMENT OF THE PLAN AND APPROACHES

This study began with a consultative process, including a review of existing literature and consultation with leading experts, to support the development of the plan for leveraging existing nutrition labeling systems and the most promising incentive approaches for promoting healthy choices. The process was guided by the following objectives: (1) identification of solutions that could be applicable in a range of retail settings; (2) development of strategies that could apply to foods in all categories (packaged, bulk, frozen, fresh); and (3) the appeal of both nonfinancial approaches and financial incentives that could be supported by reasonable cost sharing.

Key Findings from the Literature Review

A comprehensive literature review was conducted on the demographic profile of SNAP participants; the retail food environment, current use of nutrition labeling systems, and food shopping behaviors; behavioral economics; and the psychology of incentives in the food retail environment. The literature review included both peer-reviewed and gray literature culled from PubMed, Government agency Web sites, and other relevant industry and/or nongovernmental sources developed from 2000 to the present. Key findings from the literature review included the range of challenges for low-income shoppers in using nutrition labeling systems; understanding the range of existing financial incentive approaches (e.g., Double Up Food Bucks, Great For You partnership) that could be used as a starting point for the development of approaches tailored to the project's requirements; and the potential for longstanding promotional and placement marketing approaches to be used to leverage an incentive. This information was then used to develop a white paper.

The white paper described the food-purchasing patterns of SNAP households and their implications for development of the approach for incentivizing healthy choices, including the recent growth in the client population. The diet quality of most Americans, including SNAP households, falls far short of the DGA. According to the 1996 National Food Stamp Program Survey—the most recent survey of SNAP participants available—fruits and vegetables accounted for 19.6% of the money value of food used by SNAP households. Literature on the shopping patterns of low-income participants also established a need to consider the timing of SNAP benefits in the development of the approaches (Castner & Henke, 2011; Food Marketing Institute, 2011; Darko, Eggett, & Richards, 2013; Strayer, Eslami, & Leftin, 2012).

The white paper offered important findings that informed development of the plan for leveraging nutrition labeling systems. Numerous studies (Feunekes et al., 2008; Roberto et al., 2012; Hawley et al., 2013; Wartella, Lichtenstein, Yaktine, & Nathan, 2011; Wartella, Lichtenstein, & Boon, 2010) noted a relative lack of nutritional knowledge by low-income consumers and the challenges they face in using existing labeling systems. Furthermore, research has shown that higher levels of nutritional knowledge have a positive effect on nutrition label reading (Moorman & Matulich, 1993). However, other studies have suggested that consumers, especially older adults and those with lower levels of income and education, may experience difficulties using or interpreting food labels correctly, particularly if the label system requires a significant amount of interpretation to derive information (Drichoutis, Lazaridis, & Nayga, 2006; Feunekes et al.,

2008). One conclusion from these studies is that FOP and shelf-labeling systems that are straightforward and do not require interpretation or complex processing to contextualize meaning are more useful to consumers, especially low-literacy populations.

The paper also included a discussion of prior research on economic approaches for designing strategies that promote more healthful choices and aspects of the retail food environment that impact consumer choices. Targeted price alteration through taxes and subsidies is a commonly promoted and contested traditional economic strategy to encourage consumers to make healthier decisions. A recent review (Epstein et al., 2012) found that a combination of price reductions and increases, as an intervention focused on targeted foods, does modify the purchasing behavior toward those foods. However, the review also found that the nutritional quality of the resulting purchases is mixed, due to substitution effects. Thus, policy implications for pricing interventions are still unclear.

A number of studies reviewed in the white paper highlight how aspects of the retail food environment could inform both the development of the FOP and shelf-labeling plan and the incentive approaches (Chandon, Hutchinson, Bradlow, & Young, 2009; Connell, Goldberg, & Folta, 2001; Robert Wood Johnson Foundation & The Food Trust, 2011; Wansink, 2004). For example, retailers' and manufacturers' use of wellness and health as a competitive strategy to attract consumers to stores was identified as a potential method for achieving retailer buy-in. This retailer strategy was highlighted through examples such as stores hiring retail dietitians or offering store tours to help customers use nutrition labeling systems to identify healthier choices (Food Marketing Institute, 2011). These nonfinancial approaches (e.g., the use of marketing tactics in the presentation and promotion of food items) were identified as complementing economic strategies and helped inform the preliminary strategies presented as a part of the draft FOP plan, the design considerations of each proposed approach, and the expected impacts for proposed pilot studies.

The Expert Consultative Process

Overview

The project was supported by a panel of technical experts, which include a smaller advisory group that provided ongoing technical consultation and review of initial versions of the white paper and plan. Members of the project's advisory group are identified by an asterisk below. Following the foundational research described above, a formal consultative process engaged a set of expert panel members to develop the FOP and shelf-labeling plan and the approaches to incentivize the purchase of healthier foods by SNAP participants. The 10-member expert panel included specialists in behavioral economics, food and nutrition, health communication, psychology of incentives, SNAP advocacy, and retail and manufacturer operations.

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- Donna Levine—President, Donna LeVine Associates, Inc.

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- *Christina Roberto, PhD—School of Public Health, Harvard University
- Mary Sophos—Executive Vice President, Policy and Strategic Planning, Grocery Manufacturers Association
- *Carly Spross—Marketing Director, The Fresh Grocer
- *Ellen Wartella, PhD—Director, Center on Media and Human Development, Northwestern University
- Amy Yaroch, PhD—Executive Director, Gretchen Swanson Center for Nutrition

The consultative process focused on two key areas: (1) identifying opportunities and challenges for leveraging nutrition labeling systems to promote healthy choices; and (2) identifying and refining financial and nonfinancial incentive approaches that could make use of nutrition labeling systems across retail types and food categories. The expert panel convened in April 2013 for a 1-day technical meeting. This was followed by a Delphi process, which provided an opportunity for technical experts to further refine a set of potential incentive approaches to support healthier food choices by SNAP participants. The Delphi process is a method of collecting opinions on a particular research question. The conventional Delphi uses a series of questionnaires to generate expert opinion in an anonymous fashion and takes place over a series of rounds. These processes are briefly summarized in the following discussion.

Technical Meeting on FOP/Shelf-Labeling and Proposed Incentive Approaches

The consultative process began with a one-day technical meeting. In addition to the ICF study team and the technical experts, stakeholders attending the meeting included USDA representatives from FNS’s Child Nutrition Division, SNAP, and the Office of Policy Support; the Economic Research Service; and the Center for Nutrition Policy and Promotion. Prior to the meeting, the panel was provided with a briefing book that included the white paper and an annotated bibliography. The meeting opened with a brief review of the literature, and then the presentation of a preliminary FOP and shelf-labeling plan, which panelists had received in advance of the meeting. The main tasks for the panel during the technical meeting were to develop (1) recommendations for using FOP and shelf-labeling systems to identify and incentivize healthy choices, maximizing the existing systems across all food categories, followed by (2) recommendations on the essential design approaches and features that could be included in incentive approaches.

The expert panel’s discussion of the FOP and shelf-labeling plan recommended that the following factors be included in future design considerations. Incentive approaches that leverage a nutrition labeling system will need to reflect an understanding of SNAP consumers’ shopping behaviors and the contextual factors impacting use of their benefits, such as the fact that almost 80% of the benefit is used within two weeks of issuance. The incentives should promote an approach that helps SNAP consumers understand how best to maximize their benefits. Other considerations for the design of incentives include incorporating approaches that support a total diet approach while boosting consumption of fruits and vegetables. Additionally, the practical

realities of retailers and manufacturers (including their limited profit margins) should be considered to develop approaches that could work well in a variety of retail settings (e.g., supercenters/supermarkets and smaller retail stores).

The expert panel's discussion included topics such as the large consumer base of SNAP participants; SNAP purchasing patterns and retailer responses; using existing labeling systems to support healthy choices; identifying a product as healthy using existing nutritional-labeling systems; and manufacturer and retailer systems that can be used to support an incentive. The panel shared that stores are interested in maximizing profits from the sales boost that can accompany SNAP benefit issuance. Growth in the SNAP program has made the SNAP dollar more important to retailers that did not target this population in the past. Retailers that formerly did not cater to SNAP customers are now aggressively trying to capture this consumer segment by advertising that they accept SNAP and offering other promotions.

The expert panel agreed that incentive approaches should be as simple and straightforward as possible, with enough financial value to be meaningful to SNAP consumers. It would be important to consider a total basket approach in the incentive design to examine actual changes in the selection of healthy choices. The panelists also indicated that the need for retailers and manufacturers to preserve their competitive edge could be a barrier to many incentive approaches, including those that would require the use of retailer promotional strategies (e.g., additional sales) and data on consumer purchases. Design of the incentives would need to consider how to maintain the profit margins retailers and manufacturers receive through the sale of unhealthy items, as these are exchanged by the SNAP consumer for healthy choices. Healthy must be profitable to achieve support from these stakeholders, according to the expert panel.

The timing of the SNAP benefit release and SNAP redemption patterns present both challenges and opportunities for incentive approaches. Some experts recommended that the development of incentives should consider whether there are ways to manipulate the timing of SNAP benefits to both maximize the spending capabilities of consumers and meet the sales goals of retailers, but they acknowledged concerns about further limiting SNAP consumers' ability to make the most of a minimal benefit amount by breaking it into two offerings. The panel recommended that strategies be developed to direct consumers to retailers beyond the spending cycle associated with the initial monthly release of SNAP benefits, something retailers would be willing to support with additional marketing and production promotion resources. The features of incentive approaches could allow consumers to earn and use benefits over the course of the entire month with this idea in mind.

The technical meeting provided the rough contours of incentive approaches and possible features, presented in Exhibit 1. Experts were asked to refine these strategies in the initial round of the Delphi process, described below. As shared in the following chapters of this report, some of these ideas were the basis of the final proposed incentive approaches; others were either refined or dropped completely in favor of stronger alternatives.

Exhibit 1. Initial Suggested Features and Approaches for Incentivizing Healthy Choices

Feature/Approach	Description
Suggested incentive features	A shelf overlay label could be used as a means of promoting a healthy choice. The shelf overlay can be used to help shoppers easily identify healthy foods.
	As an example of a timing strategy, retailers could manipulate product sales at the beginning of the month to support perishables, or at the end of the month to promote frozen or canned items to augment SNAP fruit and vegetable purchases.
	Price promotions could be provided to SNAP participants at the discretion of retailers, but only for items that would be approved by USDA. This strategy would allow retailers flexibility in the use of their product promotion resources.
	The incentive approach could link retailers to SNAP–Ed. Retailers could support SNAP-Ed cooking classes or consultation with a dietician, and then coordinate promotions of products and the timing of promotions with the SNAP-Ed intervention. The result would be a coordinated communications campaign to drive traffic toward purchases. In this approach, the supermarket is the classroom and shoppers receive support on how to maximize their healthy choices using products retailers promote via the weekly store circular.
Suggested incentive approaches	Based on shopping behavior, a financial incentive could be offered that would result in SNAP participants receiving a rebate for future healthy purchases. SNAP shoppers would receive a rebate based on the healthy choices in their total basket. A percentage threshold of healthy purchases would be established for earning the rebate. If a certain percentage of the shopping trip or basket is composed of healthy items, consumers may receive an additional discount or a future coupon or rebate.
	A rebate-style incentive could be offered to consumers for healthy products that are specifically earmarked, a “buy-5-get-2” type of approach. Either retailers or consumers could track points earned through a green stamps approach or with alternative systems.
	The financial incentive could be linked to use of a loyalty card. As consumers make purchases that are identified as healthy using their loyalty card, they could accumulate points toward future purchases and receive a summary of a healthy purchases profile via their register receipt. The retailer would be incentivized through the increase in the use of consumer loyalty cards and foot traffic, resulting in purchases of selected items.
	Retailer product promotion and product placement strategies can be used in nonfinancial approaches. This would include shifting the timing of retailer promotions; shelf placement, cross-merchandizing, and signage to promote healthier choices; packaging of items; and advertising.

Development and Design of Approaches to Incentivize Healthier Purchases by SNAP Participants

Following the conclusion of the technical meeting, expert panel members were invited to participate in a Delphi process. The Delphi method was used to further develop the operational details of potential approaches to ensure that they leveraged FOP and shelf labels to identify and incentivize healthy choices across all food categories for SNAP participants. Panelists also were asked to (1) refine recommendations for implementing incentive approaches and considerations

for cost, use of technology, communication, and other relevant issues and (2) identify implications for key stakeholders associated with the respective incentive approach(es).

Through an online survey, Delphi participants answered a series of questions regarding a refined list of suggested approaches (Exhibit 2). Additionally, participants were asked to suggest at least one new financial and nonfinancial approach. They then rated each of these approaches on its likely effect on SNAP consumer behaviors, as well as its potential for risks or unintended consequences. For each suggested approach, expert panel members were asked to consider whether it (1) would be easy for low-income consumers with low literacy to understand, (2) was likely to be consistently used, (3) was likely to influence the whole diet, (4) would stigmatize the SNAP consumer, (5) would result in a competitive advantage only for some store formats, (6) would unintentionally promote SNAP fraud and abuse, and (7) could unintentionally increase sales of unhealthy items.

Expert panel members were then asked to rank the approaches from least to most preferred and provide additional information on the optimal design for their preferred approach. This information included likely operational features, benefits, challenges, auxiliary supports, and mechanism for use with an FOP or shelf-labeling system.

Exhibit 2. Initial Financial and Nonfinancial Incentive Approaches Considered by the Technical Panel

Approach	Description
Financial Approaches	
Standard discount	Healthier items are offered at a standard discount (e.g., 5% off) for SNAP consumers.
2-for-1 price promotion	Retailers offer 2-for-1 promotions and special deals on healthier items.
Points-based rewards system	Healthier items receive an incremental point value from most to least healthy. Accumulated points (adjusted for cost of item) can be redeemed toward future purchases of healthier items or toward an unrestricted prize (i.e., movie tickets).
Future coupon	SNAP shoppers would receive coupons (assigned a specific dollar value) based on the percentage of foods in their shopping basket labeled as healthier items. The coupons could be used toward future purchases of healthier items.
Instant coupon	Stock-keeping unit (SKU) scanners could be placed throughout the store for SNAP customers to check prices and receive instant coupons (transferable to store card or electronic benefit transfer [EBT] card) on selected healthier items based on the retailer's discretion.
EBT rebate	Similar to the USDA's Healthy Incentive Pilot, SNAP shoppers would receive a financial incentive on their EBT card when purchasing healthier items, which could then be redeemed at a future visit.
Nonfinancial Approaches	
Healthy or "green" aisles	Stores could group healthier items together on endcaps ² or in aisles, along with promotional messaging about the labeling system to encourage selection of the healthier items.

² An endcap is display in a retail setting at an end of aisle for a product. The display location, which can be leased by a manufacturer, can give a competitive sales edge to a product.

**Exhibit 2. Initial Financial and Nonfinancial Incentive Approaches Considered
by the Technical Panel (continued)**

Approach	Description
Nonfinancial Approaches (continued)	
Beginning of month special sales	Retailers use in-store advertising to promote sales on healthier items at the beginning of the SNAP cycle to draw attention to healthier items that SNAP consumers can purchase.
End of month special sales	Retailers can hold sales on frozen or canned healthier items toward the end of the SNAP benefits cycle so SNAP recipients' dollars can go further.
Shelf-label promotions	Shelf talkers (an in-store marketing tool that catches the consumers' eye to promote products or special deals, communicate nutrition information, etc.) or other types of shelf labels (e.g., hang tags) could call attention to healthier items and teach/reinforce how to use the nutrition rating system and FOP or shelf labels to make healthier choices.
Dedicated check-out aisles	Retailers could establish a dedicated check-out line reserved for shoppers whose food purchases include a certain percentage of healthier items, or who maintain an average dollar value of healthier items per trip.
Healthy product bundling	Retailers prepackage or bundle healthier items so that it is easier for consumers to make a healthier choice (e.g., preweighed apples or other produce, or items for a recipe).
Merchandizing	Retailers promote healthier items through advertisement of items on sale in the store flyer, other promotional materials, and through store lighting and displays.

Results from this initial survey were used to structure more detailed discussions of possible approaches to narrow the field to six proposed approaches. Subsequent expert discussions on the technical barriers, challenges, and motivations for stakeholders associated with each option helped the panel reach consensus on a set of approaches for further consideration. Factors receiving attention throughout these conversations included implementation strategies; likely requirements for stakeholder buy-in; likely direct and indirect costs; ability to sustain the incentive approach; potential SNAP and low-income consumer impact; and the potential to influence the total diet of consumers. At the conclusion of this process, the expert panel members identified and ranked the approaches. The ICF team, in consultation with FNS, sought additional input from national and regional retailers and manufacturers to select six proposed approaches from those ranked by the expert panel. The approaches identified were:

1. Discount coupon
2. EBT rebate
3. 2-for-1 price promotion
4. Targeted merchandizing and concurrent promotions
5. MyCart grocery cart divider
6. USDA Live Better card

The list includes direct financial incentives to consumers and approaches that use a combination of product promotion and nonfinancial supports. Each of the incentive approaches involves the

participation of stakeholders who can impact the food retail environment and the overall success of the incentive strategy. The primary stakeholders include food retailers (and their distributors), manufacturers, the SNAP consumer, SNAP-Ed, and external community partners. Additional consideration was given to other food producers and suppliers that could be important stakeholders for any incentive approach. These include retailers with “own brand” items they promote, as well as distributors, wholesalers, and food growers. Finally, the potential for corporate entities (e.g., insurance providers) to support an incentive approach also was considered.

Process for Selecting Two Most-Promising Approaches for Additional Exploration

As noted earlier, a goal of the project was to identify two approaches for additional development through a future pilot study. To make this determination from among the six proposed approaches, the ICF team used the following selection criteria:

- Potential for impact on SNAP consumer behavior
- Ability to directly target SNAP consumers
- Ease of understanding and use by SNAP consumers
- Compatibility with existing stakeholder operations and systems
- Adaptability to a broad range of retail types
- Potential for cost-sharing among diverse partners

The study team developed these criteria based on data obtained from the expert panel Delphi process and from subsequent interviews with retailers. The criteria took into account the major requirements of the project: potential for impact on the SNAP consumer, including potential for impacting the total diet of SNAP consumers; feasibility of the approach; ability of the approach to be responsive to retailers of different sizes and formats; potential for incentive approaches to be implemented across all food categories; and costs (including the likelihood that an approach could become financially sustainable in the long term). Using the ratings scale established for the Delphi survey, the team considered the operational features for each of the six approaches and rated them (1–very unlikely, 2–somewhat unlikely, 3–neutral, 4–likely, 5–very likely) for each selection criterion. Exhibit 3 presents ratings for the selection criteria for each approach.

The two approaches selected as most promising are the discount coupon approach and a targeted merchandizing and concurrent promotions approach (hereafter referred to as the targeted merchandizing approach), which are shaded in the exhibit.

Exhibit 3. Ratings for the Six Most-Promising Incentive Approaches by Selection Criteria

Selection Criteria	Rating of Incentive Approach					
	The EBT Rebate	The Discount Coupon	2-for-1 Price Promotion	MyCart Grocery Cart Divider	Targeted Merchandizing and Concurrent Promotions Approach	The USDA Live Better Reward Card
Potential for impact on SNAP consumer behavior	5	4	4	2	4	2
Ability to directly target SNAP consumers	5	5	3	2	3	2
Ease of understanding and use of the incentive by SNAP consumers	5	5	5	2	5	3
Approach compatibility with existing stakeholder operations and systems	3	5	5	2	5	3
Approach adaptability to a broad range of retail types	3	5	4	3	5	3
Potential for cost sharing among diverse partners	1	5	4	2	4	2

A summary discussion of the six proposed approaches is presented in Chapter 4 of this report.

3. THE FOP AND SHELF-LABELING IMPLEMENTATION PLAN

This discussion describes how FOP and shelf-labeling systems might function as a basis for promoting and incentivizing healthy choices. The intent of the discussion is to provide a road map for how nutrition labeling systems would be leveraged for the proposed incentives. This discussion presents an overview of nutrition labeling systems, describes how the plan identifies healthy choices to be featured within an incentive, and provides steps for leveraging a nutrition labeling system.

Overview of Nutrition Labeling Systems

Currently, no labeling systems fully meet the recommendations set forth by the Institute of Medicine (IOM) for an ideal universal nutrition labeling system. Yet many systems are already in use in grocery stores throughout the country, in both large national retailers and smaller or regional chains. Furthermore, a new national system may be developed at some point that could be used across multiple retailers, as recommended by the IOM. One of the challenges of this study is to design incentive strategies flexible enough to work with various existing nutrition rating systems and potentially with a future system. Despite this ambiguity, each of the strategies assumes that the FOP or shelf-labeling system used as the basis for a healthy food incentive strategy for SNAP shoppers will be able to successfully identify healthier foods that are aligned with the DGA.

FOP or shelf-labeling systems communicate nutrition information to consumers and may help guide consumers toward healthier food options. FOP symbols or ratings can be found anywhere on the front of a food package, while shelf labels are displayed through tags on the shelves where items are marketed, alongside product price information. Most of these systems have been created by large food-manufacturing or retailing corporations; they are therefore most heavily found in the packaged food and beverage categories.

Labeling systems that provide information to consumers about the nutritional value of foods generally fall into two categories: (1) nutrition information systems and (2) nutrition rating systems. Nutrition information systems provide numeric nutrition information (e.g., caloric content or grams of whole grain), which *describes* the nutritional contents of a product. Examples include the standard Nutrition Facts Panel (NFP) and other systems that summarize product contents based on the NFP, including Facts Up Front. Nutrition rating systems use nutrition information to create more generalized ratings or *guidance*. These systems use different algorithms to generate a rating of a product's nutritional value based on caloric content; nutrients to be encouraged (e.g., iron, fiber, vitamins); or nutrients to be discouraged (e.g., saturated fat, added sugars, sodium). The rating may be presented as a raw numeric score (as with NuVal), may be used to identify categories that might be dichotomous (such as with Great for You) or may use an ordinal ranking (e.g. stars or a traffic-light schema). In addition to the graphic depiction of the nutritional information, or the rating communicated through the shelf labels associated with individual products, this information may be stored in manufacturer and/or retailer product information databases.

Product Eligibility for Inclusion in the Incentive

Given the lack of an ideal nutrition labeling system, a key function of the FOP and shelf-labeling implementation plan was to suggest a strategy for determining product eligibility for the incentives. The technical panel recommended that only products that meet or exceed a benchmark rating be considered eligible for incentive strategies. For example, 75 points on a 100-point scale—or four stars on a five-star scale—could be established as minimum ratings for product eligibility. This recommendation supports flexible application of incentive strategies across labeling systems and reflects the desire to focus consumer attention on the healthiest items in the retail environment.

Each of the strategies put forth assumed the following:

- The strategies are specifically designed to tie to a nutrition rating system that is a means of summarizing for the consumer the overall nutritional benefit or healthfulness of the product, as recommended by the IOM. As such, strategies to tie to nutrition information systems like the Nutrition Facts Panel were not explored. However, if a standard of total calories per serving or percent fat or sugar per serving were set, products identified by information systems like Facts Up Front that met the standard could also be incorporated into the incentives presented here.
- The nutrition rating system that underlies the FOP or shelf label is aligned with the DGA and effectively identifies healthier products.
- The visual cue (logo, rating, star, etc.) on the FOP or shelf label effectively communicates to consumers the healthfulness of the product and successfully supports consumers in making healthier decisions.
- The selected FOP and shelf-labeling system will be applicable across the store for all food categories, including fresh or bulk items. For example, systems like NuVal and Guiding Stars currently display ratings for fresh produce on shelf labels located near these items. Any labeling system used for an incentive approach would use a shelf label and supporting signage for items that typically do not carry nutrition labels. This may require the development or production of supplemental shelf labels to accommodate these products.

Steps for Implementation

The implementation plan promotes the leveraging of nutrition labeling systems through consumer, retailer and manufacturer-focused strategies. In these strategies, the labeling system serves as a visual cue and starting point for the incentive approaches. FOP or shelf-labeling systems are used to signal to consumers that a product meets certain health criteria. Manufacturers and retailers can make use of these systems to draw consumers' attention to specific products. In the implementation plan, FOP or shelf-labeling systems are also used in retail systems to identify products as eligible for the discounts, rebates, or coupons that are offered to support the purchase of these healthier items. Additionally, the plan leverages nutrition labeling systems as a cue for encouraging retailers to use these systems in their stores to promote healthier foods by creating an environment that supports the increased presence, promotion and purchase of healthier choices by SNAP consumers.

The steps needed to enable stakeholders to leverage labeling systems with the incentive efforts are enumerated below and then discussed in more detail.

1. **Identifying appropriate labeling systems** that manufacturers and/or retailers may use to identify healthier products that align with the DGA.
2. **Engaging stakeholders** to generate support for the concept of tying incentive strategies to an FOP or shelf-labeling system to boost healthier purchases by SNAP participants.
3. **Making changes in underlying databases**—the product information databases—to flag these healthier products and allow retailers to order, track, store, stock, and promote identified products based on their nutritional rating or inclusion in a healthier tier of products.
4. **Making changes to POS systems** as needed to ensure the incentive strategies, such as coupons or rebates, can be supported at checkout.
5. **Providing or developing guidelines for visual representation and use of the nutrition rating systems** for manufacturers, retailers, and other implementers to ensure a consistent look and feel and use across the incentive strategies.
6. **Developing required training and technical assistance for staff** as needed to support the rollout of the incentive strategies using the FOP or shelf-labeled products. For example, staff will need training on how the system works, what the incentive strategy is, and any new skills needed to support a shelf-labeling system or the incentive strategy.

Identifying appropriate labeling systems—While there are currently no FOP or shelf-labeling systems that fully meet the recommendations set forth by the IOM (Wartella, Lichtenstein, & Boon, 2010), a central assumption of this research has been that an appropriate nutrition labeling system would be in existence for use in a leveraging approach. For this to occur, FDA could develop a new FOP nutrition rating system for use nationwide. Alternatively, USDA, in partnership with FDA, may select existing nutrition rating systems that are already being implemented by one or more retailer chains as appropriate to tie to these incentive approaches. It is also possible that FDA might develop a new FOP nutrition rating system and certain existing FOP or shelf-labeling systems may be deemed to adequately align with the DGA. The nutrition labeling systems that can most effectively align with the DGA should be the only ones used as the basis of a leveraging approach.

Engaging stakeholders—A well-executed rollout of the FOP and shelf-labeling plan for the proposed approaches would require buy-in from several major stakeholders such as retailers, manufacturers and their partners, State agencies with oversight for SNAP, and local community partners. While retailers and manufacturers would be the primary implementers of the FOP and shelf-labeling system plan, State agencies are critical partners that support the SNAP communication channels that would be utilized to alert SNAP consumers about the incentive approaches. Local community partners could also play a supportive role by providing adjunct resources for the plan.

Stakeholder input would be needed for: (1) developing a mechanism to guide the decisions required to implement the FOP and shelf-labeling system plan and (2) determining methods to invite participants to implement the approach. For large-scale implementation of the FOP and

shelf-labeling system plan, a number of decisions must be made regarding common messaging or templates, technical assistance rules, and training toolkits to support rollout and ensure uniformity and fidelity to the concept. A stakeholder advisory panel could play a role in the guiding the development of best practice strategies for implementing the approach among retailers with different formats, technology requirements and standards, and development of retailer or manufacturer toolkits that can increase the effectiveness of leveraging strategies. This advisory group could also have responsibility for developing the communication strategies. An advisory panel might include representatives from large or innovator grocery store chains throughout the country, as well as smaller retailers and farmers markets. Such a panel could be comprised of the following:

- Major manufacturers (brand leaders)
- Major grocery store chains
- Innovators of in-house FOP and shelf-labeling systems
- Deep-discount stores
- Smaller or local/regional grocery store chains
- Major convenience store chains
- Independent grocery stores
- Farmers markets

In addition, representatives from other industry stakeholder groups could be included in an advisory panel, such as food manufacturers (e.g., Grocery Manufacturers Association), distributors (e.g., UNFI), and label companies (e.g., Vestcom). Representatives from these organizations could help refine the details of implementation and facilitate pilot testing. This type of industry involvement would support larger buy-in for the incentive approaches. After the major design decisions have been made, this advisory panel could again be convened at a future time to reassess the status of the FOP and shelf-labeling plan and make additional recommendations to improve its implementation.

The successful implementation of the FOP and shelf-labeling plan also requires engaging stakeholders through communication strategies that both inform participants of the steps needed for effective implementation and provide opportunities for feedback to improve the feasibility of the approach. To garner support for the plan, an invitation package could be used to describe the intent of the plan and incentives, and the business case for engaging retailers and manufacturers in the FOP and shelf-labeling system plan. To ensure that retailers of different sizes are included in executing the plan, an industry representative and a small retailer representative from the advisory panel may be needed to issue the invitation more directly to smaller retailers and farmers markets. It may be necessary to recruit these smaller retail locations through a more personalized strategy that includes an onsite visit to explain the nature of the plan and incentive approach to obtain initial interest. This type of strategy is recommended, as smaller retailers may not be as well connected to industry groups that can support the invitation to implement the FOP and shelf-labeling system plan, or they may assume that implementation of the plan is a resource burden.

Making changes in underlying databases—Manufacturers or large retailers leveraging an FOP system in an incentive approach would need to know the nutrition rating for each of their products and thereby its eligibility for incentive approaches. Similarly, retailers who are implementing a shelf-labeling system must also know the nutrition rating and tier of the product, if applicable. Some database modifications are required to effectively link and identify healthier products to achieve these goals. Both manufacturers and retailers would modify their respective product information databases to include a new field to identify these healthier products based on the threshold rating established for identifying eligible healthier items. For retailers, the computer file containing the product information associated with the universal product codes (UPCs) and price look-up (PLU) codes of the items sold in the store would need to be programmed to link items to the nutrition labeling system, which would allow their identification as “healthier” items. This field would allow retailers to order, track, store, stock, and promote these products based on their nutrition rating or inclusion in a healthier tier of products. Product information databases would need to be tested to ensure that the new fields accurately rate and categorize the healthfulness of each food, and that point-of-sale POS systems are able to use that new field correctly.

Manufacturers would make modifications to their product information databases to ensure that the nutrition rating for each of their products is included. To make these changes, manufacturers would require access to the proprietary algorithm associated with the specific labeling system used to give the product a rating. Then, using the Nutrition Facts Panel, they would apply this algorithm to the product to generate a rating. To then include the product in a given incentive program, a database flag would need to be added to the manufacturers’ product information database that indicates the product meets the threshold for inclusion in the incentive. This database could then be used to identify items that could be offered as part of the incentive.

Making changes to POS systems—Depending on the strategy or combination of strategies selected for further piloting and implementation, changes to retailers’ POS systems may be needed. It is important to note that both the Manufacturer Discount Coupon and the Merchandizing strategies selected for further piloting do not necessitate the modification or purchase of advanced POS systems as manual workarounds (e.g., manual tracking and redemption of manufacturer coupons in corner stores) and alternate approaches (e.g., “food bucks” at farmers markets) exist, though the feasibility and impacts of these processes should be more closely evaluated in the pilot phase. If components of strategies include, say, tracking and supporting points-based rewards for healthier products on receipts or the use of a universal loyalty cards, these components would first need to be modified in or added to the store’s POS system. Most large or chain stores, including supermarkets and supercenters, use highly customized, proprietary systems designed to meet the specific needs of the retailer. Any time changes are made to retailers’ databases or systems, the changes must be handled in a planned and systematic way, which can be both costly and time-consuming for the retailer. Retailers would want assurances that the costs of making these changes could be recouped, otherwise USDA funding may be required. An advisory panel (as recommended above) could develop high-level technical assistance recommendations that provide both an overview of anticipated technological challenges and a recommended schedule for implementing product updates. This guidance would only provide an initial starting point for retailers and their POS vendors; highly individualized processes would still need to be followed to test and implement changes to POS systems to ensure proper functionality.

Providing or developing guidelines for consistent look and use of the nutrition rating systems—A recent IOM report concluded that a main obstacle for consumers in using existing FOP and shelf-labeling systems was the lack of clear, concise, and easy-to-use systems, especially for those with lower nutritional knowledge or literacy (Wartella et al., 2011). Leveraging FOP and shelf-labeling systems in the incentive approaches may require the development of common templates so that signage and materials associated with the incentives (e.g., coupon design) are clear and easy for SNAP consumers to use. The advisory panel could play a key role in developing these common templates or design requirements. A series of consumer marketing focus groups could be used to determine the designs that are most appealing to consumers for communicating an incentive and featuring the FOP or shelf labels as a visual cue.

Developing required training and technical assistance for staff—Training staff as needed to support the rollout of FOP or shelf-labeled products and corresponding incentive strategy(ies) is an important component for the success of the incentive, as it promotes buy-in by staff and helps them better understand the impact of the incentive on their regular job responsibilities, such as helping customers redeem coupons or stocking products. Training and technical assistance should be provided on how the system works, what the incentive strategy is, and any new skills needed to support a shelf-labeling system itself and/or the incentive strategy. Procedures to assist in-store managers and clerks would provide a clear explanation of the strategies being used to leverage nutritional labeling systems, enable staff to effectively assist customers on the meaning of the label and why certain products are being promoted, and correctly redeem financial incentives (i.e. coupons, rebates) provided by consumers purchasing healthier items, among other topics.

Retail floor staff can serve as valuable ambassadors for the success of an incentive strategy through their frequent contact with consumers. In this role, floor staff has the ability to re-direct consumer purchase towards more healthful choices by explaining the incentive or the nutrition labeling system. Cashiers, those with responsibility for inventory and stocking and customer service representatives should fully understand the nature of the incentive approach. For example, training staff on the floor to ensure they are informed on how to clearly explain the strategy and help consumers locate items using the FOP or shelf-labeling system can be a critical component of the success of the incentive approach by creating additional ways for consumers to be better informed and engaged in the incentive approach. Store staff would ideally need to know how to respond to a customer who asked why one can of carrots was rated higher than another and which item was coupon eligible. This type of knowledge would also help them gain familiarity with eligible products to reduce opportunities for the misapplication of promotions, incentives, and discounts to ineligible products.

Staff training would also be needed to help staff understand and correctly implement any new procedures for conducting inventory and stocking procedures used to support the incentive. This type of training and technical assistance would support the ability to staff to correctly apply the rules of the leveraging strategy to typical stocking and inventory management tasks. Relatedly, technical assistance resources would be useful to maintain or refresh the new displays that prominently feature the FOP or shelf labeling system to emphasize the healthier choice. The current hands-on approach to shelf tagging used by a majority of retailers, regardless of store size is relatively labor intensive, can take up to 20% of a stock clerk's time, and can be prone to

human error. As a result, staff training and a toolkit or guidelines for tag maintenance and weekly updates would be a valuable resource for leveraging shelf labeling systems for retailers of all sizes. This toolkit could be developed to include guidance on best approaches for maintaining information on the shelf edge and could mirror or integrate with current audit practices.

The advisory panel described previously would be a crucial resource for developing the type of technical assistance and training resources required for staff to successfully implement an incentive approach. The advisory panel could also provide guidance on the kinds of training that would need to be repeated more frequently, such as cashier trainings on coupon and rebate redemption. An important part of the training development process would include opportunities for feedback from small retailers so the trainings could be effective in these retail locations.

4. SUMMARY OF SIX PROPOSED APPROACHES

This chapter presents a summary of the rationale and design features of the six proposed approaches. From the six incentive approaches developed initially, the research team selected two as most promising for further exploration. Therefore, this section provides more detail about the two selected and describes the remaining four approaches in more general terms. Exhibit 4 below presents the six proposed approaches, highlighting the two that will be presented in more detail.

Exhibit 4. The Six Proposed Incentive Approaches

Proposed Approach	Type of Incentive
EBT Rebate	Financial
2-for-1 Price Promotion	Financial
USDA MyCart	Nonfinancial
USDA Live Better Reward Card	Financial
Discount Coupon	Financial
Targeted Merchandizing and Concurrent Promotions	Nonfinancial

The EBT Rebate

Description of the Approach

The Electronic Benefits Transfer (EBT) rebate approach modeled on the Healthy Incentives Pilot (HIP),³ provides a financial incentive via EBT card for the purchase of food and beverages identified as healthy by an FOP or shelf-labeling system. The EBT rebate is earned instantly at checkout and can then be used for future SNAP-eligible purchases in all categories. By accumulating the incentive through the purchase of healthy items, the EBT rebate allows SNAP consumers to potentially extend the life of their total benefit further into each month. A limitation of this approach is that the incentive can be earned only with the use of the EBT card. SNAP participants could not earn the benefit with cash-only purchases.

Justification for the Approach

EBT rebates are a potentially attractive intervention because they can be centrally administered through existing benefit distribution channels, and because various logistical issues associated with operation and distribution are understood due to HIP. Standard economic theory also predicts consumers should be indifferent to the format of a price reduction and should focus on the effective sales price regardless of the framing of the discount (Davis & Millner, 2005). An automatic rebate should therefore be taken into account at the time of purchase, and it should be treated as a lower price by the consumer, with behavioral changes in line with those predicted in

³ Additional information about the HIP pilot can be found in S. Bartlett, J. Klerman, P. Wilde, L. Olsho, M. Blocklin, & C. Logan (2013, July). Healthy Incentives Pilot (HIP) interim report. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis.

the economic literature based on percentage reductions (e.g., Dong & Lin, 2009). The rationale for offering the instant incentive rests in part on an assumption that households are favoring present consumption at the time that benefits are distributed, at the expense of consumption later in the month. Evidence suggests that energy intake declines at the end of the month among SNAP participants (Shapiro, 2005; Wilde & Ranney, 2000). SNAP households with constrained budgets may experience episodes of food insecurity or hunger when their benefits have been expended.

Additionally, interim results from the evaluation of USDA's HIP found that HIP participants consumed one-fifth of a cup or approximately 25% more targeted fruits and vegetables per day than did nonparticipants. The interim HIP findings suggest that respondents purchased a greater variety of fruits and vegetables because of the incentive, and respondents indicated that these foods had become more affordable due to their participation in the pilot (Bartlett et al., 2013).

Key Design Features of the Approach

This incentive would be offered at two levels that reflect different price elasticities for different categories of food. The findings from HIP support the provision of a 30% rebate on fruits and vegetables (Bartlett et al., 2013). In this approach, the 30% rebate would be offered for these food categories. A secondary, lesser rebate amount would be established for all other food categories based on combined price elasticities and the identification of a health objective by USDA (a similar process was used to determine the incentive amounts for HIP). The total dollar amount for both the tier 1 and tier 2 rebates would be capped at \$60 per household per month.

Products would be eligible for receiving the EBT rebate if rated as a healthier item by the FOP or shelf-labeling system. As described above, retailers would flag healthier items eligible for the rebate in their POS systems. Retailers, or their software providers, would need to add a new field in POS systems to identify the product as "healthy." This would support processing the incentive and printing receipts that identify these products as the source of the rebate received by SNAP consumers. SNAP consumers would select the healthiest choices by using the FOP or shelf-labeling system. Retailers could support consumer use of the nutritional labeling system through merchandizing, advertising, and other promotional resources.

The EBT rebate strategy is applicable in all retail settings where EBT redemption occurs, with some adjustments for differences in POS technologies. In retail settings that employ advanced POS systems (integrated electronic cash registers [IECRs]), design specifications would be needed to ensure the interactions between EBT processors and store IECR technology are seamless to support crediting the incentive amount. These retailers would implement this incentive by altering their systems for EBT redemption of SNAP benefits and for maintaining and tracking store inventory through purchases. POS systems would need to be altered to calculate the appropriate incentive amount when eligible items are purchased with SNAP EBT benefits. Stores without an integrated POS would be required to calculate the rebate through some other means and then enter the amount into the stand-alone POS system and stand-beside EBT processing machine. This would require training on how to identify eligible items and accompanying cashier manuals to enable cashiers to enter the transaction into a free-standing EBT machine.

Altering systems to process the rebate would require the coordination of stakeholders that include USDA, State agencies, and companies contracted through each State to administer EBT, retailers, and third-party processors (TPPs) that are contracted by retailers to process EBT payments. For the EBT rebate to operate effectively, informational and financial systems would need to be updated to identify the targeted foods and distribute the benefit on the EBT card. For the incentive to be delivered, each of these parties also would need to update its technology systems.

SNAP consumers are eligible to earn the benefit on qualifying purchases with their EBT card at the beginning of their benefits cycle. They would be informed about the incentive using an awareness campaign. The awareness campaign would be executed through direct mailings, trainings, and a dedicated hotline to support SNAP consumer questions about the incentive. Despite coverage issues that arise from a lack of reliable addresses for all SNAP households, the direct mailing has the advantage of not requiring SNAP participants to expend resources to find out about the incentive. As such, it could be a primary method used for the awareness campaign in this approach. To keep the incentive salient, SNAP consumers would be able to receive information on the incentive amount earned per shopping trip and the cumulative amount of the rebate via receipt or by using the EBT customer service system generally available for checking SNAP balances. SNAP consumers also could check SNAP balances and incentives earned through the customer service phone numbers and Web sites administered by each state.

Incentive Costs

Significant costs would be associated with both the implementation and maintenance of this proposed EBT rebate approach. During the start-up phase, the primary costs would be in (1) modifying financial and technology systems; (2) developing and executing retailer recruitment; and (3) communicating to SNAP consumers. The costs associated with updating these systems to accommodate the EBT rebate would include labor hours to coordinate updates among the different parties; IT employee or contractor costs to develop and implement the system updates for each party; and labor for each party to test and implement the update.

During the operational phase of the incentive, costs would include providing the financial incentive; implementing auxiliary communication and nutrition education programs; monitoring fraud; and conducting routine maintenance of financial and technology systems. During this phase, USDA likely would incur the majority of costs. Longer-term maintenance costs would include the routine maintenance and updates of the financial and technology systems used by the incentive, and these costs could be shared by USDA and retailers.

Adjunct Interventions

A comprehensive awareness campaign could be provided to educate SNAP consumers about the incentive, encourage them to make the healthier foods purchased a part of meal consumption, and provide a reminder about the benefits of the program. During the initial SNAP application and renewal periods, USDA, appropriate State agencies, or other stakeholders (e.g., food banks, SNAP advocacy organizations) would inform and educate SNAP consumers on the benefits and operational features of this incentive approach. Community partners could serve as an adjunct resource for educating SNAP participants about the incentive. Ongoing education and promotional messaging, provided by State agencies and community partners, could be timed to

take place at the beginning of the benefit cycle to educate SNAP consumers on healthier choices at the time they are most likely to purchase food with SNAP benefits.

2-for-1 Price Promotion

Description of the Approach

The 2-for-1 price promotion would offer a financial incentive in the form of a retailer-provided 2-for-1 coupon that would allow SNAP consumers to purchase one healthier item at full price and receive a second same item free. Alternatively, coupons could offer paired items across food categories (e.g. buy this healthier cereal and get a bunch of bananas free). The discount provides an immediate financial benefit as it would be applied to the total purchase price at checkout. Consumers would be able to review their receipts for clear indication that the price promotion was applied for selected products. SNAP consumers could use other forms of payment in addition to their EBT benefit and receive the discount. The approach may work best for the stock up type of shopping trip.

Justification for the Approach

A 2-for-1 approach can be seen as an alternate framing for offering a (potentially sizeable) discount. A 2-for-1 approach is equivalent to a 50% price reduction, higher than the level evaluated in most interventions. However, some previous studies have used a 50% discount to encourage the purchase of targeted healthier food items. The RCT conducted by Waterlander et al. (2013) found that a 50% discount increased purchases of fruits and vegetables by up to 3.9 kg/2 weeks after 6 months in the treatment. Additional research has shown that the higher the price subsidy, the greater the uptake in purchases of the targeted food and beverage items (Epstein et al., 2012).

Moreover, the impact of promotional framing on consumers provides evidence supporting matching approaches like a 2-for-1 discount over other means of delivering discounts. Wansink, Kent, and Hoch (1998) found that multiple-unit pricing (e.g., advertising items as “5 for \$1”) generated a 32% higher increase in sales than did single-unit pricing of equivalent value (e.g., “\$.20 each”). There is experimental evidence that 2-for-1 matching sales can outperform both standard discounts and rebates of identical value in trials involving purchases of snack foods (Davis & Millner, 2005).

There is additional theoretical support for offering a discount in the form of a coupon. The theory of “mental accounting” suggests that coupon-like financial incentives may be more effective at influencing the total diet because, if funds are earmarked for a certain purpose, recipients tend to spend within that category until funds are entirely depleted. Recipients spend within mental categories associated with designations such as “fruits” or “drinks.” As a result, approaches that attempt to increase purchases of healthier items within a given food category are more likely to be effective than those that attempt to get consumers to choose a healthier item from a different food category. Coupon strategies are found to be more effective in encouraging increased purchases of healthier items than strategies that attempt to shift food spending from other, less healthful food categories or strategies that provide increased cash or SNAP benefits (Just et al., 2008).

Key Design Features of the Approach

As stated earlier, the 2-for-1 approach is equivalent to a 50% price reduction. This incentive approach relies heavily on the expertise of retailers and their respective product promotional cycles to plan and implement the 2-for-1 coupon offer. Retailers would be responsible for identifying eligible healthier items from those identified as among the healthiest in their product category by nutrition labeling to be a part of the 2-for-1 offer. They would determine the number of offers beyond the minimum requirement that they would support on a monthly basis. In leveraging the nutrition labeling system to identify possible options, retailers could implement the approach by pairing similar items or through healthier pairings of complementary food items (i.e., a gallon of skim milk and a healthier breakfast cereal). Additionally, the strategy could be modified for perishable items, such as produce or dairy, by encouraging flexibility in pairing these types of items. As a financial risk is associated with accumulating extra stock that may or may not sell as a part of a 2-for-1 offer, retailers could use their in-store shopping data to determine the best weeks or months for 2-for-1 sales on various products. Retailers also could develop a clear policy for offering substitutions or a rain-check for items if they were not available to SNAP consumers due to low stock. Items selected for the 2-for-1 coupon could be also identified in store by an additional shelf label, when feasible, or via supporting in-store flyers or communications targeted to SNAP beneficiaries via e-mail or mail databases.

The requirement for a higher level of stock for the selected items to offer a 2-for-1 promotion may make this approach more appealing for medium to large retailers. The approach may not be as feasible small retailers that lack the ability to maintain stock on hand for a 2-for-1 offer. The approach could be modified for these smaller retailers to either offer a smaller number of coupons or to be more flexible in pairing different items to offset the need to maintain a large amount of any particular item on hand (for example, this flexibility could focus on items within a given food category, “buy one fruit of any type and get another fruit of any type free,” rather than a specific food item).

Some technology systems changes would be needed to implement this approach. First, product information databases would need to identify the eligible products selected for the promotion as is required to apply the discount at checkout. Second, smaller retailers that do not have POS systems capable of accepting such a coupon would either not be able to participate in the strategy or would need to purchase/modify existing POS systems to support coupon use.

To implement this approach, retailers would provide a limited number of coupons per month (approximately 5–10) for items across all food categories, based on their internally planned promotion cycles and understanding of their consumer base. To support the development of offers that cover all food categories, retailers would be asked to develop at least one offer for each of the major food groups (e.g., protein, dairy, fruits, vegetables, grains) per month. Retailers would be encouraged to offer a mix of fresh and frozen items in these selections as well. Once the targeted items for the 2-for-1 offer have been identified, retailers would develop the coupons for inclusion in a monthly circular that would be distributed only to SNAP consumers. The circular could include the 2-for-1 offers as well as messaging to encourage understanding and use of an FOP and shelf-labeling system to identify healthier choices. The store circular would allow for incorporating the coupons into existing retailer operations and resources.

Retailers could work with SNAP State agencies (or an entity designated by the State agency) to aggregate these offers into a “coupon package”—a 2-for-1 coupon circular that would be mailed to SNAP consumers in advance of the beginning of each month. State agencies, or their designated partners, would distribute the coupons through direct mail, although this would not be the only method of obtaining the 2-for-1 coupons. The mail distribution strategy could help make SNAP households aware of the incentive so that they might plan their purchases around the offers in advance of a shopping trip. Additionally, an incentive-specific SNAP app for smart phones and a dedicated Web site could be a part of the suite of options offered in order for SNAP consumers to receive the coupons.

To prevent SNAP participants from receiving an overwhelming number of coupons each month, the coupon package could be tailored to the stores most used by SNAP consumers by using SNAP EBT data on where consumers redeem the most significant portion of their benefits. Using this approach, SNAP households might receive offers only from the stores in which they most frequently shop. There may be some privacy concerns that could require a waiver to use SNAP EBT data for this purpose. To best determine the ideal number of coupons SNAP consumers should receive, additional formative research with SNAP households could be done. Additionally, retailer information on store coupon redemption rates could be useful in determining the size of the coupon package so that it is salient to SNAP consumers.

Incentive Costs

During the start-up phase of the project, the primary costs would be for developing and producing the coupons, and for establishing the process for coupon redemption. Initial costs for this approach would include some modifications to retailer inventory and receipt development systems in order to generate the summary receipts of SNAP consumers’ 2-for-1 purchases. The creation of a coupon distribution strategy, awareness campaign, and a supporting SNAP app or Web site would comprise other initial costs for this incentive.

During the operational stage, the largest costs for this approach would be (1) the financial costs associated with offering one of the items for free in the 2-for-1 coupon offer; (2) costs associated with aggregating, tailoring and distributing the coupons to SNAP households; and (3) costs associated with additional consumer awareness and distribution strategies. The costs for aggregating the offers, potentially by geographic region, would be related to any type of ZIP code matching or GIS mapping approaches that might make use of available data for targeting coupon offers to customers. Any additional direct mailings to support consumer awareness, as well as the SNAP app or designated Web site for this approach would have development and maintenance costs associated with updating content. There are likely to be additional costs associated with other promotional strategies that retailers might use to highlight the FOP or shelf-labeling system used to identify the selected products. Longer-term maintenance costs would include the continued support of the financial incentive, the production and distribution of coupons, and the routine maintenance of retailers’ inventory systems.

Adjunct Interventions

Adjunct interventions supporting this approach include the use of various retailer promotion strategies and an awareness campaign. Retailers’ use of merchandizing, advertising and other promotional resources could assist SNAP consumers by reinforcing the selection of the healthiest

choices based on the FOP and shelf-labeling systems. By using several promotion strategies concurrently, the healthier items would be better marketed to customers. Additionally, an awareness campaign could support the saliency of the incentive among SNAP consumers. As an example, consumers could receive advanced notice of additional retailer offerings that could be combined with a 2-for-1 promotion in the last few weeks of the month. The awareness campaign could communicate strategies that maximize the potential of the incentive, for example, techniques for building 2-for-1 purchases into meal planning to prevent spoilage. These communication efforts might also highlight the consumer's flexibility to purchase food in pairs or bundles as previously described. Such a campaign could engage food banks, SNAP advocates, and other stakeholders to communicate the benefits of the approach and ways that SNAP consumers can use it.

MyCart Grocery Cart Divider

Description of the Approach

MyCart is a nonfinancial approach that would use behavioral economics to encourage healthier purchases by any consumer, including SNAP participants. Similar to USDA's MyPlate campaign, MyCart would encourage consumers to think about nutrition across the major food groups and aid them in visualizing the components of a healthy diet. Consumers would be encouraged to achieve a target percentage of purchases across food group categories that correspond with the DGA and MyPlate guidance. MyCart builds on the USDA's MyPlate approach to encourage the selection of foods across the categories needed for a healthy diet by using three strategies: (1) a visual reminder in the cart (a color-coded representation of the guidance), (2) a physically divided cart, or (3) an algorithm developed for use at checkout to calculate how the purchased items fit within the recommendations by food category as presented by MyPlate.

Justification for the Approach

There is some limited research (Kalnikaitė et al., 2011; Wansink, Payne, Herbst, & Soman, 2013) that suggests an intervention of this sort might be successful in modifying consumer shopping behavior. Wansink et al. (2013) conducted a study to determine whether simple modifications to shopping carts could translate into modifications to consumer diets. In one experiment, the researchers placed a yellow line across the width of shopping carts with a sign designating one side of the cart for fruits and vegetables and the other for everything else. The findings indicated that most shoppers purchased fruits and vegetables in quantities relative to the size of the section of the cart allocated for these items. With the divided cart approach, the sale of fruits and vegetables increased by more than 200%. This research suggests that division of the cart, even into two categories, influences how consumers fill their shopping carts with more healthful choices.

There also is some evidence that suggests bringing increased attention to FOP and shelf-labeling can influence consumers' shopping patterns. Focused on making shopping trips more healthful by reducing the amount of time spent identifying healthy products, British researchers developed an electronic grocery cart bar that clips over the handle of a grocery cart and displays product ratings (Kalnikaitė et al., 2011). The study found that when the shopping cart handle displayed the FOP and shelf ratings of products, 72% of the time, shoppers selected products with better

FOP and shelf ratings compared to when they shopped without the handle. There was no effect for shoppers' favorite products or items that they strongly disliked. This research suggests that a cart divider (that specifically calls attention to FOP and shelf labels) could be influential for encouraging consumers to select more healthful choices when paired with additional guidance on the food categories that should be a part of a healthful diet.

This approach would work best in retail settings like supermarkets and larger grocery stores that feature a full range of products across different food categories, and multiple items in the food categories depicted by MyPlate. These retail settings would support the selection of multiple and diverse products that the guidance recommends are needed for a healthful diet. As a whole, the strategy may be less effective in small-scale food retailers because consumers are not usually buying a whole week's worth of food at such establishments.

Key Design Features of the Approach

The visual tool, a color-coded display placed in the bottom of the cart, would provide a visual reminder of the components of a healthful diet using the plate graphic. If the grocery cart or shopping basket was not already set up with a visual tool, consumers could get one from a dispenser when they obtain their cart or basket. The visual tool would segment the cart into two: one section for MyPlate, and a second section that remains open for household and other nonfood items. Physically divided carts would use a similar approach to promoting the MyPlate approach. An additional option for implementing the approach would not require cart modifications. Theoretically, the approach could be implemented via the use of an algorithm that calculated purchases made using the MyPlate guidance and then shared via a receipt provided at checkout. To accompany the approach, a MyCart shelf tag could be created to identify healthier items on shelves. Consumers could be guided to healthier choices through the use of visual displays and other signage, including ceiling banners, refrigerator and freezer door clings, and shelf talkers.

The MyCart approach would require USDA to play a leading role in the development of the MyCart tools and accompanying guidance. USDA or its designee would have responsibility for the development of MyCart cart dividers and other resources geared toward educating consumers on how to use the approach. However, the approach could accommodate the inclusion of corporate partners if a general framework were developed, and if USDA provided permissions for the use of the MyPlate guidance.

To support the implementation of this approach, limited technology changes might be necessary. Modifications to a store's POS and receipt systems could provide additional information to consumers through notifications that they have achieved a healthy shopping basket. To accomplish this, retailers would need to make systems adjustments to group categories of items on the receipt. POS systems would need to have a flag added to identify healthier products across food categories. A supporting algorithm would need to be developed to calculate when a basket had reached a predesignated threshold across items that qualified it as healthy. The algorithm would group the purchases to classify them using the MyPlate designations and to provide consumers with a message of support or encouragement (e.g., "You achieved a MyCart healthy shopping basket!").

The MyCart approach is not specifically targeted to SNAP consumers, but additional supports could be used to target the SNAP population. Through targeted consumer awareness campaigns exclusive to SNAP-only communication channels (e.g., SNAP Education (SNAP-Ed), State agencies, community partners), SNAP participants could directly receive guidance and supporting educational materials. These might be shared during initial enrollment for benefits, in the mail when the EBT card arrives, via SNAP-Ed, through local partners that focus on enhancing the resources of low-income individuals (e.g., food banks), and via electronic means (e.g., Web sites, a mobile app). An additional method of targeting this approach to SNAP consumers would use one of the previously described financial approaches. If used, the financial incentive would be awarded only if the SNAP consumer's shopping basket reached a predesignated threshold for healthy purchases based on the MyCart guidance.

Incentive Costs

The major costs for this incentive approach are associated with developing the cart divider, the algorithm for use in retailers' POS systems for tallying MyCart healthy purchases, and developing communication materials to link the FOP or shelf-labeling system with the MyCart approach. If a financial incentive were also incorporated, it would be another major cost of this approach.

Start-up costs would include those associated with developing the MyCart messaging and cart divider tools, or other physical changes made to grocery carts. Retailer resources for in-store promotion of MyCart via an FOP or shelf-labeling system would also be incurred at start up. Additional costs exist if the strategy is to use shopping carts that have been permanently modified to reflect the cart guidance. If retailers were to purchase new carts with the cart design, the average cost for grocery carts averages \$85 to \$100 each. Thus, it would cost about \$30,000 to replace the approximately 300 carts that a typical grocery store needs.

Implementation costs would include those associated with updating the MyCart shelf tag or algorithm for new products on a regular basis (likely every 2 months or quarterly, based on recommendations from the advisory panel), as well as any additional promotional resources retailers would use. Retailers are also likely to have additional merchandizing costs to rearrange product displays to group items as MyCart aisles or to alter product displays to include more MyCart choices, if those strategies were used. The rearrangement of products would require that retailers and manufacturers negotiate issues related to slotting fees and expected sales revenue from these items. Implementation costs would also include systems development costs associated with modifying POS systems and developing supporting algorithms to produce a receipt that tells SNAP consumers when they have achieved a healthy shopping cart. These would also be longer-term maintenance costs for this approach. Additional longer-term maintenance costs for this approach would consist of refurbishment or replacement of the cart-divider tools or specially developed grocery carts. If the approach was targeted specifically to SNAP consumers, costs would be incurred for any direct communication strategy or financial incentive.

Adjunct Interventions

The MyCart icon would be complemented by a suite of online communication tools to educate consumers on healthy eating. These would include a MyCart Web site, an online tool to personalize grocery shopping plans, consumer education materials, and social media

engagement. USDA would develop the messaging materials and distribute them to retailers through a toolkit. This suite of communication tools would be used in a planned promotional campaign by retailers as the MyCart approach is introduced to support consumer awareness and understanding. To ensure seamless integration from the SNAP consumers' perspective, other stakeholders could support the approach. Food banks and SNAP advocates could distribute MyCart nutrition education resources to low-income consumers, while USDA and State agencies could integrate MyCart into existing and future SNAP-Ed activities.

The USDA Live Better Reward Card

Description of the Approach

This incentive approach features a national loyalty-like card that could be used across retailers on its own or link to other incentive strategies to foster loyalty to healthy food purchasing. The card would align with FOP and shelf-labeling system criteria in such a way that points are given for products that receive a higher rating. The USDA Live Better card could earn customers points on purchases redeemable for a reward and could also serve as a mechanism for receiving coupons in stores. The Live Better card would be a physical card and could also be incorporated into a mobile app, providing the ability to store and transmit unique store deals on healthy items to customers based on purchasing habits. The card could be uniquely available to SNAP consumers.

Justification for the Approach

Behavioral and psychological research finds that people have problems with self-control and process immediate and future rewards in different parts of the brain (McClure, Ericson, Laibson, Loewenstein, & Cohen, 2007). With respect to food choices, the perceived health benefits of healthy foods are not always immediate or tangible to consumers. Thus people may make choices today that their future selves would not choose to make because they are undervaluing future rewards (DellaVigna & Malmendier, 2004). Rewards programs address this issue by making future rewards more salient. They increase sales of a specified food product through two mechanisms. The first mechanism is "points pressure," which leads to short-term impact whereby consumers purchase more of a particular product to earn the reward (Taylor & Neslin, 2005). The second is "rewarded behavior," which leads to the longer-term impact that earning a reward has on consumer purchasing behavior in the future. One study tested this conceptual framework by evaluating a fresh turkey reward program where customers earned a free fresh turkey after purchasing a threshold of store products over an eight-week period.

Studies indicate that consumers will engage in a rewards program depending on three factors: (1) the perceived likelihood of achieving the reward; (2) the relative value of the reward; and (3) the level of hassle or time required to engage in the program (Lewis, 2004; O'Brien & Jones, 1995). Thus, the design of any SNAP-focused rewards program built into the USDA Live Better card should take into consideration these three components. The card proposed here could be carried on a key chain or in a wallet, and it also could be linked to mobile technologies. Purchases, discounts, rewards, and redemptions could be accessed on a Web site, all to make participating simple and to keep salient the perceived likelihood of achieving the reward. The program also would offer prizes that mattered to participants to assure their relative value.

There is also an empirical reason to think that this type of card can be developed to work across retailers. Companies such as LOC Card (www.loccard.com) have worked to combine on one card the loyalty programs of many retailers. The LOC Card launched in July 2013 from a Cincinnati-based company, and aspires to help consumers go from carrying handfuls of cards to managing all of their loyalty programs on one Web site. The card also works with smaller and larger businesses such that any business that has or wants to have a loyalty program can participate. Similarly, a search of U.S. patents awarded in the past few years reveals several approaches to undertaking a “universal loyalty card.”⁴

This approach would work only for retailers that can currently support loyalty cards or those willing to accept the USDA Live Better card. While many supermarket, large warehouse, and national pharmacy chains have systems in place that support loyalty cards, not all of them do. Notably, Walmart does not use loyalty cards, nor do some hard-discount chains, or many smaller retailers, such as most smaller or independent grocery stores, corner stores, food co-ops, and farmers markets. This approach could work well for retailers with existing customer loyalty cards, but it would require additional technological investments to operate in stores that lack the requisite POS systems to support these transactions. Since the technology is evolving however, it may be possible given recent patents to include retailers that accept debit or credit cards into the program.

Key Design Features of the Approach

The USDA Live Better card could track purchases in much the same way that store cards currently do. Each customer’s loyalty card would have a unique card number that would be linked to a database that could store the information about them and their purchases. In stores, a consumer would look for the healthier items (as identified by FOP or shelf labels), along with supporting marketing materials. At checkout, consumers would swipe a physical card or provide an image of the card’s bar code in a mobile app (along with any store-specific loyalty card). Any discounts or points would be applied, and the consumer would pay with their method of choice. Customers could be encouraged to set healthy goals using either a percentage-based approach or a targeted threshold. Based on their healthier purchases, customers would accumulate points that could be used to redeem a reward, such as additional discounts on healthier items. With the assistance of an external corporate partner, such as a health insurance company, the rewards could be expanded to include other supports for a healthy lifestyle, such as discounted fitness equipment or gym memberships.

The technology for a USDA Live Better card would function as other loyalty cards do now, that is, tied to the POS systems of the stores. This card, however, would also need to work across retailers. Using FOP or shelf labels to identify the healthier products in each store, the universal card could support a rewards program to deliver “points” that would accumulate with every healthy purchase. The program also would provide coupons and discounts for healthy food purchases, and games or trackers to enable customers to measure how healthy their food purchases are and where their diets could improve. In order to develop the card, systems and technology expertise would need to be engaged to:

⁴ <https://www.google.com/patents/US20100042517>; <http://www.google.com/patents/US20110238471>

- Gather requirements—For example, identify the shoppers’ requirements for the card (what it functionally should do and how it should work) as well as database and IT requirements (specifying how IT systems should communicate or interface with each other) to support cross-retailer use of product databases.
- Develop the design concept—Create a detailed system design to illustrate and describe the dependencies, connections, and interfaces between and among the various systems (e.g., POS systems, product databases, customer databases, rewards system database).
- Develop and test the concept and any corresponding technologies—Create or modify a new or existing system or add-on to support the requirements and design. Engage critical stakeholder groups in testing, such as SNAP customers, industry retailer representatives (from checkout clerks to store managers), and SNAP fraud and abuse experts.
- Rollout and adjust—Communicate the new program to consumers. Implement the system and gather input regarding its feasibility and impact (both on stores and on customers). Adjust features accordingly, and respond to any concerns identified.

SNAP consumers would obtain the card by registering on the USDA Live Better Web site or upon their initial enrollment in the SNAP program. If the approach is to be targeted exclusively to SNAP consumers, SNAP participants would receive their USDA Live Better card via direct mailing, which would also include instruction on how to use the card, an overview of the program, and examples of how purchases translate into rewards points that benefit food budgets as well as the healthfulness of meals. SNAP consumers would be able to call, use a smart phone app or use the USDA Live Better Web site and the exclusive ID number on their cards to retrieve information on the number of points they have accumulated, and to see how many more points are needed to redeem a reward.

Incentive Costs

The major costs for this approach would be driven by the development of the card’s functionality, as well as technological challenges of supporting a cross-retailer loyalty card that is also tied to other supporting technologies such as a Web site and mobile app. Costs would exist for the following development needs during the start-up and implementation phases: development of the USDA Live Better Web site and smart phone app and integration of multiple product databases across multiple retailers. Other non-IT start-up and implementation phase costs would include marketing the program to stores as well as consumers. Consistent, retailer-independent marketing materials would need to be created to ensure that customers knew they could use their USDA Live Better card regardless of the store in which they were shopping. This would entail developing a logo, color scheme, and corresponding materials such as shelf-talkers and posters to guide consumers in the store. Longer-term maintenance costs would include database maintenance and system upgrades to support ongoing optimal performance of the system.

Adjunct Interventions

To maximize its reach and impact, the USDA Live Better card could be tied to SNAP education and outreach efforts. For example, using a coupon downloaded to the card, or purchasing a healthier item, could trigger a recipe for that item to be printed on the receipt or downloaded to the smart phone. This could link the card with SNAP-Ed efforts by providing nutrition education

materials to shoppers in conjunction with point redemption. In this way, SNAP outreach could support rollout of the card and help ensure consistency among nutritional messages provided.

The Two Most Promising Approaches

The following discussion presents a more detailed overview of the two approaches selected as most promising for a pilot study, the discount coupon and targeted merchandizing approaches. The discussion includes a detailed overview of the two approaches, description of their feasibility, overview of the likely process for implementing each approach, and discussion of the types of costs that would be associated with their implementation.

The Discount Coupon

Description of the Approach

The discount coupon approach would establish a USDA-managed channel through which manufacturers could distribute coupons directly to SNAP participants. These coupons would offer a financial incentive on targeted healthier items (as identified by the FOP and shelf-labeling system) by reducing their cost relative to nontargeted items. The discount coupons would encourage consumers to purchase a healthier product within a food category. This concept, referred to here as “trading up,” is supported by research indicating that consumers are more responsive to efforts that encourage changes within rather than across product categories (Okrent & Alston, 2011). Currently, NuVal uses a similar trading up concept to promote the use of its nutrition labeling system.⁵ These coupons would provide a discount distributed to SNAP consumers exclusively, and they could be redeemed at any retailer, regardless of whether they accept SNAP EBT benefits. Avenues for coupon delivery could be direct mail, a “SNAP app” (a mobile application that could be accessed via smart phone), or a secure Web site. Coupons for healthier items could also be printed at point of sale for stores that have integrated coupon printing functionality. The preferred distribution strategy is to provide the coupons in advance of the initial monthly shopping trip to encourage SNAP consumers to start the month with healthier choices that can be obtained during an initial trip (versus issuing a discount for later use based on healthy purchases at checkout).

Manufacturers’ coupons have been used for decades as a way for manufacturers to “price discriminate” (that is, to provide lower prices to those consumers who are most sensitive to price and are willing to face some inconvenience such as clipping coupons and following purchase rules, while not automatically providing the same discount to those consumers who are not as willing to put effort into finding a lower price). Providing a means for distributing coupons to lower-income households participating in SNAP is a potential “win-win-win” intervention that could benefit participating households, public health goals, and manufacturers. It also has added appeal in that direct governmental program costs would be limited to managing the approval and distribution of the coupons, as the financial incentive would be provided by manufacturers as they have done through traditional coupons for years.

⁵ <http://www.nuval.com/shop/trading>

Justification for the Approach

The theoretical economic justification for using discounts to incentivize healthier food choices is to induce increased consumption through relative price changes and an income effect. Studies conducted in supermarkets and other retail food settings using discounts to encourage consumers to purchase healthier foods have documented positive impacts up to 6 months after the end of the discount (Mhurchu, Blakely, Jiang, Eyles, & Rodgers, 2010; Waterlander, de Boer, Schuit, Seidell, & Steenhuis, 2012). These previous in-store findings, coupled with the persistence of manufacturer-based coupons as tools for reaching price-sensitive consumers in the general U.S. population, suggest that the approach can be effective in steering SNAP participants' purchases toward discounted items in ways that can improve total dietary quality. A recent example of this approach provided coupons and information to a sample of consumers with chronic health problems. The yearlong study, conducted by the marketing firm Linkwell Health, compared 24,000 grocery loyalty card members who received the treatment versus an equal number of those who did not. They found that the intervention led to a 4.5% increase in dollar sales of the targeted healthier items (Bernstein, 2014; Linkwell Health, 2014).

The concept of tying discounts to trading up is also based in economic findings. Estimates of stores' own-price and cross-price elasticities imply greater price responsiveness within categories (Okrent & Alston, 2011). This indicates consumers will be more likely to make switches to discounted items within a food category than across food categories. Total diet is more likely to be improved through coupon strategies that encourage increased purchases of healthier items than through strategies that attempt to shift food budget funds from less healthful to more healthful food categories (Just, Mancino, & Wansink, 2008).

Discounts also can help overcome either real or perceived cost barriers for choosing healthier products. Recent evidence suggests that, when calculated on a per-serving basis or by weight rather than per calorie, healthy foods often cost U.S. consumers less than relatively less-healthy alternatives (Carlson & Frazão, 2012). This implies that food cost alone is not the only barrier to healthier diets. Instead, less-healthy dietary patterns also may reflect valuing the present (i.e., the immediate gratification provided by consuming less-healthy food choices) at the expense of consumers' own perceived interest in their future health outcomes (Cash & Schroeter, 2010). For example, a person may express a preference for a healthier food item when asked what to eat for lunch next Tuesday, as the person is comparing future gratification (i.e., a meal next week) to future health benefits. If the same person is then given the option of switching to a less-healthy item a week later at the time of the meal, the person may do so, regardless of initial choice, as the person is then comparing immediate gratification to delayed benefit. Discounts can help counteract these time-inconsistent preferences by providing an additional present-based incentive that can improve dietary quality for SNAP consumers and that can reinforce these consumers' own interest in healthier food items. Incentives may also help to transform the intangible benefits of behaviors into something concrete in the short term (Price & Riis, 2012).

This incentive could be redeemed at any retailer that currently accepts manufacturer coupons, using existing retailer technology systems and processes for redemption. Smaller retailers can participate in this approach, but as is the case with current manufacturers' coupons, smaller retailers are less likely to stock any particular targeted item. Currently, virtually all chain food stores accept manufacturer coupons, including supermarkets, supercenters, warehouse stores, pharmacies, convenience stores, discount stores, and dollar stores. However, in the authors'

experience, many small, independent retailers (e.g., corner stores) do not accept manufacturer coupons for two reasons. First, store owners find the requisite manual process cumbersome and perceive little value to them for the work involved. Second, store owners perceive that their customers are less likely to use coupons because their stores do not carry a sufficient quantity or variety of products for their customers to find the exact eligible items in their stores. It is important to note that a manual process for handling coupons in small, independent stores is possible, and coupon clearinghouses already exist that allow store owners to enter into agreements and periodically send in accumulated manufacturer coupons for reimbursement. Since a manual approach is possible in small stores, support for outreach and technical assistance to store owners might enhance their understanding of how to use the introduction of the new FOP or shelf-labeled system along with product promotion techniques (see the Merchandizing section in this paper) to increase their customers' interest in using coupons for these products in their stores. Likewise, outreach to SNAP shoppers that coupons are accepted at certain small stores also might help drive interest in using coupons in these retail venues.

Key Design Features of the Approach

The coupons would provide a discount distributed to SNAP consumers exclusively, which could be redeemed at any retailer, regardless of whether they accept SNAP EBT benefits. The coupons also would reinforce the meaning and application of the nutrition labeling system with the potential for broader changes as consumers become accustomed to seeking out the healthier items. Coupons would be provided each month for approximately two to three dozen items, and the product assortment would change as needed to retain both consumer and manufacturer interest. To best determine the maximum number of coupon offers that SNAP households could successfully handle in a month, additional formative research with SNAP participants would be necessary. As they are recruited to participate in the incentive, manufacturers also could provide insight into proprietary data on the redemption rates for their coupons to USDA. The exact number of included items and frequency of distribution could be pretested in focus groups and pilot studies to ensure that a sufficient variety of discounts are offered to attract consumer interest and have the potential to influence much of their diet, without providing so many coupons that potential participants are overwhelmed by the scope of discounted options.

Rather than predetermining a discount amount for all coupon offers, the discount offered with the coupon would be determined by participating manufacturers. This would be based on the value of the discount they are willing to provide, existing manufacturer coupon systems, and their own knowledge of consumer responsiveness to previous promotions. The discount coupon approach should be designed to accommodate and encourage any discount level that food manufacturers, retailers, or third-party funders would be willing to offer on targeted items. A minimum level (e.g., 10%, 25 cents off) could be set but may not be necessary. Manufacturers have both past experience and market research insights into how much of a discount may be needed to make their targeted products more attractive than likely substitutes. Because only items that meet minimum nutritional criteria are to be targeted, the manufacturers' goals of increasing sales of targeted items will coincide with the program goals, and there should be little concern that manufacturer-selected discount levels would be "too small" to be worthwhile. In any case, any minimum discount guidelines should be framed in a way that does not discourage manufacturers from offering a larger discount when they see fit.

While the amount of the offer should be left up to manufacturers, USDA could establish a minimum threshold for the total value of the coupon package. The value of establishing the minimum threshold is that it helps clarify the total likely value of the coupon package to SNAP consumers. This could make the incentive more salient to them. However, it should be noted that while there may be a gross discount value associated with a monthly package, the actual discount amount received by SNAP consumers would vary, depending on the coupons they individually redeemed. A potential risk to establishing a regular gross value for the coupon package is that this may restrict manufacturers or other implementers from crafting higher discounts or joining the incentive approach. To better ascertain whether there is an ideal regular gross value that should be offered to consumers, USDA, manufacturers, and other interested parties should make this determination based on the types of discount offers they are willing to provide.

The ideal discount coupon package would be representative of a range of manufacturers and include a diversity of offers that represent all food categories, using the eligibility criteria for selection of food items discussed in Chapter 4. However, some additional guidance might be needed to ensure the coupon package is diverse and appealing to consumers. To achieve this diversity while not impeding on well-tested manufacturer processes for developing a coupon offer, a set of guidelines could be established to ensure diversity of coupons, covering as many food categories as possible, would be offered. The intent of the guidelines is to encourage implementers to select healthier items from across their product portfolio, while also enabling them to keep a competitive edge in crafting the offer.

One option would be to use MyPlate as guidance, requiring offers to include at least one item in each of five food groups (fruits, vegetables, grains, dairy, lean protein) per month. If the manufacturer's portfolio did not cover the full range of food groups, the manufacturer would be asked to develop an offer that covers as many of the food groups as are represented. Additional guidelines could include requirements for at least one fresh and one frozen food coupon offer per month to further diversify the coupon package, with waivers for those manufacturers that have only frozen or fresh items in their portfolios. In cases where a manufacturer carries only one food group, the manufacturer would be asked to develop a coupon for fresh, frozen, dried, or canned items offered.

Alternatively, USDA could develop additional recommendations for the makeup of the coupon package using recent data on food purchasing from its National Household Food Acquisition and Purchase Survey (FoodAPS)⁶ and the DGA to further support the selection of healthy choices. These recommendations would establish a pattern or basic parameters for the coupon offers, i.e., 2/3 of the coupons should be for fruits and vegetables, in any form (excluding sugar added or sweetened, or items with extra sodium). As described above, similar rules for manufacturers with only one or two product categories in their portfolio (i.e., only fruit) would be developed. However, extra caution may be needed to ensure that the parameters developed do not unintentionally discourage manufacturers from participating in the incentive: flexible and straightforward guidelines would work best to foster continued buy-in.

⁶ The National Household Food Acquisition and Purchase Survey (FoodAPS) is a nationally representative survey of American households that collects comprehensive data about household food purchases and acquisitions, along with factors that influence household food choices.

To prepare for the coupon offers, a production and distribution timeline would need to be established with the cooperation of manufacturers. Ideally, the third-party coupon aggregator would receive the coupon proposals from manufacturers well in advance of scheduled production and printing of the coupons to provide the needed approvals. This timeline would need to be negotiated with manufacturers and the third-party aggregator, but a quarterly approval of the coupon offers by the third party aggregator may be an appropriate timeline, as it would provide enough time to approve offers and support advanced planning for distribution of the coupon package.

USDA, or an authorized contractor, would receive coupon proposals from food manufacturers and commodity groups (who might, for example, choose to provide coupons on unbranded produce), would confirm eligibility of the specific items in accordance with predetermined criteria based on FOP and shelf-labeling scores, and would distribute the coupons to SNAP consumers through mailing or electronic means. Manufacturers and retailers that sell their own brand items would have the flexibility to offer coupons for items within each product category that are identified by the labeling system as the most healthful. Their inclusion would be appealing because of the possibility of gaining more SNAP customers. While the approach builds on couponing practices that are already widely familiar to consumers, a nutrition education and awareness campaign could be developed as an adjunct support for SNAP consumers to make the discounts salient and actionable.

Design Requirements for Implementation

The following discussion highlights the likely processes needed to implement this approach.

Recruiting stakeholders—A recruitment strategy would need to be developed to invite manufacturers to participate in the approach. To support the recruitment strategy, USDA could assemble a manufacturers’ consortium or technical working group to develop the necessary partnerships to sustain the approach. Alternative strategies could include issuing an invitation through industry representatives and stakeholder organizations. This recruitment strategy would both inform participants of the steps needed for effective implementation and provide opportunities for feedback to improve the feasibility of the approach.

Manufacturers have several compelling reasons to support this approach. First, the approach offers the potential to directly market to a whole new segment of consumers. The ability to create brand loyalty to healthier items among a new segment of customers can be a powerful motivator, as building consumer loyalty is important to maintaining reliable sales. The discount coupons also offer manufacturers a way to potentially test and market new food products, including those developed to appeal to specific demographic groups. The manufacturer’s coupon also offers a way of remaining competitive with a retailer’s own brand, which is often offered at a cheaper price point.

Developing the coupon offer—Developing and aggregating the coupon offers will be an important step in the approach. The intent of the approach would be to incorporate as many different healthier items across all food categories as possible. Doing so would provide SNAP consumers with continued opportunities for incorporating a variety of healthier items into their diets and thereby increase the possibility of long-term impact. Further, providing multiple coupons can help accommodate cultural diversity in food preferences, as well as brand

preferences among SNAP households. Product eligibility would be determined using the FOP and shelf-labeling systems to identify the “healthiest” items as described in Chapter 3. Procedures similar to those described in the discussion of the 2-for-1 coupon incentive would be used to ensure that coupons would be offered across product categories; these guidelines would encourage manufacturers and others (retailers with own brands and commodity groups) to develop offers that cover all food groups and, if possible, include canned, frozen or fresh items from their portfolios.

Before any coupons could be distributed, a coupon template would be developed to ensure that all manufacturer coupons have a similar look and are able to communicate the nature of the incentive, redemption value, and any appropriate “trading up” messaging that would encourage consumers to purchase the item. Stakeholders would need to partner to develop a uniform coupon template and guidance for its use to ensure there is coordination in the appearance and messaging of the coupons. It is important note that the template is not intended to negatively impact the ability of a manufacturer to brand and market its items. This approach also may require a regular review of coupons prior to their printing and distribution to ensure the template is being used as intended. Manufacturers would develop test coupons to determine the most concise and visually appealing style and layout of the coupons. To support this testing, a series of consumer marketing focus groups could be used by manufacturers to determine which design is most appealing for communicating the trading up messaging and FOP/shelf-labeling as a visual cue.

Coupon offers would be aggregated across implementers into one package that could be distributed to consumers on a monthly basis. One option for aggregating the offers into a package for distribution by a State agency would be to appoint a third party to manage this responsibility. USDA or an authorized contractor would receive coupon proposals from food manufacturers, retailers with own brands, and other implementers (such as commodity groups who might, for example, choose to provide coupons on unbranded produce). The third party could be a contractor or technical partner that, working closely with the State agency, would receive the coupons directly from the retailers and manufacturers participating in either coupon offer, and would manually and electronically assemble the package. This partner would confirm eligibility of the specific items in accordance with predetermined criteria based on FOP and shelf-labeling scores, and would distribute the coupons to SNAP consumers through the mail or by electronic means. This partner also could collect some limited data on the range of foods covered by the coupons, participants providing an offer, and related information to support program improvement and refinement of the approach.

Developing SNAP-specific distribution channels—The coupons could be distributed to SNAP households in multiple ways, but each approach would require the cooperation of State agencies to act as a conduit between manufacturers and SNAP households. To initiate the incentive, SNAP households would receive a direct mailing from the State agency that includes the coupons and an overview on how to use them. In addition to direct mail, a second delivery option might be through a secure Web site developed to access and print coupons. This password-protected Web site could be made accessible only to SNAP households (e.g., via a unique password derived from a SNAP recipient’s EBT identifiers). A third delivery option might include a mobile SNAP app, which could be downloaded by SNAP consumers to their

smart phones. USDA and State agencies would provide oversight for developing these delivery channels and ensuring access for SNAP participants.

Timing of the incentive—This approach is designed to be responsive to some of the challenges that SNAP consumers face when attempting to maximize their benefit over the course of a month. The third-party aggregator would provide the assembled coupon packages for distribution according to the SNAP benefits release cycle of participating States. The coupons would have an eight-week redemption period, which would enable SNAP consumers who receive the coupons on a staggered schedule the ability to use them for a significant period of time. No SNAP consumer would be disadvantaged by receiving a coupon that expires before its benefit is received. SNAP consumers would have the ability to use them over the course of the month, both to stock up on items at the beginning of the month and to stretch benefits beyond the initial two weeks of the benefits cycle. SNAP consumers would have the ability to maximize their purchases by using the coupons with sales a retailer may offer (e.g., “stock-up-and-save” deals). The flexibility of the approach would also work well in States that use different schedules for releasing EBT benefits.

Promoting awareness of the offer—SNAP consumers would be made aware of the incentive via an awareness campaign, which would be launched in advance of the initial distribution of coupons. The awareness campaign would share the details of the trading up concept and the guidelines for use of the coupons. USDA, in partnership with local community resources, would develop and implement this campaign. A suite of mobile technologies could also be developed to support awareness of the offer. Special attention also could be paid to boosting acceptance of these coupons in small store settings and communicating to SNAP consumers that coupons are accepted at a wide variety of locations.

Technology needed to implement—No modifications to store POS systems are required for this approach (unless the approach is modified to offer coupons at checkout). Manufacturers would work with their coupon clearinghouses and retailers to establish and review the eligibility and redemption guidelines for the coupons. These guidelines would ensure that the retailer honors the coupon when presented, and that clearinghouses correctly validate the coupon as eligible for redemption, so that retailers can receive payment for the handling and processing costs associated with the coupon.

It could be expected that manufacturers would amend the current guidelines they have in place with retailers and stakeholders to include the SNAP trading-up coupons. These guidelines—established for a SNAP incentive-specific coupon, would include making coupons redeemable only by a consumer purchasing the specific brands, product(s), quantity, and sizes stated on the coupon prior to the expiration date, with the face value of the coupon being deducted from the retail price; enabling only one coupon to be redeemed for each item purchased, and addressing any additional restrictions on coupons being reproduced, photocopied, mutilated, trimmed, or altered in any way by the retailer; and establishing guidelines for the use of coupons with other offers such as “buy-one, get-one” free, or double savings. These conditions establish the safeguards needed to ensure that SNAP incentive-specific coupons are processed as valid. The safeguards protect the retailer from being left to absorb the costs of the items redeemed by the coupons, a situation that both manufacturers and retailers want to avoid.

Procedures to support implementation by staff—To support the leveraging of the FOP and shelf-labeling system via the discount coupon, additional training on redeeming the coupon is needed. A retailer’s checkout clerks would require some guidance to recognize the coupon as valid, be familiar with the rules for redemption, understand how to correctly scan or punch the coupon into the checkout system to ensure it had been applied to the purchase, and understand how to correctly aggregate redeemed coupons for submission by retailer to the manufacturer’s clearing house for reimbursement. The training protocol for checkout staff would also include a refresher on methods the retailer uses to track the receipt of manufacturer coupons in their in-store systems. While this type of training would be limited in duration, it would need to be repeated by retailers on an ongoing basis as they retrain or hire new checkout clerks. Manufacturers would need to partner with their retailers to support the training, which retailers would likely tailor to their stores.

Recruiting local community partners to support the incentive—Local community partners, such as local providers of nutrition education resources and food banks, can play a valuable role in the implementation of the incentive strategy by serving as conduits for additional awareness and educational materials for SNAP consumers. Local community partners also could be linked with a retailer’s health and wellness initiatives to develop more tailored approaches for reinforcing how healthier choices, as identified by an FOP/shelf-labeling system, also are affordable choices within the context of SNAP consumer deal-seeking behaviors. Retailers could become a valuable partner for linking SNAP-Ed and retailer resources to offer cooking demonstrations and nutrition education classes focused on coupon package offerings. These partners could support the distribution of the discount coupon through adjunct supports, as described below.

Additional adjunct resources to support the approach—While the coupons should be redeemable at any retailer that sells the items, retailers also could support the approach through their own existing merchandizing and in-store health and wellness promotions (e.g., cooking classes, store tours) tailored specifically to the products being offered as a part of the discount. The SNAP app, Web site, and social media could be used to provide promotional messaging, recipes, or shopping lists to encourage use of the coupon. The approach also could be strengthened by a tailored nutrition education program, which could include components such as an interactive food shopping module that demonstrates how to leverage nutrition labeling to take advantage of the coupon. This could be provided by local community partners and would illustrate how the trading up concept can be used to incorporate the targeted food items into meals that are appealing to the diversity of SNAP consumers. Peer-to-peer education could be an impactful way of delivering this message, as it would provide a means for sharing real stories of successes in incorporating healthy items using the incentive.

Potential costs—The major costs for this approach would consist of development and distribution of the coupons and the financial costs of the incentive, including coupon processing; development of SNAP consumer awareness and educational materials; and the development, testing, and launching of the SNAP app or any other dedicated technology used to support the incentive. Costs also would include any ongoing technical and content development of these apps and Web sites. The start-up costs include those associated with developing a selection system that can be implemented across manufacturers; costs associated with the development and implementation of a trading-up coupon template; costs for developing the SNAP app and Web site; and costs associated with mailing the coupons directly to SNAP households, or

through other community partners. Operational costs for implementing this approach would include costs for continued distribution to SNAP households via mail; costs associated with redeeming and processing a coupon; costs for an accompanying education campaign; and costs for any in-store resources used to promote an FOP or shelf-labeling system to identify healthier choices. These costs would also exist for longer-term maintenance of the approach. The costs for implementing the approach could be divided among USDA, manufacturers, retailers and other interested partners in this approach. USDA would likely need to support the development and distribution of the SNAP app and related messaging. Manufacturers would support the development of the coupons and costs associated with the financial incentive. Retailers could assume the costs associated with any additional in-store promotions that could support the incentive.

Targeted Merchandizing and Concurrent Promotions

Description of the Approach

This approach uses the product placement and promotion strategies currently available to retailers to promote healthier products. Retailers would merchandize⁷ healthier items identified by FOP and shelf-labeling systems by using signage, lighting, and placement to make these items more appealing to consumers. The merchandizing strategies would nudge consumers, including SNAP participants, to select healthier options by increasing the level of attention they receive beyond current sales. Retailers also would develop a series of concurrent promotions for items that are not rearranged in-store to encourage their purchase. These concurrent promotions would be determined by the schedule that retailers already have for the promotion of their store brands, as well as by scheduled promotions for a manufacturer's offerings. The promotional cycle that retailers develop to focus these merchandizing strategies on healthy items could change over time, minimizing the risks that consumers become bored or begin to ignore the promotions. This approach would allow retailers to capitalize on their growing use of health and wellness strategies (e.g., "healthy aisles" or special placement of healthier choices) to attract customers. For this approach to be accepted by retailers, the healthier items identified as part of the incentive would have to be profitable or, at a minimum, cost neutral. However, this approach would be fairly sustainable, given that it occurs within the scope of resources retailers would typically access to promote their products.

To implement this approach, retailers could incorporate an FOP and shelf-labeling system into their product inventory data systems to support the selection of eligible items for promotion. Retailers would rearrange stores to place selected food items with higher ratings in more visible retail space. Planograms⁸ would instruct staff on how to stock refrigerated cases and shelves to promote healthier items. The approach also could suggest standards for stocking healthier products within a particular category (e.g., at least half of all shelf space in the dairy case should be allocated for low-fat or skim milk). The promotional cycle that retailers develop to focus these merchandizing strategies on healthy items could change over time, minimizing the risks that

⁷ Merchandizing is a subset of marketing defined as the promotion of goods through coordinated marketing, display, and sales strategies.

⁸ Planograms are visual depictions, a map of sorts, of where products are to be positioned on a shelf or in a refrigerator or freezer case.

consumers become bored or begin to ignore the promotions. Materials developed to support the merchandizing and promotions would leverage the FOP and shelf-labeling system visually through a common color, image, logo, or slogan to communicate a coherent and consistent message to the SNAP shopper, as well as to other consumers.

Justification for the Approach

This approach capitalizes on longstanding strategic product placement and promotion marketing strategies. Retailers are familiar with these marketing techniques and use them as a core component of business operations to encourage consumers to purchase more products. Strategic product placement may guide consumers to make healthier choices in retail or food service settings. Placement of products is a key area for marketing and behavioral economic research, as customers are likely to purchase items that are visually appealing and visibly placed. Chandon, Hutchinson, Bradlow, & Young (2009), in an eye-tracking study, discovered that placing a product at eye level had the greatest impact on shoppers' attention. Using cross-category positioning to place products that shoppers are likely to consume together as a meal, for example, also influences purchases, increasing sales (Bezawada, Balachander, Kannan, & Shankar, 2009). Research also has found that lighting, packaging, aromatics, and audio messaging can improve the nutritional quality of choices made in retail settings (Connell, Goldberg, & Folta, 2001) and in food service in cafeteria settings (Wansink, 2004).

The principle of self-attribution suggests that when an individual perceives they have the ability to freely choose between options, they are more likely to be satisfied with the choice they make. Using this principle, positioning healthier items for increased salience can support consumers choosing healthier options. Because consumers are satisfied with the ability to choose and with their choice, they are more likely to repeat their choice in the future (Just & Wansink, 2009). Many experiments have found that making healthier foods more convenient and visible can lead individuals to consume more of them (Just, Mancino, & Wansink, 2008). One experiment conducted in a high school lunchroom found that moving healthier foods to the convenience line, where unhealthy foods are usually placed, increased sales of healthy foods by 18% (Hanks, Just, Smith, & Wansink, 2012). Simply moving the fruit bowl in the school lunchroom to a well-lit and more convenient location has also been shown to significantly increase the amount of fruit sold to children (Wansink & Just, 2011). Another study found that moving the salad bar to the center of the lunch serving area increased purchases of salad by children (Smith, Just, & Wansink, 2011). In the context of a grocery store, this evidence may suggest that rearranging food items could be an effective way to nudge consumers to choose these products.

It also should be noted that this approach does not target SNAP consumers specifically, rather it is targeted to a broad audience. One notable advantage of this approach is the potential for more consumers to be exposed to and purchase the healthier choices. As a result, there may be a larger set of stakeholders who would potentially be more willing to assume some of the costs associated with the implementation of the approach, as their consumer bases would be impacted by it. Alternatively, it may be more favorable to develop an adjunct strategy that has the ability to specifically target SNAP consumers. To achieve this goal, targeted financial incentives could be combined with this approach to make the merchandizing and promotions more salient to the SNAP consumer. To incorporate a financial incentive with this approach, a retailer could, for example, create a double-value endcap where featured items always have a 2-for-1 discount.

Similarly, in cases in which there is cross promotion, consumers who purchase a healthier cereal may, for example, receive a discount on bananas that are also placed nearby.

This approach may be more easily adopted by larger retailers who have additional space and resources available for merchandizing and concurrent promotions. In most supermarkets (independent grocery stores and chains), as well as chain convenience stores, store managers and staff are very familiar with product placement strategies. Furthermore, food manufacturers and distributors typically do some of the “heavy lifting” from a product promotion perspective, in that their staff arrange shelves designated for their products, provide and set up product displays, and ensure products are stocked according to the company’s planograms. It should be noted that some larger grocery chains may have more policies in place that could make these changes more difficult to implement. Identifying the current staffing and tasks structure may help pinpoint places where these new tasks can be incorporated into current practice for larger retailers.

Additional modifications should be considered for implementing this approach for small retailers such as convenience stores, particularly those that are independently operated, because these stores tend to be significantly constrained by staff resources, space, and lack of promotional resources. In these small, independent stores—including many urban corner stores as well as “mom and pop” grocery stores in rural communities—the store owner (and additional staff, if any) may not have the capacity to successfully promote products in the store through complex placement and promotional strategies, and may lack the budget for in-store marketing materials. To make this strategy effective in a small/independent store environment, the following components to implementation are advised:

1. Development of a subset of in-store marketing materials that are scaled for a small store environment, such as ceiling banners, shelf talkers, and refrigerator clings.

In store spaces where shelf labels are not feasible due to type/size of shelf or food display used (e.g., small stores, farmers markets), retailers are used to hand-writing product names and prices. Coordinating materials that align with the overall in-store marketing look and feel could be created, such as the product tags in use in The Food Trust’s Healthy Corner Store Initiative in Philadelphia, PA., depicted in Exhibit 5 below.

Exhibit 5. Example of Coordinated Shelf Label in a Small Retail Setting



2. Provision of technical assistance for store owners, possibly via online training modules, to support development of skills regarding product placement and promotion. Likewise, provide planograms scaled to a small retailer environment.

For example, store owners and market operators could receive a list of standard shelving units and baskets, along with corresponding planograms, to enable them to quickly stock the healthier items in accordance with marketing principles. See Exhibit 6 (also from the Healthy Corner Store Initiative).

Exhibit 6. Shelving Options for Merchandizing in a Small Retail Setting



To implement this approach in small retail settings, additional efforts might focus on providing resources to highlight targeted products with displays, signage, and lighting to direct consumers to healthier choices.

Key Design Features of the Approach

This approach capitalizes on longstanding strategic product placement and promotion marketing strategies. Merchandizing is a subset of marketing and is defined as the promotion of goods through coordinated marketing, display, and sales strategies. Strategic product placement may guide consumers to make healthier choices in retail or food service settings. While retailers are familiar with these approaches, they have not been implemented extensively for healthier items, and fewer financial resources, such as slotting fees, have been used for the overall marketing and promotion of healthier products in comparison with less-healthy alternatives. These placement and promotion approaches include addressing the following:

Placement Approaches:

- Location of products
- General store layout
- Checkout aisles
- Quantity of facings/shelf space
- Eye-level (children's, women's, men's)

Promotion Approaches:

- In-store and out of store shopper marketing
- Single and cross brand promotions
- Item and shelf tagging
- Storewide nutrition guidance systems and educational programs
- In-store product sampling

This approach could be implemented using several of the above merchandizing strategies. As an example, retailers commonly use cross promotions to boost sales of various departments in the grocery store. The bakery department may benefit, for example, from placing freshly baked cookies in the milk aisle. This strategy anticipates customers' associations with certain food groups and products—in this example, a customer who is there to purchase a gallon of milk will purchase the cookies as well. Cross promotion can be used to create positive associations among healthy items, such as moving healthier canned fruits and vegetables into the fresh produce aisle to create better associations with canned products. Cross promotion of items also could include, for example, presenting healthier cereal choices with low-fat milk options or placing bananas in the cereal aisle. As another strategy, shelf-stocking techniques and special displays could be used to call attention to promoted items. An example of this approach is the healthy checkout aisle, where some retailers replace the typical candy displays with pieces of whole fruit such as bananas, apples, and oranges or healthier snack options such as low-fat granola bars or nuts.

The following discussion highlights the likely processes needed to implement this approach.

Recruiting stakeholders—A recruitment strategy would be needed to engage retailers (and their distributors, manufacturers, and wholesale partners) to implement this approach. As with the discount coupon approach, a set of formal and informal strategies would be needed to invite these stakeholders to participate in the incentive. The recruitment strategy could be executed through retail industry organizations, as well as through means such as work groups or advisory panels to invite additional partners. In addition to clarifying the objective and goals of the incentive, the recruitment strategy should also clarify the kind of commitment and resources that would be required for the incentive. Prospective participants would likely want to know how their participation could impact their business model (including sales and customer reach), the types of supports USDA would provide, and the relative flexibility they might have to tailor the incentive more closely to their business model and in-store operations. Some special strategies might be needed to recruit smaller retailers, including offers of additional technical assistance to arrange healthy displays or to support alternative stocking and inventory procedures. Retailers like opportunities for good press, and to be identified as a key player. Further, if the strategy drives consumers to retailers in a way that improves sales, they will want to be engaged and/or not left out. As population demographics shift and the lower-income population increases, retailers will want to remain attractive to this important consumer base. Indeed, the growth of the dollar store market has demonstrated the importance of the low-income and price-conscious shopper to business growth, and many retailers are already trying to attract—or win back—these customers.

Aligning with a nutrition labeling system—While this approach is compatible with any of the existing nutrition rating systems, retailers may stock products that contain several FOP labels and have their own proprietary shelf-labeling systems. Retailers would need to select one FOP or shelf-labeling system to serve as the primary organizer for the merchandizing strategy. Factors impacting this decision could include whether the retailer is using its own proprietary system (one they have heavily invested in), as well as any data retailers might have on consumer responsiveness to different kinds of labeling systems used in their stores.

Retailers and their partners would likely need also to do some negotiation around slotting fees to identify healthier items meeting the threshold for selection that could be featured in this approach. To support this dialogue, USDA, retailers, and manufacturers may need to discuss the business case for changing the strategic placement of items. Manufacturers and retailers may be likely to agree on products that could include higher potential for increased sales to a distinct SNAP consumer base.

Developing a promotional plan—To implement this approach, retailers would need to develop a comprehensive merchandizing plan and promotional cycle to fully develop the specifics of the strategies they choose to implement. This planning consists of a fairly substantial rearrangement of retailer floor space, and the development of new planograms, even if a few products are initially targeted for the incentive. The planning would need to specify the kinds of aisle displays, endcaps and shelving strategies that the strategy would use in the particular store, and also consider the most impactful cross-promotional strategies that could be used. These planograms would also develop solutions for including items that typically do not have an FOP label, such as fresh produce. Sample planograms could be created either for a targeted food category (e.g., dairy or bread), or for the spaces where the retailer and manufacturer would be willing to promote healthier items at certain times of the month (e.g., the space just inside the front entry). It could be helpful to start with a product category for which the retailer has control (i.e., able to develop their own planogram and is responsible for stocking and maintaining product) over stocking and shelving. The strategy could be used in one category initially, or it could focus on a handful of product categories in the store as a test of retailer tolerability and sales lift. Starting with a small number of product categories also could enable problems to be solved prior to reorganizing the store aisles for other kinds of products in targeted food categories. A major concern for retailers would be the degree to which their profits from slotting fees paid by manufacturers are impacted by this type of approach. As an example, milk is less likely to be affected by slotting fees and might be a good product with which to pilot the approach to get retailers on board.

An additional consideration would be whether there is a need to develop additional shelf labels for bulk items or fresh produce and how these might be displayed as a part of the approach. If such a decision is made, retailers would need to factor in the development time for this kind of labeling, as well as the resources needed to update and maintain additional shelf labels as a part of the overall merchandizing strategy. These planning efforts also would consider how retailer in-store promotions could better feature the FOP/shelf-labeling system in order to help consumers identify and select healthier items. This is a highly individualized process for these retailers; however, larger chains or regional stores may convene working groups or develop a series of sample planograms for their stores to facilitate this process.

Developing new store merchandizing arrangements—As this strategy involves rearranging products in the store, retailers also would need time to move products to new locations and to rearrange shelf labels using these new planograms. One likely challenge for this approach is the level of effort associated with rearranging items, known as an initial reset. Retailers may be more receptive to changing planograms if additional staffing help is available to assist with this initial reset of products. Once the initial reset takes place and staff members are properly trained on how to keep shelves restocked according to the new plans, the strategy would be essentially self-sustaining. Most retailers, regardless of size, use a hands-on approach for labeling shelves. This work is relatively labor intensive and can take up to 20% of a stock clerk’s time. Technical assistance may be needed for smaller retailers that have fewer employees to stock items to maintain the approach.

Promoting awareness of the offer—USDA, State agencies, retailers, and external community partners could support the engagement of SNAP consumers in this nonfinancial incentive approach with direct communications through SNAP-specific channels that encourage awareness and understanding of the FOP or shelf-labeling system. These partners could develop a series of health communications—distributed via direct mail, mobile technologies, and in person—to increase the visibility of the nutrition labeling system and to describe how to use it to make healthier choices. SNAP participants could receive this information at the same time they receive their EBT benefits to support planning around healthier choices, but the information would be available to consumers in stores or from community partners at any time during the month. A SNAP app for this approach could focus on healthy messages or games that encourage healthier choices, for example, featuring additional recipes for the food items retailers have selected for the merchandizing approach.

Technology needed to implement—This strategy would require changes to a retailer’s store inventory systems to support the addition of a “flag” that would identify a product as healthier based on the FOP or shelf-labeling system. As described in Chapter 3, retail inventory databases should be modified to include a flag or indicator that contains the nutrition label information at the product level. This database flag would support retailers in managing inventory, stocking, and product promotion practices that reflect product nutritional ratings. Technology system partners, retailers, and manufacturers also would need to develop procedures and a recurring timeline for updating this flag when new products are introduced or when products are reformulated and their nutrition ranking changes. With the new flag, a retailer would be able to pull and stock healthier items or a promotional endcap without having to read the individual package labels. To support use of the flag, some systems testing would be needed to ensure that it contains accurate information and is readily accessible through the various systems that interface with an inventory database. Retailers and their technology providers would be the main implementers of these changes.

Procedures to support implementation by staff—The merchandizing strategy might require additional training and communication for staff on the floor to ensure they are informed on how to clearly explain the strategy and help consumers locate items using the FOP/shelf-labeling system. Additional trainings would support staff members so that they are properly trained on how to keep the store restocked according to the new planograms and promotions. Retailers would have the responsibility for developing and implementing these trainings, which would

need to be timed to coincide with training for new staff and refreshers for existing staff on an ongoing basis.

Recruiting local community partners to support the incentive—As with the discount coupon approach, local community partners would also provide additional supports for this approach. External community partners could support the engagement of SNAP consumers in this nonfinancial incentive approach through direct communications through SNAP-specific channels that encourage awareness and understanding of the FOP or shelf-labeling system and how to prepare food items purchased using this approach, especially less familiar items. These partners could develop a series of health communications, distributed via direct mail, mobile technologies and in person, to increase the visibility of the nutrition labeling system and describe how to use it to make healthier choices, as well as a suite of demonstrations on how to incorporate and prepare healthier choices into a meal. The information would be available to consumers in stores or from community partners at any time.

Additional adjunct resources to support the approach—As noted, the merchandizing approach does not specifically target SNAP consumers. However, targeted financial incentives could be combined with this approach to make the merchandizing and promotions more salient to the SNAP consumer. To incorporate a financial incentive with this approach, a retailer could, for example, create a double-value endcap where featured items always have a 2-for-1 discount. Similarly, in cases in which there is cross-promotion, consumers who purchase a healthier cereal may, for example, receive a discount on bananas that are also placed nearby.

A comprehensive communication strategy for implementers and consumers would also help to bolster this approach. A forum for retailers and manufacturers could be a valuable support for implementation. This forum could serve as a setting for stakeholders to discuss and negotiate issues related to the challenges of promoting healthy items. The goal would be to foster continual communication about the strategy and to help develop a set of best practices that retailers of all sizes and formats (e.g., superstores, corner stores, smaller stores) and their wholesalers and distributors could use in shifting their promotional resources.

Additionally, the SNAP app, Web site, and social media could also be used to provide promotional messaging, recipes, or shopping lists to enforce the merchandizing approach. SNAP-Ed and external channels, such as food banks or similar partner resources, could create promotional materials (distributed via these methods) that increase awareness of healthier items through FOP and shelf labels in the store. Other materials might include recipes that could be released at the time when a store's promotions take place.

Potential costs—The major costs associated with this strategy include altering the inventory systems with the addition of the new flag tied to an FOP or shelf-labeling system, the labor costs for the retailer to implement the strategies, and the costs for promotional messaging. If a financial incentive is incorporated in this approach, those costs would also comprise a major segment of the costs associated with this approach. Start-up costs would include the development of promotional messaging, altering the store planograms, developing database specifications, and additional stocking costs. Some retailers may require additional specialized shelving or lighting to fully implement the approach, but it is likely that these costs would be associated only with smaller retailers.

Implementation costs would include the final programming and systems testing of the new FOP and shelf label database flag; labor associated with arranging new, healthier choices store displays; and staff training on new stocking procedures. Other implementation costs would include any promotional resources that retailers, USDA, and community partners develop to promote the approach among SNAP participants, as well as the printing of any retailer advertisements, new shelf labels, floor banners, or similar items developed to promote the nutritional system and any concurrent promotions. Longer-term maintenance costs would include updates to advertising materials to reflect the products identified for merchandizing or promotion, as well as stocking costs associated with maintaining the rearranged items. Other costs associated with this approach might be potential lost revenue in slotting fees; however, these costs potentially could be offset by increased sales of healthy items, and such costs would ideally be minimized through the selection of a limited set of products, as described previously. The broad targeting of this approach should provide additional support for costs among stakeholders. USDA or corporate partners may consider offering financial resources to offset the costs associated with the product placement reset, as this is likely the most expensive requirement for enacting this approach.

5. THE PILOT STUDIES OF THE TWO MOST-PROMISING APPROACHES

This chapter describes the pilot studies for the two most promising approaches, the discount coupon and targeted merchandizing and concurrent promotions approaches. Each pilot study has multiple research objectives, including assessing (1) the impact of the incentive approach on consumer behavior; (2) the feasibility, scalability, and sustainability of the approach across retail settings; and (3) the costs associated with implementation and operation, among other issues. The pilots have been developed to test proof of concept, thus adjunct interventions (described previously) that could strengthen the main design concept are not recommended for an initial pilot test. A set of overall goals and research questions has been developed for each incentive approach.

A limitation of the project was the inability to obtain the insights and recommendations of SNAP participants on the two most promising approaches, as this was out of scope for the project. However, prior to the testing of either pilot strategy, formative research with SNAP consumers should be conducted to review the features of the incentive approach. Of particular interest would be feedback on the relative accessibility and ease of use of the proposed incentive strategies, as well as any recommendations that could be made to strengthen the incentive to make it more salient for SNAP consumers. This feedback could be obtained via a series of SNAP consumer focus groups held in geographically diverse areas and with SNAP consumers that differ by key demographics, including household size, ethnicity, and duration of program participation.

Another consideration applicable to both pilots is how the impact of the incentive on the diet of SNAP consumers is assessed. Rather than recommending a dietary recall approach as the method for assessing consumer impact, change in food purchases or shopping behaviors is suggested as the primary outcome of interest. Ideally, it would be possible to measure the success of the incentive based on the diet changes observed in SNAP households. However, because diet change is very gradual, using a dietary recall or similar tool to measure this may not be as effective. Rather, as the pilots are designed to test proof of concept, an important outcome would be evidence that either incentive actually alters the purchases of SNAP participants (assuming that changes in purchases could then lead to changes in actual consumption). This is a more proximal measure of the likely impact of the approaches, and has the advantage of providing evidence for the entire households as opposed to an individual within the household. To this end, the pilot studies recommend the use of the National Household Food Acquisition and Purchase Survey (FoodAPS)⁹ to collect data on the actual purchases of SNAP consumers. Supplemental questionnaires would be used to capture perceptions of coupon use and any self-reported changes in consumption patterns. These questionnaires would ask SNAP participants to report on the changes they experience due to the incentive to understand the contextual factors impacting SNAP consumers' choices.

⁹ <http://www.ers.usda.gov/data-products/foodaps-national-household-food-acquisition-and-purchase-survey.aspx#37754>

Discount Coupon Approach Pilot Study

Primary Research Objectives

The overall goals of the discount coupon approach pilot study are twofold: to assess the feasibility of a manufacturers' coupon, and to determine—to the extent possible—the impact of the coupon on SNAP consumers' purchase behavior and intake of healthier foods. To meet these goals, objectives include the following:

- O1.** Determine effective operational procedures for offering a manufacturer's coupon
- O2.** Determine the impact of the coupons on purchases by SNAP consumers (including the conditions under which SNAP consumers use coupons)
- O3.** Quantify the costs of the discount coupon approach for USDA, key stakeholders, community organizations, and SNAP consumers
- O4.** Assess the potential for a sustained intervention to impact the dietary quality of SNAP consumers (including likely changes in consumption)

Pilot Implementation Design

The main programmatic activity of this pilot intervention is to provide a distribution channel for manufacturers to deliver coupons to a sample of SNAP consumers. While the approach could incorporate two other components (the creation of a SNAP app and nutrition education), the initial pilot should first test if indeed a couponing strategy with industry meets expectations for feasibility and effectiveness. The pilot as presented here therefore seeks to test proof of concept before incurring significant development costs for adjunct components such as refocused nutrition education or the development of mobile technologies to support distribution of coupons.

The pilot study would test the following components of the approach: the guidance developed to select and aggregate coupon offers (using the FOP and shelf-labeling system); the processes used to develop a coupon template with the trading up logo; the processes used by manufacturers, retailers with own brands, or commodity groups to develop and print the coupons; and the SNAP-specific delivery channels, as well as the redemption of the coupons. To implement a pilot program in the near future, it would be necessary to work with existing, well-established programs that provide ordinal ratings of food items that can be used to establish product eligibility. Purely informational schemes are less suitable for a pilot study, as they would require the establishment of additional algorithms for determining product eligibility.

In the pilot, the coupons offered could either be existing manufacturer coupons already offered to anyone (where only the additional distribution channel is SNAP specific), or “new” coupon offers to be presented only to SNAP consumers (and not made available to the general population through other means). While it would be possible to put minimum discount restrictions in place for the pilot, this is not a necessary feature. This means that discount levels would vary, and those differences could be examined as part of the pilot assessment. Coupon reimbursement would occur through existing retailer channels. Retailers would not necessarily

know if the coupon had been distributed through a SNAP coupon program channel, although the coupons would have a distinctive design that incorporates the nutrition labeling system's logo.

The distribution channel tested would be a mail-only channel. Although mailing addresses are incomplete nationally and will require some significant effort to obtain, the pilot could identify available mailing addresses within the study region and sample from among those households. The mailing channel is being tested because it has the most reach in comparison to the alternatives proposed in the approach (SNAP app and Web site) even with invalid addresses.

The pilot could be conducted statewide, or in selected regions that reflect a mix of rural, suburban, and urban SNAP households. Because of differences across States in SNAP eligibility and administrative processes, and the need to work with administrative records to distribute coupons, the most likely approach for a discount coupon intervention would be to work with the State agency to distribute manufacturer coupons to SNAP participants in one or more regions within the State. An important contributor to site selection is identifying a partner State to conduct the intervention. The chosen State agency must be willing to use its administrative records to select a treatment sample and distribute coupons, share data on administrative costs (whether borne by the State or reimbursed by USDA), and share de-identified household information on demographics with the research team. Note that there is a trade-off between broader geographic representativeness and the ease and expense of some of the additional assessment activities described below. USDA would have primary responsibility for partner State selection. We recommend the identification of two States for the pilot study, which provides an opportunity to understand how potential differences in administrative procedures, policies, and resources could impact the pilot if it were implemented more broadly.

The implementation phase of the pilot would likely require one year to 18 months, while the period of operation for the pilot would last at least six months to one year. Communicating with and recruiting manufacturers and distributors to ensure a wide variety of promoted items will be a major focus of the initial implementation efforts. Initial contacts could be made through representatives of the Grocery Manufacturers Association, as well as through direct contact with major food companies likely to have a wide variety of eligible products. Commodity groups representing major fruit and vegetable crops also may be targeted for participation. Participating manufacturers must be willing to provide information on coupon reimbursement rates, as this data is needed to understand how many coupons were redeemed. The pilot team would have primary responsibility for manufacturer recruitment, with the direct involvement of one or more key USDA personnel. Additional activities taking place during this phase include the development and testing of coupon templates, production of the coupons, establishment of processes to collect, collate, and distribute coupon packages, and the development of any supporting guidance for retailers in the redemption of the coupons.

In the operational phase, trading-up coupons would be distributed to a random sample of SNAP participants within a selected study region. A random subsample of nonintervention households would serve as a valid control group. The treatment group would receive multiple mailings of printed coupon packages during the pilot period, consisting of monthly mailings over a period of at least six months. It should be noted that a longer timeline is preferable but would be determined by available project resources.

Unintended Consequences

The study design also would allow for measurement of some potential adverse consequences that may arise in the use of discount coupons. One is that the discount coupons may lead to overconsumption of the targeted products because of the price effect or allow for increased consumption of less-healthy, nontargeted products through income effects (i.e., the discount provides more money overall for food purchases). Such effects are likely to be small or nonexistent for the discount levels that manufacturers would provide. However, if present, they would be observable in the food acquisition and dietary data collected at the household level.

A possible confound in the study design would occur if coupons are given or traded to people outside of the treatment group. While this cannot be prevented or measured directly, as the coupons will not be individually tracked, it is not likely that discount coupons will be subject to much redistribution. Note that manufacturers already provide coupons freely to the general population, and there are generally restrictions in place on how many coupons can be used at one time, which presumably would apply here as well. Notwithstanding, to try to capture some data on this, the end-of-study surveys of treatment households can include a self-reported measure of the extent of redistribution by asking coupon recipients if they gave their coupons to others.

Design of the Pilot Evaluation

The design proposed for the pilot study is a randomized field trial. Random assignment of the treatment of coupon receipt allows for rigorous evaluation of the impact of the incentive on SNAP consumers. The design would include a fairly large treatment group, with a smaller, proportionally stratified sample of households as the control group. A larger treatment group sample is desirable to allow for richer analysis of within-group differences (i.e., across households) among those households that received coupons. Assignment to the treatment group would be random from all SNAP participants within the designated regions. Pilot study costs would increase with larger samples, but a larger sample would be more attractive for recruiting manufacturers and would provide a more representative basis for evaluating aggregate coupon use. The pilot evaluation consists of a process and impact evaluation. The details of both evaluation components are presented next.

Process Evaluation

The process evaluation focuses on the feasibility of the design features of the incentive approach, and whether processes for inviting stakeholders to participate, changing store or manufacturer operations, and implementing the approach are effective and promote longer-term participation by stakeholders, including SNAP participants. As such, the key research questions proposed for this pilot include the following:

RQ1. How can stakeholders be recruited to participate in the discount coupon approach? In the early implementation phase of a pilot, it will be imperative to communicate with food manufacturers or distributors to inform them of the opportunity to provide coupons specifically to SNAP consumers, and to engage them in participating with a variety of products. Pre-implementation interviews with key industry representatives will be helpful in identifying strategies that can serve both the program goals and manufacturer objectives.

RQ2. What factors support and hinder feasibility of the intervention? Successful program implementation will require working with existing coupon processing and reimbursement systems and shelf-labeling systems, as well as successful distribution of the coupons in print or electronic formats. Information on feasibility can be obtained through semi-structured interviews of manufacturers, retailers, and representatives in manufacturer's coupon clearinghouses to probe the implementation challenges and opportunities associated with the discount coupon approach.

RQ3. What are the costs of a discount coupon intervention? What are the Federal and State agency administrative and monetary outlays needed to implement a discount coupon approach? Key cost areas include coupon distribution, administrative oversight of product eligibility, and costs associated with recruiting manufacturers.

Research questions RQ1-RQ2 on the feasibility of the incentive approach would be addressed via interview data with manufacturers and other implementers. The approach for answering research question RQ3 is described in the section on assessing pilot costs.

The key informants for the process evaluation are manufacturers, along with distributors or retailers who choose to participate in the pilot. For each of organization type, questionnaire and semi-structured interview protocols would be developed to collect data via in-person or telephone interviews. The instruments used for the process study would likely be developed from scratch and tested with members of the advisory group assembled for the approach, as described in Chapter 5.

A census approach would be used for the pilot study, given the likely limited number of manufacturers participating in the pilot. The manufacturer-level assessments would include semi-structured interviews with them to assess the implementation challenges and opportunities associated with the coupon approach. For example, manufacturers would be asked how they decided what discount amounts would be provided and for which food products; what challenges were encountered in providing the coupons and reimbursing retailers; and what opportunities they saw for reaching a new or increased consumer group. These semi-structured interviews would facilitate analysis of the processes used to develop the coupon discounts, as well as the procedures used to develop and print the coupons, in addition to other related issues. This data would inform procedures to implement the incentive on a larger scale, as well as the desirable modifications to these systems. Semi-structured interviews would also be conducted with store managers to assess their awareness and perceptions of coupon use; other promotions underway within the stores; and assessments of the interest in promoting discounted items to SNAP populations with shelf-labeling systems in stores. Some interview data would be analyzed to produce frequencies and cross tabulations, while open-ended responses would be analyzed for key themes using qualitative methods and analytic software.

Impact Evaluation

The main impact measure for this pilot study is the increase in sales of items identified for the manufacturers coupons, measured in both dollar purchases and serving-size equivalent units of product sold. A secondary impact measure is the difference in purchasing patterns of SNAP consumers receiving the coupons in the treatment group versus those who do not receive the coupons. This could be measured in dollar purchases or serving-size equivalents of

purchases. To assess impact on SNAP consumer behavior, selected survey instruments from the USDA FoodAPS survey could be used. If resources allow, dietary quality measures also could be collected, but we assume that the expense of this may be prohibitive for a pilot study.

For the impact evaluation, the research questions are as follows:

RQ4. Do the coupons influence purchasing behavior? Do consumers use the coupons? Do consumers increase their purchase of healthier food items? Do consumers substitute away from purchase of less healthy alternatives? Coupon use can be assessed by collecting coupon reimbursement information from manufacturers and from coupon reimbursement companies. Examining the impact of coupons on purchase patterns and substitutions will require manufacturer-level data on reimbursements and consumer-level data on purchases.

RQ5. What factors moderate impact of the intervention on SNAP participant purchasing behavior? It will be important to measure the difference in uptake of the incentive among SNAP households with differing characteristics (e.g., household size, length of program participation, and relative access to food retail). Understanding variation in SNAP consumer response to the pilot would inform future tailoring of coupons to be appealing and useful to as broad a group of SNAP participants as possible.

RQ6. Do discount coupons have the potential to influence dietary patterns? (Optional, only applicable if dietary measures are collected.) The pilot study should address whether a sustained coupon intervention has the potential to improve overall dietary quality. Measures may include data on purchasing patterns, quality indices constructed from diary- or recall-based dietary assessments, and SNAP participant perceptions of dietary impacts.

SNAP Consumer Household-Level Measures

Selected households in the treatment and control groups would be surveyed both during and after the operational phase of the pilot. Survey instruments would include the following:

- At least two rounds of purchase record assessments, such as those developed for use in USDA's FoodAPS survey. As the intervention is focused on influencing purchases, the use of these established purchase and acquisition measures is most directly related to measuring the initial impact of a coupon intervention.
- A brief assessment of knowledge of healthier choices, also to be conducted at the start and end of the intervention period, in both treatment and control households.
- For treatment households only, a survey at the end of the intervention to capture perceptions and coupon ease of use, household members' perceptions of the coupons' influence on their consumption choices and dietary knowledge, and open-ended questions regarding how households used the coupons to support their shopping patterns.

These household-level data would provide the primary set of measures for evaluating the pilot intervention. Intervention impacts would be identified through the difference in purchase patterns between the treatment and control groups during the intervention period, and also through the

difference in treatment groups pre- and postintervention. Key research hypotheses to be evaluated from the household-level data would include the following:

H1. (RQ4) Consumers in the treatment group are more likely to purchase healthier food items than consumers in the control group.

H2. (RQ4) Consumers in the treatment group purchased fewer less-healthy alternatives than consumers in the control group.

H3. (RQ5) Variations in dietary quality across the treatment households are related to coupon usage during the intervention period.

H4. (RQ6) Coupon use across treatment households varies with household characteristics (e.g., income, education, location, length in program).

The first two hypotheses will be tested by comparison of the treatment and control groups. The third and fourth hypotheses will be tested through multivariate analysis modeling and the use of dietary quality measures (if collected) as a function of coupon use (H3) and coupon use as a function of observable household characteristics (H4).

The outcome measure is the increase in sales of items identified for the manufacturers coupons, measured in both dollar purchases and serving-size equivalent units of product sold, to be compared between a treatment and control group, as well as between the pre- and post-intervention period for the treatment group. Once the operational details of the intervention were available, including the number, range, and value of the discount coupons, an appropriate sample size could be determined to sufficiently power the study to detect the intervention's impact. Additional formative research may be desirable to extrapolate from similar interventions to estimate the likely impact and establish an appropriate minimal detectable difference. The Linkwell study, described above, provides one benchmark that could inform evaluation design; it found a 4.5% increase in the purchase of healthy items. This indicates that the impact measured in dollars may be quite small. One might also assume rather high variation in the use of the coupons. In order to sufficiently power a study to detect this small change at the 95% confidence level, robust sample sizes would be needed. For example, sample sizes of approximately 650 in both the treatment and control group, after accounting for non-response, study attrition, and attrition off SNAP would provide sufficient power to detect a 1.25% change in purchases.

It would be beneficial to oversample in the treatment group to support subgroup analyses to examine potential determinants of coupon usage (i.e., which consumers are most actively using the coupons). The sample would also be stratified to ensure a mix of income level, location, and length of SNAP participation, which would allow for household-level analysis to address the research questions regarding the impact described above. An assumption of a 20% attrition rate should also be factored into the sampling approach, based on the most current research on SNAP movement on and off the program and likely SNAP consumer attrition over the course of the study period for other reasons.

The analytic objectives of the pilot are to understand how the purchasing of healthy items might differ across SNAP households, compared to each other and in comparison to SNAP consumers who did not receive the coupons. To achieve this, a series of multivariate analyses would be

conducted to enable examination of the differences in coupon usage among SNAP households, within treatment group, and in comparison to the control group.

Manufacturer-Level Measures

An important additional set of impact measures would be obtained from the manufacturers' data on coupon redemption, tracked by the store as well as independent companies (e.g., Catalina). Key measures to be evaluated would be: (1) the ratio of distributed to redeemed coupons; (2) the relative redemption rates across product categories; and (3) redemption rates as a function of the size of the discount offered. The third measure could be used to calculate participation elasticities that could set target discount rates in future programs. Manufacturers also would be asked to provide information on the impact on sales of products and the extent to which the coupons changed purchase patterns, rather than reinforcing existing ones.

Store-Level Measures

A third set of measures could be collected at the store level if cooperating retailers can be recruited to participate. Although the coupons could be redeemed at any retailer that would normally accept manufacturer coupons, a small subset of stores would be asked to cooperate in evaluation activities. A small set of retailers that are diverse in size and format should be selected, based on their respective volume of sales to low-income populations, prior volume of coupon redemption, and relative accessibility to SNAP consumers. A minimum of 10 to 12 stores, differing by retailer format, could be identified for this data collection. The final number of stores recruited for this phase of the evaluation should include replacements by store type, so that a full range of formats could be represented, even if a retailer decided to withdraw from the evaluation. This would mean that at least two or three stores for each store type are identified.

While this is not necessary to evaluate the impact of manufacturer coupons on product sales or household purchases and consumption, it would be useful for assessing how intervention effectiveness varies across the type of retailer and by neighborhood. The store-level data could support analysis on the kinds of stores at which the intervention is most successful. The measures to be collected would be sales and revenue data for selected products reflected in the coupon offers. The food manufacturer is provided the exact store in which the submitted coupons were redeemed. While this data is highly sensitive, manufacturers and retailers could be encouraged to provide the data through the development of a detailed plan for the specific data variables needed and security measures to be used. The use of an incentive, provided to offset administrative costs associated with the data request, also could be offered to increase the willingness of retailers to provide data. Obtaining this data will be largely dependent on agreements between the store and the study team. While there is a precedent for such data being shared, it is not reasonable to expect that all retailers will be comfortable doing so. Additional funds for retailer database system managers to pull the needed data fields in a compatible format for the analysis should be allocated, as retail systems are not typically designed for research purposes.

Evaluation of Pilot Study Costs

The major costs for the pilot study would include the development and distribution of the coupons; the financial costs of the incentive, which include coupon aggregation and processing; costs associated with the development and implementation of a trading-up coupon template; and costs associated with direct mailing of the coupons to SNAP households, or through other

community partners. Costs for any in-store resources used in the promotion of an FOP or shelf-labeling system to identify healthier choices also would be included. As previously stated, the costs for supporting the coupon could be divided among USDA, manufacturers, retailers, and other interested partners in this approach. Government program costs should therefore be limited to managing the approval and distribution of the coupons, and administrative costs for the support of State agencies and coupon aggregators, as the financial incentives would be provided through manufacturers, as has been done with traditional coupons for years. Retailers could assume the costs associated with any additional in-store promotions used during the pilot.

To assess the costs incurred, the pilot evaluator will develop a series of detailed templates for the implementing agencies and other stakeholders to use to record the amount of time associated with administrative tasks, labor costs, and indirect costs associated with implementation. These templates will be developed in cooperation with agency personnel most familiar with the cost centers relevant to other comparable agency activities. These cost-collection templates would be pretested prior to full implementation. The templates would be used by administrators and a subset of line staff in State agency offices and by a similar subset of staff for the retailers, manufacturers, and local partners that implement the approach. These cost-collection forms would be tailored to record the costs associated with the production and redemption of the coupon as well. To further detail these costs, it is expected that any existing formulas used to calculate reimbursement for coupon processing also would be a part of cost calculations. A series of key informant interviews would also be held with managers and line staff involved in the implementation to further refine cost estimates. When financial records are available, they will be requested to support the analysis.

The Targeted Merchandizing Pilot Study

This approach encourages retailers to merchandize items identified by the FOP and shelf-labeling systems as healthier choices. For the purposes of the pilot, certain food categories might be selected as a focus for the promotion and concurrent messaging strategies, for example, low-fat dairy or low-sodium canned vegetables. Merchandizing strategies would be used to call attention to these promoted items, such as grouping products on endcaps, shelf-stocking techniques (e.g., placing items at eye level or at a certain height and breadth on the shelf), and special displays stacked prominently. The pilot study should include the adjunct strategies of developing a retailer's toolkit to assist in the promotion of the items selected for the targeted merchandizing approach, as well as developing SNAP-specific communications that support awareness of the incentive approach.

The goals of this pilot study are as follows:

- O1.** Ascertain whether, and to what extent, targeted merchandizing approaches impact purchases of SNAP consumers.
- O2.** Determine which merchandizing approaches are most effective to improve sales of healthier FOP and shelf-labeled items.
- O3.** Quantify the costs of the merchandizing approach for USDA, key stakeholders, community organizations, and SNAP consumers.

Two features make this proposed pilot evaluation particularly unique. The first is use of supermarket sales data to evaluate changes in purchases due to in-store marketing strategies to promote healthier choices. No published studies have previously used data of this sort, and no study has examined how customer purchases change over a multiyear period in response to in-store marketing strategies. The second important feature is the use of store marketing environmental assessments and customer intercept surveys to help interpret the trends observed from the sales data analyses.

Pilot Implementation

The pilot study would focus on two to three specific food categories in which products can be clearly targeted (e.g., low-fat dairy or low-sodium canned vegetables). Factors for consideration in the selection of products primarily focus on two potential implementation challenges, offsetting the potential lost revenue retailers could incur for moving products to feature healthier choices, and the related labor and development costs associated with developing new planograms. The food categories selected should be ones where retailers are more likely to be willing to negotiate because the profit margins associated with the healthier products in these categories are likely to be similar to those for less-healthy items. The targeting of these items improves the pilot feasibility for retailers.

For each of these product categories, three to four in-store product placement and promotion interventions would be developed. These in-store marketing interventions could be tested in a cross-section of store formats and localities (urban, suburban, rural) to evaluate the impact of the approach on the foods purchased, store revenues, and customer response. Merchandizing strategies to be employed in the intervention stores could include the following:

1. **Multiple facings**—Increase the number of facings of the recommended products.
2. **Prime placement**—Place recommended products at arm/eye level and in the middle of the category aisle.
3. **Signage**—Place call-out signs and shelf runners on targeted products.
4. **Secondary placement**—Use shelf strategies (1 and 2) in all secondary placements (endcaps, dead-space stacks).
5. **Cross-promotion** (where feasible)—Display two product categories together (e.g., cereal and berries).

6. **Taste testing**—Offer free samples of recommended products to increase shopper exposure to healthier options.

To assist in operationalizing the study, the pilot could work with the brand leaders in each food category to establish buy-in and to support the negotiations of slotting fees needed to rearrange shelf displays to promote healthier items. It should be noted that this does not imply that USDA endorses the brand leader or any of its products, but that the brand leader could be an important stakeholder in testing the approach. While stores have control of their own brand products, they usually reserve endcap “premium” space for brands, since the manufacturer will pay extra for it. Recruitment of the brand leader would provide the retailer with assurances that it is being supported in the implementation of the incentive. This would mean that the products that typically have the most promotion associated with them will have that promotion redirected to the healthiest choices within the brand leader’s portfolio. The brand leader is highly recognizable to consumers, and this recognition provides another support for the implementation of a pilot study.

The pilot study would be conducted in one to two States, in up to three geographic clusters to enable the incentive strategy to be piloted in retail settings that vary by urban status and across diverse retailer formats. This would provide the opportunity to recruit a large enough group of retailers to support the pilot. A matched comparison group would be selected to assess retailers and SNAP participants in the study.

The project could be completed in approximately 24 months. In the first year of the pilot, partner States would be selected and recruited. State agencies are important partners for the pilot study, as they will be needed to distribute information about the incentive approach and to provide access to SNAP redemption data. The first year of the pilot also would be spent on developing and implementing a retailer recruitment strategy, identifying products to target (based on the FOP, shelf-labeling system, and negotiations around slotting fees), and modifying technology for stocking inventory and supporting the incentive at checkout. The development of planograms and other supports needed to implement the use of an FOP and shelf-labeling system, and targeted merchandizing and promotion strategies also would occur in the first year of the project. Towards the end of the first year, participating retailers would revamp their store layouts and stocking procedures to support the implementation of the approach.

The intervention would take place in the second year of the pilot. This timeline would allow for multiple products to be tested using the approach and for actual changes in sales data to occur. Operating the pilot for a year also is sufficient to include seasonal variations in product offerings and in-store layout in the study design. The multiple products would be tested for certain intervals, as reflected by the store’s promotional plan, with a reset period to enable the collection of pre/post-data for the items being merchandized. A staggered implementation schedule would be developed to support a clear baseline for the intervention.

This pilot study requires the recruitment of retailers and manufacturers as the main implementers. To determine the feasibility of the approach among retailers of different formats, the pilot would recruit a mix of larger and smaller retailers in each of the selected geographic areas. The use of SNAP sales and SNAP redemption data in combination with other available demographic data would aid in targeting retailers for recruitment into the pilot that attract a significant number of frequent SNAP shoppers. Recruiting the stores from among one or two chains might allow the retailers to use available merchandizing resources in a more-effective

way. For example, it might be easier to agree on changes to planograms with retailers that are a part of a chain. On the other hand, identifying a variety of unaffiliated retailers may be initially difficult to achieve but could provide additional process data for an eventual national implementation of the approach. Because this approach involves changes to the in-store environment, it is important to recruit stores willing to participate in the intervention.

Retailers would need to develop a comprehensive merchandizing plan to fully develop the specifics of the strategies that are selected for the pilot. While there are six possible merchandizing strategies that could be used for the implementation of the approach, some may be easier to implement than others in the context of a pilot. To support an effective evaluation, retailers would be asked to select a similar combination of strategies. For comparison purposes, it would be important to have retailers of different formats implementing similar approaches.

Unintended Consequences of the Intervention

The targeted merchandizing approach could have some unintended consequences. SNAP consumers could purchase the healthier targeted item but compensate for this “good” choice with other less-healthy items in the product category, or in the total basket. While such effects are likely to be small, if present they would be observable in the food acquisition and dietary data collected at the household level. An additional concern is that of “crowding out” by non-SNAP participants. In other words, the promotions may have large impacts on non-SNAP consumer purchasing behaviors, which influence total sales volume for retailers but fail to reach the targeted population. This outcome would be observed in the store-level sales data. Retailers have the ability to sort store-level sales data by tender to support observation of this outcome.

Design of the Pilot Evaluation

The pilot of the merchandizing approach could be implemented to inform a range of process and impact findings that help to further understand the effectiveness of this kind of approach, particularly as it is more subtle than receiving a financial incentive. The evaluation design proposed for this intervention is a trial with matched control and treatment groups. This approach would support multivariate analysis of sales and purchasing patterns in stores where the intervention took place, compared to those where it did not. Pre- and post-data on the sales volume of targeted items and close substitutes from both treatment and control stores will be collected as part of the pilot. This data would include the merchandized products and specific SKUs of these items, which could be also be sorted by payment type used (for example, EBT or other forms of payment).

These retailers would be matched in comparison pairs on the basis of store and community characteristics. This pilot could use common propensity score matching techniques to develop an optimal matching algorithm, which allows for a large number of matching covariates to be introduced into the model. Furthermore, when considering an appropriate set of matched stores, issues such as proximity to the intervention store (opportunity for contamination) should be considered and eliminated wherever possible. The store characteristics that would be used to develop appropriate matching would include: retailer size, overall volume of sales, total SNAP sales, and type of FOP and shelf-labeling systems currently in use by the retailer. The sample design should be large enough to overcome any unexpected withdrawal of stores from the intervention over its duration. Additional sampling considerations should likely be given to

ensure that a large enough subset of smaller retailers is included in the study from its onset to account for possible withdrawals. It is expected that the pilot study might include 12 to 16 retailers in treatment and control groups, for a total of 24 to 32 participating retailers.

The pilot study also requires a fairly robust sample of SNAP participants who are frequent shoppers in the selected stores to determine the impact on SNAP shopping behavior. As with the discount coupon pilot, a robust sample of SNAP households would be needed to conduct multivariate analysis that supports answering research questions on the impact of the intervention on SNAP consumers. The sample would need to be large enough to detect small differences in purchasing behavior and other outcome measures and support subgroup analysis based on SNAP household characteristics. Once again, considerations for the sample size include SNAP consumer attrition over the course of the study period. For the intercept interview or any observations, a smaller set of interviews, using a subset of the sample would be conducted.

Discussion of each component of the evaluation is below, starting with the primary research questions for the evaluation of the pilot.

Process Evaluation

As with the discount coupon pilot study, a specific set of research questions on the viability of the approach has been developed. This pilot will provide important information regarding the feasibility, reach, and cost of an eventual national targeted merchandizing strategy, with answers to the following questions:

RQ1. How might the intervention be adapted to work best in different retail formats? The pilot design must include retailers of different formats to determine whether the required merchandizing strategies can be readily adopted without extreme disruption to the business models of both large and small retailers. The intervention will need to capture whether barriers exist for use in certain retail formats, particularly smaller stores.

RQ2. How might the intervention be adapted to work best for different product categories? The selection of two to three items across food categories can provide insight as to whether the merchandizing approach can work across various food items and categories of interest. This will be assessed in the pilot study by examining the sales data for the selected items and supported by SNAP consumers' self-reporting of their interest in purchasing the targeted items.

RQ3. What barriers exist for recruitment and participation of stakeholders in the targeted merchandizing approach? The success of this intervention approach rests in part on the ability to develop a successful recruitment strategy and to successfully support retailer and manufacturer negotiation on the slotting fees associated with the placement of the targeted items for the pilot study.

RQ4. What factors support and hinder feasibility of the intervention? Successful program implementation will require working with retailers and manufacturers on issues such as the payment for placement and promotion of targeted items. Semistructured

interviews with retailers will help determine what factors help and hinder the feasibility of such activities.

RQ5. What are the costs of a targeted merchandizing intervention? Key cost areas for this approach include those associated with altering retailer inventory systems, labor costs for developing and implementing new planograms and stocking of products, staff training, and the costs for concurrent promotional messaging. Additional costs could include those associated with the involvement of local partners or State agencies in the adjunct activities to promote the approach.

To answer the process research questions (RQ1–RQ4), survey and qualitative data collection with retailers (and possibly manufacturers) would be used. Retailer interviews would be used to gather data on the required process changes to implement the merchandizing approach, possible improvements, and better understanding of any obstacles and possible solutions in answering research questions on the feasibility of the approach.

The data collection with retailers would be conducted at a few predetermined intervals over the data collection period to better capture possible troubleshooting in which retailers might engage to implement the approach. A set of telephone interview protocols would be developed and implemented. In-depth interviews with each of the participating treatment group retailers, conducted at the end of the pilot, would be used as well. The in-depth qualitative interviews would serve as a debriefing on the challenges and successes of the processes used to implement the incentive approach, and to collect lessons learned as well. The data collection protocols would be developed in consultation with the advisory group assembled to implement the FOP and shelf-labeling plan described in Chapter 3. Survey data would be analyzed to produce frequencies and cross tabulations, while open-ended interview data would be analyzed for key themes using qualitative methods and analytic software.

For research question RQ5, the approach for assessing pilot costs is provided later in this section.

Impact Evaluation

In the impact evaluation, important measures of pilot effectiveness include whether SNAP consumers purchase and consume healthier items as a result of the merchandizing approach.

Research questions for this component of the evaluation include the following:

RQ6. Does the merchandizing approach influence purchasing behavior? Do consumers make additional healthy purchases and/or purchase the specifically targeted item as a result of the merchandizing strategy? This would be assessed through comparisons of retailer sales data and through qualitative data collection with SNAP consumers.

RQ7. Does the targeted merchandizing of a limited number of foods have the potential to influence dietary quality? Does a targeted merchandizing approach focused on only a few foods have broader influence on purchasing behavior? That is, can the pilot leverage the FOP and shelf-labeling system as a part of this approach to encourage widespread attention and selection of healthy items by SNAP consumers?

RQ8. What factors moderate impact of the intervention on SNAP participant purchasing behavior? Understanding what factors moderate SNAP participant purchasing behavior is a key question for the pilot. For example, do certain SNAP consumers increase purchases of targeted items at a different rate than other SNAP consumers? Data on the purchasing patterns of SNAP consumers with regard to the merchandizing approach would be obtained by intercept surveys of consumers who have completed their purchases at participating stores.

Key research hypotheses for the impact evaluation include the following:

H1. (RQ6) SNAP consumers shopping at the treatment stores purchased more of the targeted healthy items during the intervention period than shoppers who shop at the control stores.

H2. (RQ7) SNAP consumers shopping in the treatment stores exhibited greater improvement in dietary quality compared to shoppers in the control stores postintervention.

H3. (RQ8) SNAP consumers shopping in the treatment stores exhibited greater awareness of nutrition labeling systems at the end of the intervention period than consumers in the control group.

The next discussion describes the methods that would be used to answer the research questions and test the proposed hypotheses.

SNAP Consumer Household-Level Measures

To evaluate the impact of the targeted merchandizing approach on SNAP consumers, samples of frequent shoppers in the treatment and control stores would be recruited to participate in food frequency questionnaires and/or purchase and acquisition measures. Ultimately, the purchasing behavior of residents shopping at the intervention stores would be compared before and after the intervention to those who primarily shop in another similar location. Participants in the sample should be matched on common demographics such as race, income, and gender to maximize likelihood of comparability. The primary recruitment challenge is identifying those SNAP participants who not only have the potential to be frequent shoppers in a recruited store but who actually shop in the store as the targeted merchandizing strategies are being used. To find these shoppers, EBT data could be used to sample SNAP recipients who frequent the participating retailers or spend a certain share of their benefits at the participating retailer. Alternatively, intercept surveys could be used to identify SNAP participants who frequent either treatment or control stores.

Qualitative methods also are recommended to understand nuances of how consumers experience the merchandizing approach. A subsample of SNAP shoppers could be selected for observations while they shop. The subsample would be selected from the larger sample identified using EBT data reviewed prior to the pilot (the shopping trip observations can be scheduled with them). The shopping observation uses techniques of WIC secret shoppers to discreetly trail consumers as they make purchases. Observing factors such as when consumers pause to look at a display (and

when they do not), or where they most often remove items from the display (at eye level or below), will inform the study.

Additionally, a set of focus groups (depending on the final sample size of SNAP participants and number of intervention stores) could be recruited through in-store intercepts to obtain additional data on diet and shopping behaviors, as well as purchase decision making, nutritional knowledge, and acceptance or reluctance to change food choices. The focus groups would be conducted at the beginning of the month, when SNAP shoppers are more likely to be redeeming their benefits in the store and there is a higher volume of shoppers from which to recruit—but after a recent shopping trip in the participating store. The number of focus groups needed would be based on cost constraints for conducting the evaluation of the pilot, the desire for geographic diversity (for more representative findings) and the desire to include shoppers with the following characteristics: diverse ethnicity, use of different retailer formats, and diverse household size (to capture important demographic distinctions in SNAP participants). While there is no standard metric for determining the number of focus groups needed based on sample size for a larger study, at least three focus groups per geographic region would enable some demographic variation and representativeness for the findings.

The data collection tools used for this component of the evaluation include food frequency questionnaires and/or purchase and acquisition measures, abstraction of retailer sales data, and qualitative protocols. It is expected that some components of the FoodAPS survey instruments may be adapted to support data collection with SNAP participants. Qualitative protocols for focus groups and observations would be developed and tailored to reflect the research questions. Recent USDA instruments on SNAP customer satisfaction and shopping behaviors could be used to shape the development of these tools. WIC or industry secret shopper strategies could be a useful resource for developing the observational protocols. The data collection also requires the development of the intercept interview tools, which may be supported by a small incentive to encourage participation.

Data from SNAP consumers on purchasing behaviors would be collected at baseline and post intervention for both treatment and control groups. The focus groups would be conducted post intervention as well. Intercept interviews and observations would be conducted one time with respondents, although the sample of respondents would be staggered over the pilot implementation to enable comparisons of new and mature merchandizing interventions using this SNAP consumer data.

The main impact measure for this pilot study is the increase in the purchase of targeted items. Intervention effectiveness would be determined through the difference in overall sales and purchasing patterns between consumers shopping in the treatment versus control stores, in addition to other measures. The analysis would focus on whether SNAP households purchase the merchandized item and if their purchases as a whole reflect healthier choices based on exposure to the merchandizing and concurrent promotions. Additional outcome indicators would include measures of purchase decision making, brand loyalty, preference, awareness of the labeling system, and acceptance or reluctance to change food choices. Those SNAP participants who frequent intervention stores would be surveyed to understand their awareness of the targeted merchandizing approach, their perception of its influence on their purchase choices, and their

awareness and use of the labeling systems. Focus groups and observational data also would support this understanding of how SNAP consumers responded to the promotions.

Store-Level Measures

The pilot would use store sales data to evaluate changes in purchases due to in-store marketing strategies to promote healthier choices. To examine primary sales outcomes, mean sales of targeted items during a baseline period (before the intervention was implemented) would be compared to the mean sales on targeted items during the intervention period for the intervention stores and separately for the control stores, to test whether changes from baseline to intervention differ. The outcomes would measure shifts in total volume or total units sold. The process of obtaining sales data from retailers is collaborative, and it depends on the systems and infrastructure of the retailer.

The research team will likely need to work with the retailers from the beginning of the study to develop a plan for how to pull and code the desired data. In cases of larger retail chains, they might have staff members dedicated to these types of tasks who can easily query the information. In cases of smaller stores (e.g., corner stores), it would be beneficial to set up a plan from the beginning, taking into account how the POS system works and is coded.

At the outset of the pilot, the team would work with the retailer to establish a memorandum of understanding to clarify categories of products and obtain specific SKUs, as well as to outline issues related to data ownership, privacy, and security concerns. There is also a precedent when conducting research of this nature to compensate retailers for the time and expertise needed to pull data from their data management systems.

In addition, compliance assessment site visits would be conducted either monthly at each treatment store either in-person or via photographs sent to research staff by store management, resulting in a dataset of at least 12 compliance visits per retailer. Compliance measures could include monitoring where items are placed, number of facings, and the presence or absence of signage for each of the targeted products. Compliance scores could be incorporated into the analysis. This additional analysis would assist in addressing RQ4 for retailers, while providing insight into how successful the approach is to set up and maintain.

Developing Pilot Study Costs

Anticipated costs of the pilot include altering the inventory systems with the addition of the new flag tied to an FOP or shelf-labeling system, the labor costs for the retailer to implement the strategies, the development of promotional messaging, altering the store planograms, and additional stocking costs. Pilot costs would also be incurred for arranging new, healthier choices store displays, staff training on new stocking procedures, stocking costs associated with maintaining the rearranged items, and promotional resources used to support SNAP participants' awareness.

To assess the costs incurred, the pilot evaluator would develop a series of detailed templates for the implementing agencies and other stakeholders to use to record the amount of time associated with administrative tasks, labor costs, and indirect costs associated with implementation. Administrative cost data on the recruitment strategy would be obtained from retailers directly. Retailers would also be asked to provide data on labor costs associated with implementing the

approach. Cost assessment would accommodate the recording of staff time and resources associated with the full range of floor staff needed to implement and maintain the approach. Costs for development of training, planograms, and time in negotiation on slotting fees would also be collected. When financial records are available, they will be requested to support the analysis. A series of key informant interviews would also be held with managers and line staff involved in the implementation to further refine the cost estimates.

Data on the costs associated with retailers' merchandizing efforts would also be incorporated in the assessment of costs. Data would be collected on any estimated loss in slotting fee revenues due to the reorganization of stores. Retailers in both control and treatment groups would be asked to provide their sales data for the two to three items targeted by the pilot to assessing possible revenue losses or gains in treatment stores. These data would then be compared across store types (treatment and control) and within category to identify revenue shifts. These data would also help inform a determination of the feasibility of the approach.

6. CONCLUSION

Currently, there is significant interest from public health officials, researchers, and the retail industry in the potential for nutrition labeling systems to assist consumers in making healthier choices. At the time of the publication of this report, the Food and Drug Administration (FDA) had announced its intentions to revise the nutrition facts panel with major changes, including more prominent calorie counts and the adjustment of some portion sizes. Many food retailers are now promoting efforts to encourage consumers to make healthier choices. As an example, Wal-Mart, the nation's largest retailer, implements the Great For You incentive program with Humana, a healthcare company, to incentivize people to eat healthier by providing savings on healthier foods. The food retail industry as a whole is increasingly sensitive to consumer preferences to identify healthier choices and is developing health and wellness marketing strategies, including guidance on using nutrition labels, to appeal to these consumers (FMI, 2011).

The plan and incentive approaches discussed in this report offer guidance on potential strategies that could leverage nutrition labeling systems to effectively encourage the purchase of healthy choices. The approaches are ones that can be broadly implemented in the retail environment and also ones that are highly feasible for a full range of stakeholders (SNAP consumers, manufacturers, retailers, distributors, and other partners). The options provided in the report include both financial and nonfinancial incentives. The financial incentives presented offer salient discounts for SNAP consumers that balance SNAP spending patterns, shopping behaviors, and the resources of stakeholders for supporting the financial costs of the incentive. The nonfinancial approaches proposed capitalize on aspects of the in-store environment. They are intended to change the choice architecture of the food retail environment to make healthier choices more prominent by drawing on existing food retail marketing strategies. These strategies, in particular, draw on principles of behavioral economics to nudge consumers towards healthier choices.

While this report presents two strategies for future exploration, future work to fully execute these incentive approaches or others would be heavily impacted by a few important factors. The lack of one universal, well-defined nutrition labeling system is the most critical factor that could impede future work to leverage a nutrition labeling system to support healthier choices. While the plan for leveraging shelf labeling systems has been developed to take into consideration the multitude of labeling systems currently in existence (or proposed in the future), the implementation of the incentive strategies would be strengthened by having one universal system in place. The lack of one universal system means that retailers need to invest a higher level of effort into technology resources and processes needed to support an incentive to account for multiple systems in their retail environment. More importantly, the lack of one system impacts the ability of low-income consumers to make healthier choices. While the implementation plan discussed in this report simplifies the identification of healthy items as eligible for the incentive approaches, consumers still need to search in stores to select the healthiest items in environments where multiple systems are used, even as strategies such as incentive-specific shelf tags or additional education on nutrition labeling systems and their meaning are provided as a part of an incentive approach. While the incentive approaches proposed all include a significant nutrition education and awareness campaign to support lower income consumers in using a labeling

system, the resources could be more impactful or used more efficiently if the focus was on one universal system.

Another factor that could impede future work to implement the incentives is the changing nature of the food retail environment itself. The strategies presented in the report have carefully considered how to frame the leveraging of nutrition labeling systems within the shared interests of manufacturers and retailers working within small profit margins to provide them with either a competitive edge or ways to capitalize on existing initiatives where corporate resources have already been heavily invested. However, the successful marketing models for retailers are rapidly changing in a highly competitive environment. As noted in this report, the dollar store is increasing its volume of sales. At the same time, several large national supermarket chains (most recently Safeway) are being bought by larger corporations, with some considerable consolidation of food retail marketplace. The model for food retail shopping is changing: the appeal of traditional supermarkets is waning in favor of the supercenter model, specialty retailer, or discount retailer. The implications of these changes are that the retailer resources that could be used to support the incentives may need to be reconsidered in light of increasing pressures to remain profitable in a highly competitive marketplace.

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