

GAO

Report to the Chairman, Committee on
Agriculture, Nutrition, and Forestry,
U.S. Senate

July 2008

FOOD STAMP PROGRAM

Options for Delivering Financial Incentives to Participants for Purchasing Targeted Foods





Highlights of [GAO-08-415](#), a report to the Chairman, Committee on Agriculture, Nutrition, and Forestry, U.S. Senate

Why GAO Did This Study

In fiscal year 2007, the Food Stamp Program provided about \$30.4 billion in nutrition assistance benefits to 26.5 million individuals. Benefits are issued through Electronic Benefit Transfer (EBT) cards, similar to debit cards, to purchase eligible foods at authorized retail stores. The diets of many low-income individuals, like the U.S. population overall, do not meet federal dietary guidelines. One potential strategy for increasing the purchases of targeted foods that contribute to a healthy diet is to incorporate into the program financial incentives for purchasing these foods. GAO was asked to identify (1) what is known about the effectiveness of financial incentives and other approaches intended to increase the purchase of targeted foods, (2) the key factors to consider in designing a financial incentive program, and (3) options available to the U.S. Department of Agriculture's Food and Nutrition Service (FNS) for implementing financial incentives. GAO interviewed agency and state officials, retailers and associations, private EBT contractors, and other stakeholders; convened a panel of 17 experts; and conducted a literature review.

In commenting on this report, FNS generally agreed with GAO's findings and concluding observations.

To view the full product, including the scope and methodology, click on [GAO-08-415](#). For more information, contact Kay Brown at (202) 512-7215 or brownke@gao.gov.

FOOD STAMP PROGRAM

Options for Delivering Financial Incentives to Participants for Purchasing Targeted Foods

What GAO Found

A variety of approaches, including financial incentives and nutrition education, can increase the consumption of targeted foods, but little is known about the effectiveness of efforts to increase access to targeted foods. A few studies examining the effectiveness of financial incentives have demonstrated short-term positive effects on purchases, consumption, or weight loss. A study that reviewed 92 nutrition education studies found that most studies reported significant positive effects on consumption. Because of a lack of reported research, little is known about the effectiveness of approaches intended to improve access to targeted foods.

Factors to consider in designing a program that delivers financial incentives through an additional food stamp allotment tied to the purchase of targeted foods include the following:

- *Selection of foods:* Selecting which foods to promote could be a controversial and challenging part of designing an incentive program.
- *Incentive amount:* The amount of the incentive will affect participant response and program costs.
- *Informing participants:* Participants must be informed of the availability of incentives to take full advantage of a new incentive program.
- *Program monitoring and evaluation:* Monitoring and evaluating the incentive program is critical to maintaining program integrity and determining the effects of the program.

An incentive program could be implemented through either electronic or paper methods, and the different options would have implications for ease of implementation, program integrity, and cost. Electronic options include adding food benefits to the EBT cards currently used or to a separate card on the basis of the amount that participants spend on targeted foods. Providing incentives using existing EBT cards would build on the current checkout technology and process, and could require less time to complete transactions compared with using a separate card. However, delivering financial incentives to participants' EBT accounts on the basis of their purchases of certain foods would require several changes to the EBT system, such as modifications to retailer and EBT contractor software to separately track the amount spent on the targeted food items. Administering incentives using a separate card, such as an additional EBT card, may be more costly and complicated to implement. Alternatively, providing participants with paper vouchers for the purchase of targeted foods would not require changes to the EBT system, but could be more burdensome to use, increase fraud risk, and increase state administrative costs. With the new authority provided as part of the Food, Conservation, and Energy Act of 2008, FNS will have the opportunity to develop and administer a pilot incentive program and to determine both its effects on participant purchasing and consumption patterns and the costs associated with such a program.

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Abbreviations

EBT	Electronic Benefit Transfer
EFNEP	Expanded Food and Nutrition Education Program
ERS	Economic Research Service
FNS	Food and Nutrition Service
FSNE	Food Stamp Nutrition Education
FSP	Food Stamp Program
PIN	personal identification number
PLU	Price Look-Up code
POS	point of sale
TANF	Temporary Assistance for Needy Families
UPC	Universal Product Code
USDA	U.S. Department of Agriculture
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children

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United States Government Accountability Office
Washington, DC 20548

July 30, 2008

The Honorable Tom Harkin
Chairman
Committee on Agriculture, Nutrition, and Forestry
United States Senate

Dear Mr. Chairman:

The diets of many low-income individuals, like the U.S. population overall, do not meet federal dietary guidelines. The typical American diet includes higher-than-recommended intakes of fat, added sugars, and sodium and lower-than-recommended servings of milk, whole grains, fruits, and vegetables. Poor eating habits can increase the risk of serious health problems, such as heart disease, cancer, stroke, diabetes, and hypertension. Changing food purchasing and consumption patterns, therefore, might produce improvements in the nation's health. The Food Stamp Program (FSP), whose mission is to improve the nutrition of low-income families, provides one possible vehicle for influencing dietary patterns for large numbers of individuals. This program provided about \$30.4 billion in food benefits to about 26.5 million individuals each month during fiscal year 2007.

The FSP is jointly administered by the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS) and states. States generally administer the program from local offices where caseworkers determine whether households meet the program's eligibility requirements, calculate monthly benefits for qualified households, and issue benefits through Electronic Benefit Transfer (EBT) cards. These cards, similar to debit cards, allow participants to purchase eligible foods at retail stores authorized by FNS to accept FSP benefits. At the end of fiscal year 2007, about 165,000 retailers—ranging from large supermarkets to convenience stores and farmers' markets—were authorized to accept FSP benefits. In addition to providing food assistance, states have the option to offer federally funded nutrition education to FSP participants and eligible nonparticipants. FNS also administers the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) through grants to the states. Although benefits in this program are primarily delivered through a paper-based voucher system, FNS has recently provided some states with funds to pilot an EBT system. The WIC program provides food, nutrition education, and health care referrals to low-income pregnant and

postpartum women, infants, and children under aged 5 years who are determined to be at nutritional risk. In fiscal year 2007, the WIC program served an average of about 8.3 million women, infants, and children per month, and federal program costs amounted to over \$5.5 billion.

The Food, Conservation, and Energy Act of 2008 (the 2008 Farm Bill) includes provisions authorizing USDA to fund pilot projects in the FSP to assess whether healthier food purchases result from projects that provide financial incentives, nutrition education, and improved access to healthy foods, among other options.¹ Given the variety of approaches available to influence food purchases, you asked us to assess what is known about their effectiveness in increasing purchases of targeted foods that could contribute to a healthy diet. In addition, because the technical and operational challenges of implementing a system of financial incentives at the point of sale (POS) are largely unknown, you asked us to determine the key factors to consider in designing such a program, options available to implement financial incentives, and advantages and challenges involved in their implementation. To address these issues, we examined the following:

1. What is known about the effectiveness of financial incentives and other approaches intended to increase the purchase of targeted foods that could contribute to a healthy diet?
2. What are the key factors to consider in designing a program that provides FSP participants with financial incentives to purchase certain foods?
3. What options are available to FNS for implementing financial incentives, and what are the advantages and challenges involved in implementing such options?

To identify recent studies that examine the effectiveness of nutrition promotion approaches, we conducted a literature review and consulted with USDA staff. We identified related studies published from January 2000 through February 2008 and conducted detailed reviews of 16 studies, including reviews or summaries of original research from peer-reviewed journals, published research from USDA's Economic Research Service (ERS), and studies of WIC farmers' market programs. We reviewed each

¹The act also includes a provision changing the name of the Food Stamp Program to the Supplemental Nutrition Assistance Program, effective October 1, 2008.

study's research methodology and determined that the studies were reliable for the purposes of our work.

To understand the issues involved in designing a financial incentive program, we interviewed representatives of stakeholder groups that would be affected by implementation of an incentive program, including USDA officials; officials from four states with WIC EBT experience (Ohio, Texas, Washington, and Wyoming); officials from one state (California) that passed legislation authorizing the provision of financial incentives to FSP participants for purchasing targeted foods; three EBT contractors serving almost all of the states; retailer associations and retailers representing large chain and smaller independent grocery stores; food and nutrition advocacy groups; and researchers. We also facilitated group discussions about the options for delivering financial incentives and implementation issues with state officials, retailers, and industry representatives at three national conferences. To further explore financial incentive options and implementation issues, we convened a panel of 17 experts representing stakeholder groups that would be involved in implementing an incentive program, including FNS, states, state EBT contractors, retailers, and manufacturers of retailer checkout systems. Appendix I explains our scope and methodology in more detail. We conducted this performance audit from May 2007 through July 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Results in Brief

A variety of approaches, including financial incentives and nutrition education, can increase the consumption of targeted foods that could contribute to a healthy diet, but little is known about the effectiveness of efforts to increase access to such foods. A few studies examining the effectiveness of financial incentives have demonstrated short-term positive effects on purchases of targeted foods, consumption, or weight loss. For example, an evaluation of a Farmers' Market Nutrition Program implemented in a county in Michigan found that after giving \$20 in farmers' market coupons to 564 low-income women, they self-reported a significant increase in fruit and vegetable consumption. Nutrition education approaches, such as individual counseling and group classes, can positively affect fruit and vegetable consumption, particularly among populations at risk of or diagnosed with disease. Providing nutrition

information at the point of purchase—such as posters, brochures, and shelf and food labels—is another nutrition education approach that can influence food purchasing behavior and consumption, although the results from reported research on these approaches are mixed. Little is known about the effectiveness of approaches aimed at improving access to targeted foods because of a lack of reported research. Study limitations, including a lack of information on costs and sustained effects as well as methodological differences among studies, make it difficult to compare approaches or determine which approaches are most effective.

Factors to consider in designing a financial incentive program include the foods to target for promotion, the incentive amount, how participants would be informed of the new benefit, and how the program would be monitored and evaluated.

- *Selection of foods:* Expert panelists and many stakeholders we interviewed agreed that an incentive program would be easier to implement if incentives were provided for a general food category, such as fruits and vegetables, rather than for individual food items that either meet certain nutritional criteria or contain a particular ingredient, such as whole grains. Even using general food categories could be challenging, however, since some foods with less nutritive value might be included in a category. Another issue to consider is the availability of the targeted foods, which could vary by retailer.
- *Incentive amount:* Although the optimal value of an incentive to increase targeted food purchases has not been determined, ERS estimated in a study that a 20 percent reduction in the price of fruits and vegetables would result in a modest increase in these purchases by average FSP participants. The incentive amount would affect overall program costs.
- *Informing participants:* Participants must be informed of the availability of incentives to take full advantage of a new incentive program, but reaching them could be a challenge and would likely increase the workload of local assistance offices and nutrition education providers.
- *Program monitoring and evaluation:* FNS indicated it would need to incorporate any new incentive program into its existing oversight activities by monitoring the total amount spent with the incentive benefits on the targeted foods and developing criteria to flag suspicious transactions since opportunities for fraud may be increased. Expert panelists agreed that evaluating the incentive program is critical to ensure that program integrity is not eroded and to determine the effects of the incentives on participants' food choices.

A financial incentive program—defined as an additional FSP allotment tied to the purchase of certain foods targeted for promotion—could be implemented through electronic or paper methods, and the different options would have implications for ease of implementation, program integrity, and cost. Electronic options include providing additional FSP benefits to the cards currently used or to a separate card on the basis of the amount that participants spend on targeted foods. Providing incentives using existing EBT cards would build on the current checkout technology and process, and could require less time to complete transactions compared with using a separate card. Implementing incentives electronically on EBT cards could also minimize fraud risk by requiring entry of a personal identification number (PIN) to complete transactions. However, delivering financial incentives to participants' EBT accounts on the basis of their purchases of certain foods would require several changes to the EBT system. For example, it would require modifications to retailer and EBT contractor software to separately track the amount spent on the targeted food items. Administering incentives using a separate card, such as an additional EBT card, may be more costly and complicated to implement. Alternatively, providing FSP participants with paper vouchers for the purchase of targeted foods would not require changes to the EBT system, but could be more burdensome to use, increase fraud risk, and increase state administrative costs. With the new authority provided as part of the 2008 Farm Bill, FNS will have the opportunity to develop and administer a pilot incentive program and to determine both the program's effects on participant purchasing and consumption patterns and the costs associated with such a program.

In commenting on this report, FNS officials agreed with our findings and concluding observations. However, they raised concerns about the opportunity for fraud in a financial incentive program as well as the potential cost of such a program.

Background

The FSP is intended to help low-income individuals and families obtain a more nutritious diet by supplementing their income with benefits to purchase food. Most food items sold in grocery stores can be purchased with FSP benefits, except for hot foods, tobacco products, and alcoholic

beverages.² FNS pays the full cost of FSP benefits and shares the states' administrative costs—with FNS usually paying approximately 50 percent. FNS is responsible for promulgating program regulations and ensuring that state officials administer the program in compliance with program rules. States usually administer the program from local assistance offices where staff determine whether households meet the program's income and asset requirements, calculate monthly benefits for qualified households, and issue benefits to participants on an EBT card. The local assistance offices often administer other benefit programs as well, such as Temporary Assistance for Needy Families (TANF) and Medicaid.³

Determination of Eligibility and Benefits

FSP eligibility is largely based on a household's income and assets. To determine a household's eligibility, a caseworker first determines the household's gross income and net income. Gross income cannot exceed 130 percent of the federal poverty level for that year as determined by the Department of Health and Human Services, and net income cannot exceed 100 percent of the federal poverty level (or about \$20,652 annually for a family of four living in the continental United States in fiscal year 2008). Net income is determined by deducting a portion of specified expenses from gross income, such as dependent care, medical needs, utilities, and housing.

Use of Electronic Benefit Transfer Cards to Redeem FSP Benefits

Prior to EBT, participants used paper coupons to pay for allowable foods. The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 required each state agency to implement an EBT system to electronically distribute FSP benefits. The last state completed its implementation in fiscal year 2004. States are responsible for coordinating and managing the EBT system in their state, but they generally award contracts to private sector companies to develop and operate the system. Under the EBT system, FSP participants receive an EBT card imprinted

²Current regulations define "eligible foods" as any food or food product intended for human consumption, except alcoholic beverages, tobacco, and hot foods and hot food products prepared for immediate consumption. Eligible foods are further defined as seeds and plants that are used to grow food for the personal consumption of eligible households, and meals prepared and delivered or served to eligible food stamp recipients as well as equipment for hunting and fishing in certain specified areas in Alaska (7 C.F.R. § 271.2).

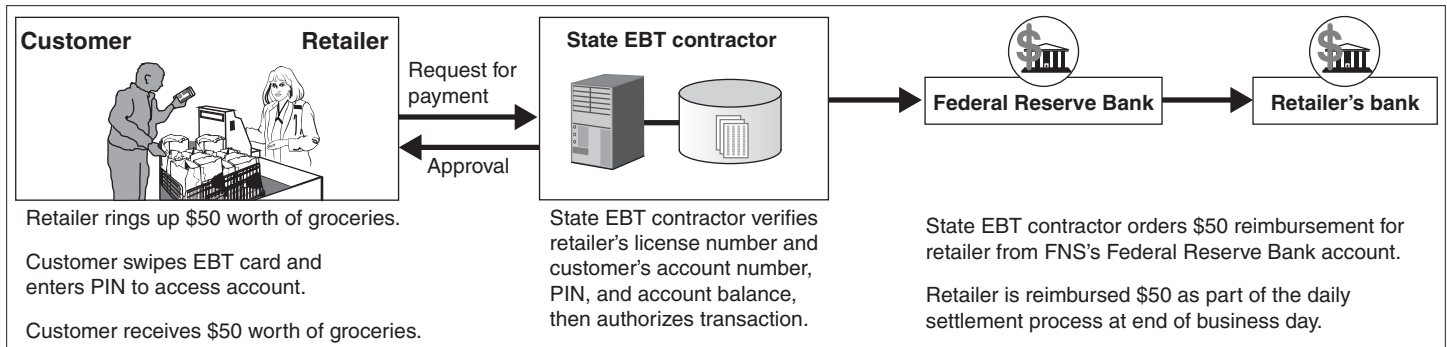
³TANF is a federal block grant program that provides federal funding to states and tribes to operate programs that deliver cash assistance and services, such as transportation and child care assistance, to needy families.

with their name and account number. FSP benefits are automatically credited to the participants' accounts once a month. According to FNS, more than half of the states use EBT cards to distribute benefits from other federal programs, such as TANF cash assistance.⁴

The EBT system uses magnetic strip EBT cards that work like commercial debit cards and an online system where transactions are processed as they occur. As shown in figure 1, to complete a FSP EBT purchase, the store clerk totals the amount of eligible items on the cash register, and the amount of the EBT purchase is entered into the retailer's POS device. The EBT card is then swiped through the POS device at the grocery checkout counter, and the participant enters a PIN to access the account. POS devices read the recipient identification information from the magnetic strip on the back of the EBT card. That information, along with the total amount of the EBT purchase, is sent to the state's EBT contractor for approval. Information about the items purchased is not transmitted through the FSP EBT system. Electronically, the EBT contractor verifies certain information and sends an authorization or denial back to the retailer. The purchase amount is then subtracted from the participant's account balance and added to the retailer's bank account through a settlement process at the end of each business day. Retailers can also be reimbursed for EBT purchases by using manual paper procedures if the EBT system or an EBT card is inoperable or if the retailer does not have access to telephone lines and electricity.

⁴For more information on the use of EBT and other electronic means of distributing government benefits, see GAO, *Electronic Payments: Many Programs Electronically Disburse Federal Benefits, and More Outreach Could Increase Use*, [GAO-08-645](#) (Washington, D.C.: June 23, 2008).

Figure 1: Example of a FSP EBT Transaction



Sources: GAO, Nova Development Corp.

Retailers use different checkout systems to process EBT transactions. Many large volume retailers have integrated checkout systems that automatically identify and subtotal the FSP-eligible items when items are scanned and display the EBT purchase amount on the POS device. Retailers with scanning systems develop and maintain a computer file that contains the prices associated with the Universal Product Codes (UPC) and Price Look-Up (PLU) codes of the items sold in the store.⁵ The computer file can be programmed to contain a FSP eligibility “flag” associated with each item, which can help the retailer ensure that only FSP-eligible items are purchased with EBT cards. Some retailers use commercial POS equipment that can accept multiple payment types, such as EBT, debit, and credit cards. Retailers that do not accept debit or credit cards but average more than \$100 in monthly FSP sales often have state-provided, stand-alone POS equipment that can only process EBT transactions. These stand-alone devices are not integrated with the retailer’s cash register system. Without a scanner and an integrated checkout system, store clerks have to manually separate and subtotal the eligible and ineligible items and manually enter the EBT purchase amount in the POS device.

⁵Bar codes on most prepackaged items adhere to a UPC format that enables retailers to uniquely identify the items. Food items with UPC codes are prepackaged, with a fixed weight, count, or volume, and are distributed by national suppliers or large regional suppliers. Retailers with scanning systems can also create their own unique bar codes for non-UPC items, referred to as PLU codes. Retailers use PLU codes for foods supplied by local independent suppliers and foods that are purchased by weight, such as fresh produce.

Characteristics of Authorized Retailers

FNS has the primary responsibility for authorizing and overseeing retailers that accept FSP benefits. To become an authorized retailer, a store must offer on a continuing basis a variety of foods in each of the four staple food categories—meats, poultry, or fish; breads or cereals; vegetables or fruits; and dairy products—or 50 percent of its sales must be in a staple group, such as meat or bakery items. At the end of fiscal year 2007, about 165,000 retailers were authorized to accept FSP benefits. Large stores redeem most of the FSP benefits, as shown in table 1. In fiscal year 2007, supermarkets and superstores accounted for about 21 percent of the authorized stores but redeemed about 85 percent of FSP benefits.⁶

Table 1: Percentage of Authorized Firms and FSP Redemptions, by Category, for Fiscal Year 2007

Type of firm	Percentage of total authorized firms	Percentage of total FSP dollars redeemed
Supermarkets	13.16%	49.98%
Superstores	7.83	35.18
Grocery stores ^a	17.65	6.24
Convenience stores	35.45	4.32
Combination stores ^b	15.48	1.62
All other stores ^c	8.72	2.43
Meal services ^d	1.71	0.23
Total	100%	100%

Source: Food and Nutrition Service data.

^aThis category includes small, medium, and large grocery stores.

^bThis category includes stores such as independent drug stores, dollar stores, and general stores.

^cThis category includes farmers' markets, wholesalers, specialty food stores, health/natural food stores, nonprofit food-buying co-ops, military commissaries, and delivery routes.

^dThis category includes drug and alcohol treatment centers, group homes, and communal dining facilities or meals-on-wheels for seniors.

In addition to approving retailers to participate in the program, FNS headquarters officials collect and monitor EBT transaction data to detect suspicious patterns of transactions by retailers. As part of the monitoring

⁶FNS defines a "supermarket" as a store with between \$2 million and \$5 million of annual retail sales and, typically, 10 or more checkout lanes with cash registers and bar code scanners. A "superstore" is a very large supermarket with \$5 million or more of annual retail sales. Both supermarkets and superstores have staple food sales greater than or equal to 65 percent of their retail food sales.

process, FNS collects each day's FSP transaction data from the states' EBT contractors and adds these data to its EBT transaction database for analysis. Information on the amount of the transaction is reported. Information on the items being purchased is not available through EBT. The system scans these data to identify transactions or sets of transactions that fit a certain set of criteria defined by established patterns of fraudulent activity.

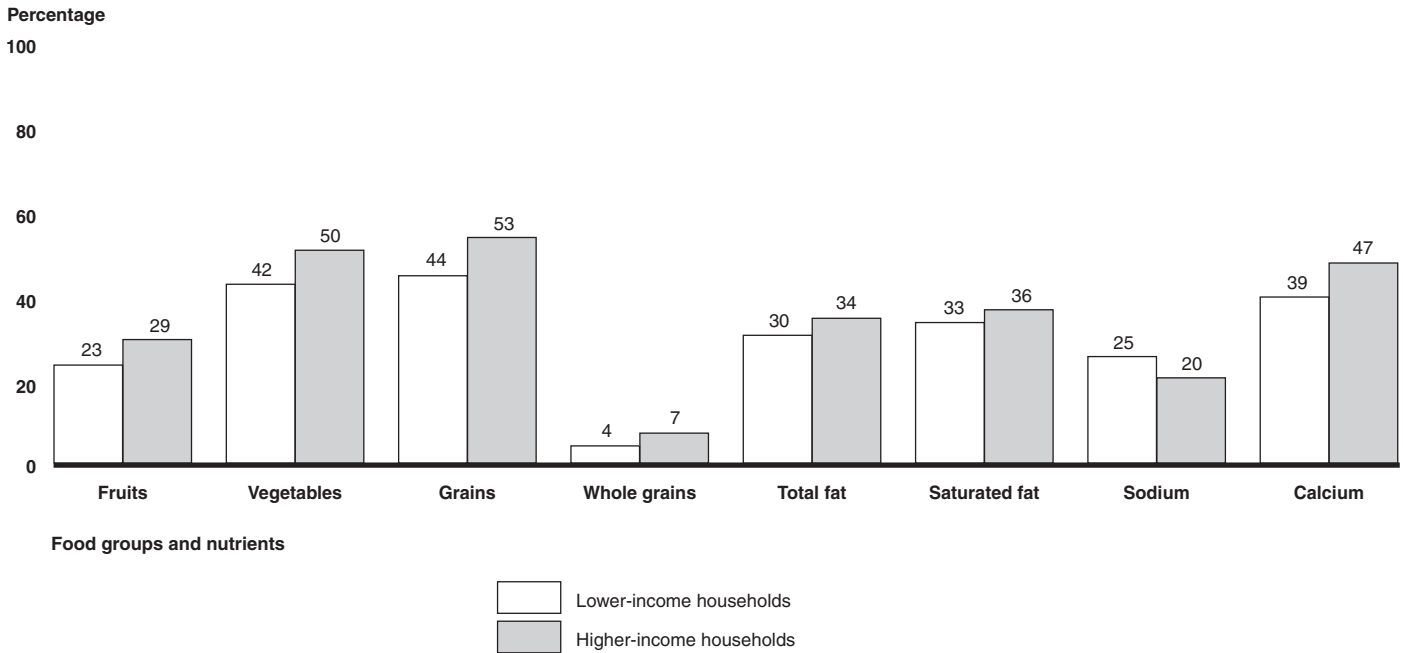
Adherence to Federal Dietary Guidelines

According to ERS, research has shown that the diets of most Americans do not follow the pattern recommended by the 2005 Dietary Guidelines for Americans and USDA's MyPyramid. The federal dietary guidelines describe a healthy diet as one that emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products; that includes lean meats, poultry, fish, beans, eggs, and nuts; and that is low in saturated fats, trans fats, cholesterol, salt, and added sugars. Two cups of fruit (4 servings) and 2½ cups of vegetables (5 servings) per day are recommended for a reference 2,000-calorie intake, with higher or lower amounts depending on the calorie level. The federal guidelines recommend that total fat intake be between 20 percent and 35 percent of daily calories, with most fats coming from sources of polyunsaturated and monounsaturated fatty acids, such as fish, nuts, and vegetable oils.

As shown in figure 2, less than half of the U.S. population met specific dietary guidelines for the consumption of many of the recommended food groups and nutrients.⁷ A greater percentage of people in higher-income households met recommendations for the consumption of certain food groups and nutrients than did people living in lower-income households. For example, 50 percent of those living in higher-income households met the vegetable recommendations, compared with 42 percent in lower-income households.

⁷The figure 2 data on the consumption of fruits, vegetables, grains, and fat reflect the percentage of the population meeting USDA's 2000 Dietary Guidelines for Americans, which has since been revised. Sodium consumption data reflect the percentage of the population meeting a standard tracked by Healthy People 2010, a project managed by the Department of Health and Human Services. Calcium consumption data reflect the percentage of the population meeting the recommended adequate intakes for calcium developed by the Institute of Medicine of the National Academy of Sciences.

Figure 2: Percentage of U.S. Population Aged 2 Years and Older, Meeting Specific Dietary Guidelines for the Consumption of Food Groups (Data Collected between 1988 and 1996)



Source: Ronette R. Briefel, "The Changing Consumption Patterns and Health and Nutritional Status in the United States: Evidence from National Surveys," *The Nation's Nutrition*, International Life Sciences Institute (Washington, D.C.: 2007).

Notes:

Data are from the 1994 to 1996 Continuing Survey of Food Intakes by Individuals for fruits, vegetables, grains, whole grains, total fat, and saturated fat and from the 1988 to 1994 National Health and Nutrition Examination Survey for sodium and calcium.

Lower-income households have income at or below 130 percent of the federal poverty threshold.

Other research has examined how the diets of FSP participants compare with the diets of low-income and higher-income individuals not participating in the FSP. This research suggests that the diets of FSP participants and income-eligible nonparticipants do not differ significantly. An ERS-funded study found that FSP participants were more likely than higher-income nonparticipants to have poor diets, on the basis of an

assessment of the intake of grains, vegetables, fruits, dairy, meats, fat, cholesterol, and sodium as well as on the variety of foods consumed.⁸

Nutrition Education

Nutrition education can be defined as any set of learning experiences designed to facilitate the voluntary adoption of eating and other nutrition-related behaviors that are conducive to health and well-being.⁹ USDA, the lead agency for the nation's nutrition education efforts, funds and administers a variety of nutrition education efforts. One program, the Expanded Food and Nutrition Education Program (EFNEP), is specifically designed to educate low-income families and youths about nutrition and nutrition-related subjects. EFNEP is administered at the state level by Cooperative Extension Service offices, which oversee the allocation of federal EFNEP funds. In 2006, USDA reported that EFNEP delivered nutrition education to 150,270 adults and 409,389 youths, and that 84 percent of the families served were at or below the federal poverty level.

While there is no legislative mandate for nutrition education, states can provide nutrition education to FSP participants and eligible nonparticipants, known as Food Stamp Nutrition Education (FSNE). USDA reimburses states 50 percent of allowable nutrition education costs. To provide nutrition education, the state agency administering the FSP submits a state nutrition education plan. About one-half of the 93 agencies implementing FSNE are affiliated with the Cooperative Extension Service, which is the same entity that administers EFNEP. In 2007, 52 state agencies had approved nutrition education plans for which more than \$270 million in federal funds were approved.

⁸Mary Kay Fox and Nancy Cole, *Nutrition and Health Characteristics of Low-Income Populations, Volume 1, Food Stamp Program Participants and Nonparticipants*, U.S. Department of Agriculture, Economic Research Service, (Alexandria, Va.: December 2004). An analysis of more recent data to be published by FNS will report similar findings, according to FNS officials. The forthcoming FNS report is entitled *Diet Quality of Americans by Food Stamp Program Participation: Data from the National Health and Nutrition Examination Survey - 1999-2004*.

⁹For more information on USDA nutrition education programs, see GAO, *Nutrition Education: USDA Provides Services Through Multiple Programs, but Stronger Linkages Among Efforts Are Needed*, [GAO-04-528](#) (Washington, D.C.: Apr. 27, 2004).

Variety of Approaches Can Increase the Consumption of Targeted Foods

Recent research describes a variety of approaches to encourage healthy eating habits, such as providing financial incentives and nutrition education as well as improving access to targeted foods. Studies show that financial incentives and nutrition education can increase the consumption of targeted foods, although there is less reported research on financial incentives. Little is known about the effectiveness of access approaches due to a lack of reported research. Study limitations, including a lack of data regarding cost and information on sustained effects, as well as methodological differences among studies, make it difficult to compare approaches or determine which approaches are the most effective.

Recent Research Describes a Variety of Approaches

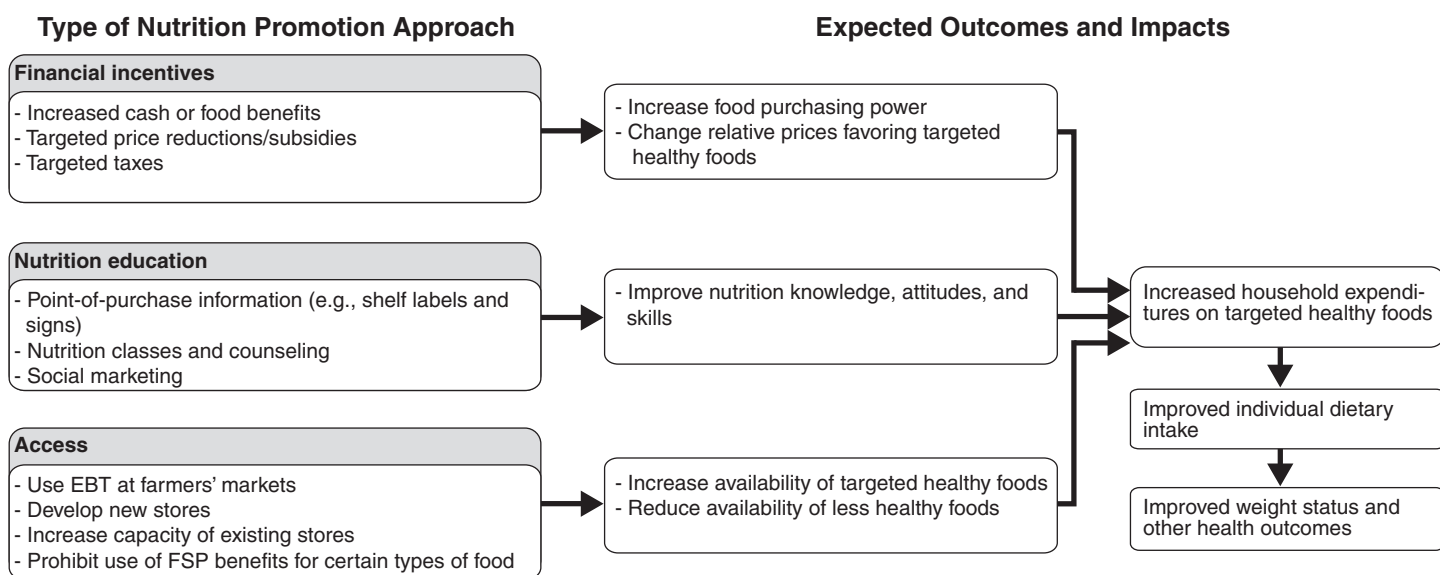
A variety of approaches have been undertaken to increase the purchase and consumption of targeted foods, and many combinations of approaches have been studied. Financial incentives are used to make the purchase and consumption of the targeted foods more affordable and appealing than alternative food choices. Examples of financial incentives include providing additional unrestricted food or cash benefits; providing targeted financial incentives (e.g., price discounts at the POS, coupons or vouchers for targeted foods, or financial rewards based on the adoption of the desired behavior); or taxing foods on the basis of nutrient content. Nutrition education approaches—including nutrition classes, counseling, point-of-purchase information, and social marketing—attempt to increase individual knowledge and skills (e.g., reading food labels and shopping) as well as influence underlying food preferences.¹⁰ Access approaches focus on increasing the availability of targeted foods or limiting the availability of foods with low nutritional value. These approaches can vary by setting (e.g., grocery stores, schools, workplaces, or communities); scope (e.g., individual or larger scale); target population (e.g., healthy or at risk of or diagnosed with diet-related disease); and targeted foods.

The goal of these approaches is to influence one or more of the many factors that affect adult food purchasing decisions, such as food prices, household income, knowledge about food choices that contribute to a

¹⁰Social marketing is a private sector marketing model that can be adapted to social services, which often makes use of television, radio ads, videos, and brochures. These materials by themselves do not constitute social marketing; rather, social marketing entails a comprehensive program in which these materials are employed as part of tactics to reach a target audience. Social marketing also emphasizes the importance of keeping the target audience and network partners involved in needs assessment, message development, and refinement of messages and delivery strategies.

healthy diet, and food availability. Taste and convenience also influence food purchasing decisions. Figure 3 illustrates the theoretical effects of these approaches on household food expenditures, eating habits, and health.

Figure 3: Theoretical Relationships between Nutrition Promotion Approaches and Outcomes and Impacts



Source: GAO.

Studies Show Financial Incentives and Nutrition Education Can Positively Affect the Consumption of Targeted Foods, but Little Is Known about Efforts to Improve Access

Several nutrition promotion studies have demonstrated positive effects on the purchase or consumption of targeted foods. However, results vary and changes in consumption patterns as a result of approaches may not be substantial enough to meet federal dietary guidelines.

Financial Incentives

A review of research published as of April 2005 identified four studies of financial incentive programs that were able to compare a group of participants that received incentives with a similar group that did not in order to identify program impact. All four studies demonstrated short-term positive effects on the purchases of targeted foods, consumption, or

weight loss.¹¹ The studies evaluated the provision of WIC farmers' market coupons, price discounts on low-fat items offered in school and work-site vending machines, and payments contingent on weight loss. For example, an evaluation of a Farmers' Market Nutrition Program implemented in a county in Michigan studied the following approaches with WIC and Commodity Supplemental Food Program participants: education about the use, storage, and nutritional value of fruits and vegetables; farmers' market coupons; both education and coupons; and no education or coupons.¹² The study found that after \$20 in farmers' market coupons were given to 564 low-income women, they self-reported a statistically significant increase in fruit and vegetable consumption. This study also found that the maximum impact of the intervention on attitudes about fruit and vegetable consumption and intake was achieved through a combination of education and coupons. Additional evidence from the WIC program suggests that providing cash value vouchers for purchasing fruits and vegetables can increase the consumption of these items. New York State found that 81 percent of the \$5 checks that were provided to households with children in the WIC program for the purchase of fruits and vegetables were redeemed.¹³ Another study evaluated the effect of providing \$10 vouchers once a week for 6 months for fresh fruit and vegetable purchases at a farmers' market or supermarket.¹⁴ Participants in this study included 602

¹¹Joanne Wall, et al., "Effectiveness of Monetary Incentives in Modifying Dietary Behavior: A Review," *Nutrition Reviews* (Health Module: 2006), 64, 12. These randomized controlled trials involved random assignment of study participants to two or more interventions, including a standard of comparison or control, and a comparison of outcomes after the participants received the interventions. For example, participants could be randomly selected to receive financial incentives and compared with an appropriate control group that did not receive the incentives.

¹²See the following citation for the original study: Judith V. Anderson, et al., "5 a Day Fruit and Vegetable Intervention Improves Consumption in a Low Income Population," *Journal of the American Dietary Association* (2001), 101(2). The Commodity Supplemental Food Program provides food and administrative funds to supplement the diets of low-income pregnant, postpartum, and breastfeeding women; infants; children up to aged 6 years; and individuals over aged 60 years.

¹³The Bureau of Supplemental Food Programs Food Delivery Systems Unit, New York State Department of Health, *New York State WIC Program 2006 Vegetable and Fruit Demonstration Project* (February 2007).

¹⁴Dena R. Herman, et al., "Effect of a Targeted Subsidy on Intake of Fruits and Vegetables Among Low-Income Women in the Special Supplemental Nutrition Program for Women, Infants, and Children," *American Journal of Public Health* (2008), 98. For more information, see an earlier evaluation of the same approach: Dena R. Herman, et al., "Choices Made by Low Income Women Provided with Economic Supplement for Fresh Fruits and Vegetables," *Journal of the American Dietetic Association* (2006), 106: 740-744.

low-income women from the WIC program in Los Angeles. This study found that participants increased their consumption of fruits and vegetables and sustained the increase 6 months after the program ended. The results of this study show that 90 percent of the coupons were redeemed; farmers' market participants showed an increase in the consumption of 1.4 servings per 1,000 calories of consumed food, and supermarket participants showed an increase of 0.8 servings per 1,000 calories of consumed food.¹⁵

Economic research suggests that providing low-income households with targeted financial incentives may be more effective at increasing fruit and vegetable consumption than providing additional unrestricted cash or food benefits. In a 2007 study, ERS estimated how spending on fruits and vegetables by low-income households would change in response to changes in the prices of fruits and vegetables, using statistical models and data from the 1987-88 Nationwide Food Consumption Survey.¹⁶ Specifically, ERS estimated that a 10 percent reduction in the price of fruits and vegetables would result in increases in the amount purchased, ranging from 6 percent to 7 percent, and would increase consumption by the average FSP participant from 1.95 cups per day to an estimated 2.08 cups per day. A 20 percent reduction in price would raise consumption by about ¼ cup, bringing total daily consumption up to 2.20 cups.¹⁷

¹⁵The 2005 Dietary Guidelines for Americans recommends 2 cups of fruit (4 servings) and 2½ cups of vegetables (5 servings) per day for individuals consuming 2,000 calories per day. A serving of vegetables is 1 cup of raw leafy vegetables, ½ cup of cooked vegetables, or ½ cup of vegetable juice. A serving of fruit is 1 medium-sized fruit; ¼ cup of dried fruit; a ½ cup of fresh, frozen, or canned fruit; or ½ cup of fruit juice.

¹⁶Joanne F. Guthrie, et al., *Can Food Stamps Do More To Improve Food Choices? An Economic Perspective*, U.S. Department of Agriculture, Economic Research Service (Alexandria, Va.: September 2007). To develop the estimates, ERS applied the estimated rate of change in fruit and vegetable expenditures in response to the price changes to what households in the poorest one-fifth of the population spent per person on fruits and vegetables in 2004, using data collected by the Bureau of Labor Statistics' Consumer Expenditure Survey.

¹⁷Given the age of the data used and the assumptions underlying the analysis, the magnitudes of the estimates of how low-income households would respond to fruit and vegetable price reductions may be inaccurate, either understated or overstated. Food stamp participants and policies have undergone changes since 1988, which may influence the results of this type of analysis. In addition, no single study can provide great confidence in the application of its conclusions to a policy question. ERS has replicated this analysis with more recent data; however, the findings were not published prior to us completing our work.

In contrast, another ERS study suggested that a modest increase in income would not result in increased spending on fruits and vegetables in low-income households. ERS examined the relationship between increased income, which could be spent on any food or nonfood item, and fruit and vegetable expenditures in low-income households. This study found no relationship between a 10 percent increase in income and expenditures on fruits, vegetables, eggs, dairy products, or baked foods among low-income households.¹⁸ However, ERS found a statistically significant relationship between the additional income and expenditures for beef and frozen entrees and other frozen prepared foods among low-income households, possibly because of taste preferences and convenience.

California passed legislation in September 2006 authorizing the Healthy Food Purchase Pilot Program, which includes the delivery of financial incentives to FSP participants for purchases of fresh produce; however, the pilot program has not been implemented. The pilot program aims to increase access to fresh produce in selected low-income communities, in part by adding a percentage of what FSP participants' spend on fresh produce back to their EBT accounts. The law requires the state agency to consult with USDA's ERS to design the pilot evaluation. The state convened a workgroup made up of state and local health and FSP administrators, information systems staff, retailers, and advocacy organizations to begin discussions about the pilot. However, the California state legislature did not provide funding as part of the legislation, and implementation is on hold until funding is made available.

Nutrition Education

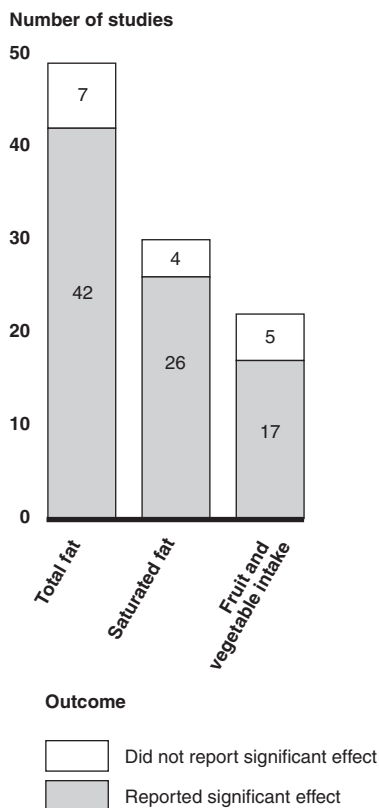
A review of 92 studies analyzed the results of nutrition education approaches, including individual counseling; support groups; and classes provided in school-based, work-site, community, and health care settings.¹⁹ The review compared the results of studies that used similar outcome measures and found that most studies reported that the approaches had statistically significant effects on consumption, as shown in figure 4. For

¹⁸Hayden Stewart and Noel Blisard, *Are Lower Income Households Willing and Able to Budget for Fruits and Vegetables?*, U.S. Department of Agriculture, Economic Research Service (Alexandria, Va.: January 2008).

¹⁹Alice Ammerman, et al., "The Efficacy of Behavioral Interventions to Modify Dietary Fat and Fruit and Vegetable Intake: A Review of the Evidence," *Preventive Medicine* (2002), 35 (1). For more details about this study, see Alice Ammerman, et al., *Efficacy of interventions to modify dietary behavior related to cancer risk. Evidence Report/Technology Assessment No. 25*, Publication No. 01-E029 (Rockville, Md.: February 2001).

example, more than three quarters of the studies reporting changes in fruit and vegetable consumption (17 of 22) found significant increases in the consumption of these foods, with an average increase of 0.6 servings per day. Similarly, 86 percent of the studies reporting results for total fat and 87 percent of the studies reporting results for saturated fat found that the approaches had a significant effect in reducing fat consumption. Of the studies reporting results for total fat, groups receiving nutrition education decreased fat intake more than groups that did not receive nutrition education, representing an average decrease of 7.3 percent of daily calories from fat. According to this review, approaches may be more effective if educators help participants set goals and involve small groups of participants.

Figure 4: Number of Studies Reporting Significant Nutrition Education Effects



Source: Alice Ammerman, et al., "The Efficacy of Behavioral Interventions to Modify Dietary Fat and Fruit and Vegetable Intake: A Review of the Evidence," *Preventive Medicine* 35, 25-41 (2002).

Note: Total fat and saturated fat are measured as either a percentage of daily energy intake or in grams per day. Fruit and vegetable intake is measured as servings per day or in other units, such as fruit and vegetable intake scores.

Another review of 15 community-based nutrition education studies found that increased fruit and vegetable consumption was reported in many studies.²⁰ According to the authors, the most effective approaches gave clear messages, incorporated multiple strategies that reinforced the messages, involved the family, were more intensive (e.g., multiple contacts and multiple components) and provided over a longer period, and were based on a theoretical framework. Another review of 44 nutrition education studies suggested that small increases in the consumption of fruits and vegetables can be achieved in a variety of ways. This review found that fruit and vegetable consumption increased when participants were provided with face-to-face education or counseling. Less intense approaches, such as telephone contacts and computer-generated information tailored to the participant, can also be effective.²¹ Increases in fruit and vegetable consumption ranged from 0.1 to 1.4 servings per day in approaches used for healthy adults.²² Nutrition education approaches appeared to be more successful at positively changing dietary behavior among populations at risk of or diagnosed with disease than among general, healthy populations, according to two study reviews.²³ According to the study reviews, these approaches may be more successful because (1) higher-risk individuals are more motivated to change and (2) approaches with higher-risk populations, such as those offered in health care settings, may be more intense than approaches used with lower-risk populations in community, workplace, or school settings.

²⁰Donna Ciliska, et al., "Effectiveness of Community-Based Interventions to Increase Fruit and Vegetable Consumption," *Journal of Nutrition Education*, Health Module (2000), 32, 6.

²¹FNS developed a report reviewing the research on the effectiveness of computer-tailored nutrition education. See Dawn Aldridge, *Interactive Computer-Tailored Nutrition Education*, U.S. Department of Agriculture, Food and Nutrition Service (Alexandria, Va.: 2006).

²²Joceline Pomerleau, et al., "Interventions Designed to Increase Adult Fruit and Vegetable Intake Can Be Effective: A Systematic Review of the Literature," *Journal of Nutrition* (2005), 135 (10).

²³Another study we reviewed found that approaches involving individual or group counseling were successful in changing dietary behaviors and most were conducted with individuals with existing risk factors for heart disease. See Deborah Bowen and Shirley Beresford, "Dietary Interventions to Prevent Disease," *Annual Review of Public Health* (2002), 23:255–86.

Providing nutrition information at the point of purchase—such as posters, brochures, and shelf and food labels—is another nutrition education approach that can positively affect food purchasing behavior, although the results from reported research on this approach are mixed. In another review of eight studies that used only information strategies (e.g., labels and signs) to promote targeted items in a grocery store setting, five studies reported increased sales of some of the targeted items.²⁴ The grocery store intervention studies that showed the greatest changes in behavior lasted for 2 years, involved a large supermarket chain, and involved multiple components. One of the studies reviewed found significant increases in the sales of low-calorie or reduced-calorie foods after a 2-year effort involving shelf labeling, pamphlets, and advertisements on television and radio and in newspapers. The authors of this review concluded that nutrition information approaches and financial incentives appear to be more successful in settings where food choices are limited, such as workplace cafeterias or school settings, rather than in grocery stores. Food labels may also have an effect on dietary intake. In a study estimating the effect of the Nutrition Labeling and Education Act of 1990, which took effect in 1994 and made nutrition labeling mandatory for most processed foods, researchers found that the new labels were associated with a decrease in body weight and the probability of obesity among non-Hispanic white women. The new labels were not associated with a statistically significant decrease in body weight or the probability of obesity among other groups of women or among men.²⁵

Access

We did not identify any recent studies evaluating the effects of approaches designed to improve access to targeted foods, but there have been efforts to address the availability of foods that contribute to a healthy diet. California's Healthy Food Purchase Pilot Program, which was not funded, included proposed assistance for retailers to obtain refrigerated produce display cases and technical assistance on the purchase, storage, marketing, and display of fresh produce. The FSP authorizes farmers' markets to accept FSP benefits, an approach that may increase the

²⁴Jennifer D. Seymour, et al., "Impact of nutrition environmental interventions on point-of-purchase behavior in adults: A Review," *Preventive Medicine* (2004), Vol. 39. For more information about approaches implemented in a grocery store setting, see Karen Glanz and Amy Yaroch, "Strategies for increasing fruit and vegetable intake in grocery stores and communities: policy, pricing, and environmental change," *Preventive Medicine* (2004), Vol. 39.

²⁵J.N. Variyam and John Cawley, "Nutrition Labels and Obesity," National Bureau of Economic Research, Working Paper No. 11956 (Cambridge, Massachusetts: 2006).

availability of fresh fruits and vegetables. In 2007, 532 authorized farmers' markets redeemed \$1.6 million in FSP benefits, according to FNS.

Another access strategy that has been proposed but not implemented or evaluated is to prohibit FSP participants from using their benefits to buy foods with limited nutritional value. This strategy would require an FNS-approved waiver of FSP regulations. For example, Minnesota proposed prohibiting the purchase of candy and soft drinks with FSP benefits. While this strategy has not been implemented, FNS and ERS reports have described several challenges to implementing this idea.²⁶ For example, FNS reported that food restrictions would increase program complexity and cost, since either FNS or food manufacturers and producers would need to assess and certify a large number of food products that meet new federal standards. ERS reported that restricting purchases of "unhealthy" foods and beverages may not be a promising strategy for dietary improvement, in part because FSP participants may use their own money to buy prohibited items or substitute the prohibited foods for other foods similar to the prohibited items.

Lack of Information on Costs and Sustained Effects and Methodological Differences among Studies Make It Difficult to Identify the Most Effective Approaches

The studies reviewed provided little information about the cost or sustainability of the nutrition promotion approaches. Five reviews of studies found that cost information, such as total costs, cost per participant, and the cost-effectiveness of the approach, was not reported. In addition, few approaches were shown to be effective over a sustained period of time, such as a year or more. For example, one review of studies found that many approaches last only a few weeks, and studies have short durations, which prevents researchers from identifying long-term effects.

The studies reviewed were designed differently, and they often used different outcome measures to evaluate effects, thereby making it difficult to compare the results of the approaches. For example, not all studies used a control group to compare individuals receiving the intervention with similar individuals who did not. Although measures of changes during and after an intervention provide useful insights, without a control group that does not participate in the intervention, it is difficult to directly attribute any changes the researchers observed to the intervention. In addition, three reviews of studies found that various outcome measures

²⁶For more information, see U.S. Department of Agriculture, Food and Nutrition Service, *Implications of Restricting the Use of Food Stamp Benefits* (Alexandria, Va.: March 2007).

were used, which prevented study comparisons and conclusions about the most effective approaches. For example, one review found that studies used various self-reported dietary assessment tools or sales data to measure changes in consumption. A lack of standardized outcome data has also been identified as a barrier to evaluating the effectiveness of nutrition education activities, according to ERS. One review of studies that was able to compare study results found that the dissimilarity across studies was a major barrier to drawing comparisons and reaching broad conclusions about the effectiveness of approaches.

The 2008 Farm Bill authorizes funding for pilot projects to evaluate health and nutrition promotion in the FSP. The pilot projects may include increased benefit allotments to participating households, increased access to farmers markets, incentives for authorized retailers to increase the availability of healthy foods, stricter retailer requirements to stock healthy foods, incentives at the point of purchase for targeted foods, and select school-based nutrition education strategies. All pilot projects require an independent evaluation using rigorous methodologies, particularly random assignment or other methods that are capable of producing scientifically valid information regarding which activities are effective.

Factors to Consider Include the Selection of Targeted Foods, Incentive Amount, Participant Education, and Monitoring and Evaluation

There are several factors that must be taken into consideration in designing a program that provides financial incentives for the purchase of targeted foods in the FSP. These factors include the selection of foods to target for promotion, the incentive amount, how participants would be informed of the new benefit, and how the program would be monitored and evaluated.

Selection of Foods to Promote Could Be Controversial and Challenging

Selecting the foods an incentive program is designed to promote could be controversial. Various interests—such as food manufacturers, nutritionists, participant advocacy groups, and states—may have differing opinions about which foods should be targeted for promotion and which should be excluded. Food manufacturers may want the targeted foods to include a wide variety of products because they could see financial gain, nutritionists may not agree on which foods are the healthiest, and

advocacy groups may not want FSP participants to be restricted in their food choices. States may also advocate for locally grown or produced foods to be targeted for promotion.

Developing a list of individual food items that either meet certain nutritional criteria or contain a particular ingredient, such as whole grains, would be challenging because the nutritive content of thousands of food items would need to be evaluated to identify the eligible items. For example, if low-fat items were targeted, retailers would need to identify each of the items sold in their stores that meet that criteria. Similarly, targeting all foods that contain whole grains may be difficult, given the variety of foods that have whole grains as ingredients.

Expert panelists and many stakeholders we interviewed agreed that providing incentives for a general food category that is relatively easy to identify—such as fruits and vegetables—would be easier for participants and retailers, rather than identifying and selecting specific items on a list. However, using a general food category could allow some foods with less nutritive value to be included in that category. For example, the nutritive value of fruits and vegetables varies extensively from one to the other. Offering incentives for purchasing all fruits and vegetables would include frozen or canned items that may contain added sugar or salt, thereby making them less healthy.

In addition, availability of the targeted foods may be limited in some areas, depending on the foods selected. Some stakeholders we interviewed said small retailers serving large urban areas may not stock certain foods, such as fresh produce. State officials we interviewed commented that if fruits and vegetables were the targeted foods, they should be eligible in any form—canned, frozen, and fresh—because fresh produce may not be equally available throughout the year or throughout the country.

Amount of the Incentive Will Affect Participant Response and Program Costs

Although financial incentives could take many forms, the amount would need to be large enough to motivate FSP participants to change their purchasing patterns by buying more of the targeted foods.²⁷ The optimal value of an incentive to increase purchases of targeted foods is not known at this time, but as we have previously noted, ERS estimated in a study that a 10 percent reduction in the price of fruits and vegetables would result in a modest increase in fruit and vegetable consumption by the average FSP participant, and that a 20 percent price reduction would have a slightly larger effect.²⁸ California proposed providing a larger incentive as part of its Healthy Food Purchase Pilot Program, pending the availability of state funds, equal to 30 percent or 40 percent of the amount that participants spend for fresh produce.

The amount of the incentive would also affect the cost of the program. ERS estimated that with a FSP caseload of 25.7 million participants at the time of the study, the annual cost of a 10 percent price reduction would range from \$300 million, if the price reduction was restricted to fresh produce, to \$500 million, if all fruits and vegetables were discounted.²⁹ The cost of a financial incentive program could be contained somewhat by setting a limit on the amount of targeted food purchases that would be eligible for the incentive. The ERS study did not estimate how much of the targeted foods participants would buy if there were a limit on the amount of fruit and vegetable purchases that would be discounted. Depending on the amount of funding available for such a program, policymakers may have to choose between offering a small and potentially ineffective

²⁷Similarly, research suggests that disincentives must be substantial enough to motivate individuals to avoid purchasing foods with low nutritional value. An ERS study found that adding a relatively low tax on salty snacks of 1 cent per pound and 1 percent of value would not appreciably reduce the consumption of salty snacks and would have little effect on diet quality or health outcomes. For more information, see Fred Kuchler, et al., *Taxing Snack Foods: What to Expect for Diet and Tax Revenues*, U.S. Department of Agriculture, Economic Research Service (Alexandria, Va.: August 2004).

²⁸ERS estimates indicate that a 10 percent reduction in the price of fruits and vegetables would increase the amount purchased by 6 to 7 percent. Fruit and vegetable consumption of the average food stamp participant is estimated at 1.95 cups per day. A 10 percent reduction in fruit and vegetable prices, therefore, would raise consumption to an estimated 2.08 cups per day. A 20 percent reduction in the price of fruits and vegetables would raise fruit and vegetable consumption to 2.20 cups per day.

²⁹As we have previously stated, given the age of the data used and the assumptions underlying the analysis, the magnitudes of the estimates may be inaccurate, either understated or overstated.

incentive to a greater number of participants and offering a more substantial incentive to a smaller number of participants.

Informing Participants Could Add to Caseworker and Nutrition Educator Responsibilities

To motivate participants to change their purchasing habits in response to financial incentives, participants must first be informed of the availability of incentives. Informing participants may increase the workload of the local assistance offices. Caseworkers from local assistance offices could inform new FSP participants when they apply for benefits and inform existing participants when they visit the office to reapply for benefits. Providing information through the mail is one way to advertise the incentive to existing participants; however, processes would need to be in place to correct home addresses if mail is returned. Information could also be posted on FNS and state FSP Web sites. Other marketing options include advertising in print, broadcast, and electronic mediums. Another marketing idea, suggested by a few retailers, is to use shelf tags to identify the targeted foods. However, use of this strategy would vary by retailer.

Educating participants on the nutrition and health benefits of buying more of the targeted foods could enhance the effectiveness of financial incentives, according to some research and stakeholders. An evaluation of the effects of providing WIC participants with farmers' market coupons found that those who received both coupons and nutrition education showed the greatest changes in attitudes about fruit and vegetable consumption and intake. Expert panelists said that having an education component is crucial to the success of an incentive program. In addition, a retailer we interviewed emphasized that if the goal of this program is to change purchasing patterns, participants need to understand why the program is important to their families and their health. Officials from one state also suggested it would be helpful to provide nutrition education activities, such as food demonstrations, healthy recipe books, cooking classes, and giveaways (e.g., cooking utensils). However, the FSNE program does not currently reach all FSP participants. Educating all FSP participants would be challenging and would likely increase the workload of nutrition educators.

Decisions about Program Monitoring and Evaluation Would Affect USDA's Ability to Protect Program Integrity and Determine the Effect of Incentives on Participant Food Choices

Program monitoring of day-to-day activities would be necessary to ensure that providing financial incentives for targeted foods to FSP participants does not erode program integrity. According to FNS officials, any new incentive program would pose an increased risk of fraud. For example, a FSP participant and retailer could agree to fraudulently claim that the participant spent a certain amount of their EBT benefits on the targeted foods. In this scenario, the retailer would ring up the targeted food purchases, the participant would swipe their EBT card for the purchase amount, and the retailer would give the participant a portion of the purchase amount in cash and pocket the difference. FNS officials suggested that limiting the amount of targeted food purchases that would trigger the incentive may reduce the risk of fraud and the cost of the incentive program (e.g., participants can receive incentives for purchasing up to \$50 of the targeted foods per month). FNS indicated that it would need to incorporate any new program into its existing oversight activities by monitoring the total amount spent on the targeted foods and developing criteria to flag suspicious transactions. Since individual food purchases cannot be monitored through the existing FSP EBT system and USDA has a limited number of fraud investigators nationwide, any additional oversight responsibility would create a new challenge, according to FNS officials.

Piloting the program prior to full implementation and evaluating the impact of the program are important steps to determining its effectiveness.³⁰ Two important considerations in evaluating a financial incentive program are the research design and how results would be measured.

- *Research design:* Ideally, impact evaluations allow a reasonable comparison of a participant group that received the financial incentives with a similar group that did not receive the incentives to accurately gauge the effect of the intervention. Appropriate sample sizes would need to be determined to allow meaningful comparisons of these two groups. However, alternative research designs could be used if randomly assigning participants to comparison groups is not possible. For example, researchers could use statistical techniques to isolate the effect of financial incentives from other factors that affect purchasing behavior.

³⁰FNS developed a document that describes issues to consider when evaluating nutrition education approaches. See U.S. Department of Agriculture, Food and Nutrition Service, *Nutrition Education: Principles of Sound Impact Evaluation* (Alexandria, Va.: September 2005).

One expert panelist commented that isolating the impact of this price change from other store promotions may be difficult given the many factors involved. Any research design would have to take into account an appropriate time frame for the pilot, allowing time for retailers to change their operations to be able to implement the pilot and for participants to change their purchasing habits in response to the incentives. In light of these concerns, when ERS was consulted by California on its proposed pilot, ERS suggested that the evaluation include a before-and-after review of the purchases made by participants and nonparticipants, and that pilot counties be randomly selected.

- *Measuring results:* Researchers could measure changes in participants' food purchases, consumption, or health outcomes to determine the effects of a financial incentive program. Measuring health outcomes would require tracking participants over an extended period. California's legislation authorizing a pilot incentive program requires researchers to assess whether the pilot program resulted in FSP participants' increased purchases of fresh fruits and vegetables. FNS officials suggested that a study could compare FSP participants' purchases with federal dietary guideline recommendations before and after an incentive program was piloted. If the purpose of the program were to encourage a diet that meets federal dietary guidelines and improves the health of participants, the effect on participant's consumption and health could also be examined.

Options for measuring changes in food purchasing behavior include collecting participant-reported information or collecting food purchase records from retailers.³¹ Understanding whether participants increased their purchases of targeted foods would require gathering information on how the participants spent their entire food budget, since participants may pay for food several ways (e.g., cash, TANF cash benefits, EBT, or credit cards) and shop at multiple stores. Researchers would need this information to know if more targeted foods were being purchased or if participants were substituting the new targeted benefits for money they were already spending on those foods. Gathering this information may be challenging, depending on how the financial incentives are delivered. For example, FNS officials said one disadvantage of using paper vouchers is that the redeemed vouchers may not be linked to the rest of the family's

³¹A FNS-funded study found that it is technically feasible to collect bar-code data on the products purchased with food stamp benefits and to link those data with demographic information about the food stamp household. For details, see John Kirlin, et al., *Feasibility Study of Capturing Food Data at Checkout*, U.S. Department of Agriculture, Food and Nutrition Service (Alexandria, Va.: September 1999).

purchases or household demographic information. Using participant-reported information on purchases to measure effectiveness can be problematic if participants cannot recall the information or if they otherwise misreport purchases. Using purchase data to analyze changes in purchases would be more accurate but could be difficult to collect and analyze. For example, collecting purchase data would likely require researchers to enter into data-sharing agreements with multiple retailers, which would need to include provisions to protect participants' privacy. Data would need to be collected from multiple retailers on all of the food items purchased by participants using all payment types. Also, food purchases may not accurately reflect consumption.

Financial Incentives Could Be Implemented Electronically or Using Paper Methods, but Each Option Has Potential Implications for Ease of Implementation, Program Integrity, and Cost

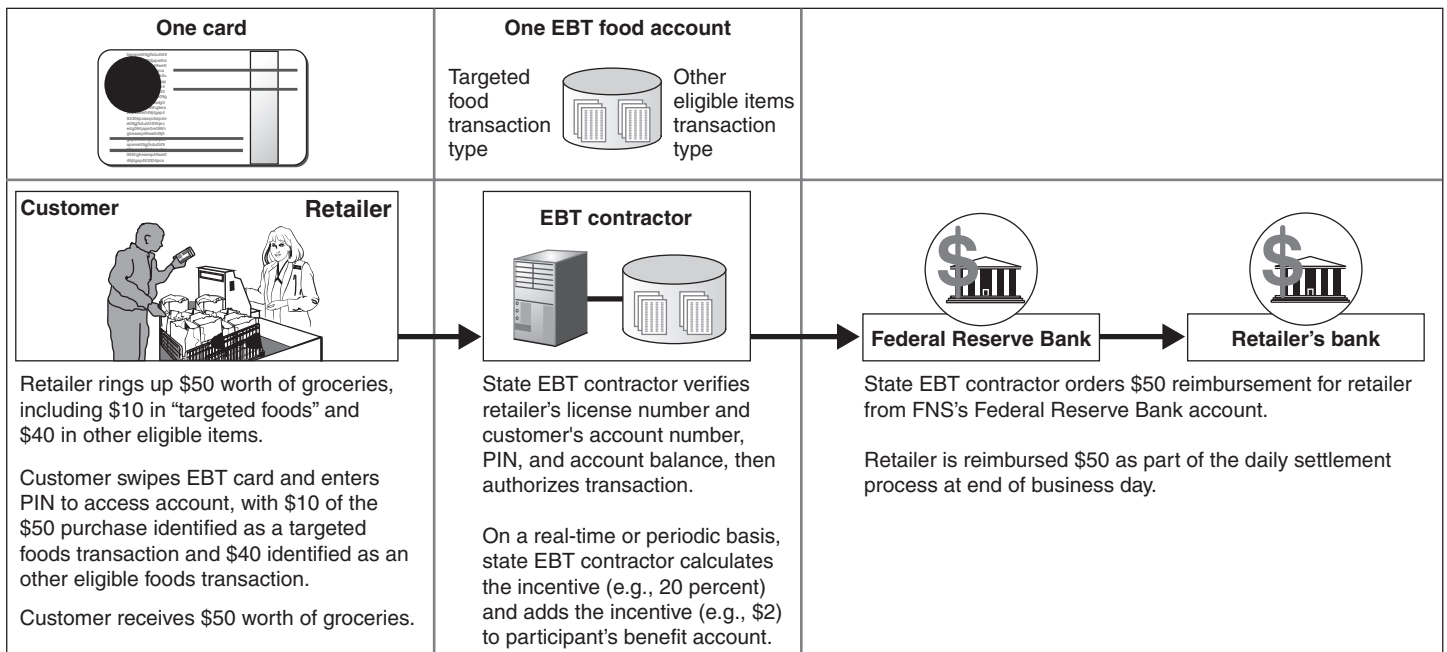
An incentive program—delivered in the form of an additional FSP allotment tied to the purchase of certain foods targeted for promotion—could be implemented through electronic or paper methods, and each of the options would have implications for ease of implementation, program integrity, and cost. Electronic options include providing additional FSP benefits to the EBT cards currently used by FSP participants or to a separate card on the basis of the amount participants spend on the foods targeted for promotion. Alternatively, paper options for delivering incentives include providing vouchers to be spent on the targeted foods or coupons that would discount the prices of those foods.

Electronic Delivery of Incentives to Existing EBT Cards May Be Easy for Participants to Use, but Would Require Several Changes to the EBT System

Incentives provided electronically by using existing EBT cards would build on the current checkout technology and process, may not require as much time to check out as using a separate card, and could minimize the risk of fraud. Online EBT for processing FSP transactions is operational nationwide and national standards have been developed to promote consistent transaction processing and allow interoperability, which means that participants may use their EBT cards at any FNS-authorized retailer in any state. According to expert panelists, financial incentives could be added to existing EBT cards without requiring an additional card swipe and PIN entry, thereby minimizing checkout time. Providing incentives electronically on EBT cards could also minimize fraud risk by requiring entry of a PIN to complete transactions.

Expert panelists preferred this option and cited its advantages in ease of use for participants and program integrity. With this option, the retailer would electronically or manually separate and subtotal the targeted food purchases and the purchases of other eligible items, and the participant would swipe the EBT card and enter the PIN once into the POS device, as shown in figure 5. The purchase amount of the targeted foods and the purchase amount of other FSP-eligible items would be communicated to the EBT contractor who would calculate the financial incentive amount and either immediately add it to the participant's EBT account or periodically add to the account after the purchase, such as at the end of each business day. Participants could leave the store with a receipt showing the amount of the financial incentive they just received or can expect to receive.

Figure 5: Incentive Amount Added to Existing EBT Card on the Basis of the Amount Spent on Targeted Foods



Sources: GAO, Nova Development Corp.

This method may be relatively easy for a participant to use, but expert panelists agreed that their preferred option would be a significant undertaking and would require several changes to the EBT system, as described in the following text:

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- *Identifying purchases of targeted foods:* To identify and subtotal purchases of the targeted foods at the POS, retailers with scanning systems would need to update the software used on their electronic cash registers to include an additional field that would flag particular items as the targeted foods eligible for incentives. Programming the additional field would enable the cash register system to automatically ring up and subtotal the targeted food purchase when the items' product codes are scanned. Maintaining an updated list of the eligible items could be challenging because UPC and PLU codes can change when new products are added or certain foods are included in special promotions. Also, fresh produce vendors use varying PLU codes for the same fruits and vegetables. Smaller retailers without scanning technology and a computerized price file system would need to manually sort out and subtotal up to three piles of food: one for the targeted foods that are eligible for the incentive, one for other FSP-eligible items, and one for non-FSP-eligible items.

Successfully implementing an incentive program depends in part on the level of guidance retailers receive regarding foods that qualify for the incentives. Generally, there are two ways that retailers could identify which foods sold in their stores are the targeted foods eligible for incentives: that is, (1) FNS or states could develop a detailed list of the targeted foods and associated product codes or (2) FNS or states could provide a broad definition of the targeted foods and retailers could decide which of the foods in their stores would qualify. Retailer representatives and state officials we interviewed preferred that the foods eligible for incentives be defined at the federal level to assist retailers operating in multiple states and to minimize the burden on states. Retailer representatives on the expert panel said it would help retailers implement the program if FNS provided a detailed list of the targeted foods and associated product codes. However, FNS officials on the panel said FNS lacks the resources to develop and maintain a detailed list and would prefer to provide a more general definition of the foods targeted for promotion.

- *Tracking purchases of targeted foods:* The total amount spent on the targeted foods must be tracked separately from other purchases to calculate and apply the incentives to participants' EBT accounts. To process the transactions, expert panelists agreed that the total amount spent on the targeted foods should be communicated through the EBT system, rather than requiring retailers to complete additional reporting. A few retailers commented that any ongoing reporting on individual purchases in addition to the reporting that takes place during EBT transactions at the POS would be burdensome, especially for smaller

retailers that may not have detailed accounting procedures. Tracking the total amount spent on the targeted foods separately from other FSP-eligible items would require software modifications to retailers' POS devices.

- *Calculating and applying the incentive:* To apply incentives to participants' EBT accounts, EBT contractors would need to develop software for calculating and applying the incentives and to modify their software to include a new transaction type that tracks the amount spent on the targeted foods. The interface between the EBT contractors' systems and state information systems that contain benefit issuance data may need to be modified. EBT contractors would also need to modify their retailer and participant complaint processes, modify automated telephone systems, and train customer service representatives to support the new benefit.

Modifying and updating the retailer cash register systems and POS devices could be challenging with different types of equipment and varying levels of technical support. Smaller independent grocery stores that install and maintain their own equipment may face significant challenges in making technical changes if they do not have ongoing technical support. Some smaller retailers with outdated equipment may need new equipment to use updated software. However, supermarkets, which account for about 85 percent of FSP redemptions nationwide, may not experience as much difficulty in modifying their systems because of in-house information technology support. Table 2 summarizes the changes that would need to be made by each affected group to implement the option preferred by expert panelists. Some stakeholders, such as third-party processors that help process EBT transactions, may also need to make operational changes to implement this option. This broad list of required changes points to the types of costs involved in developing an incentive program. Expert panelists did not provide information on how much it would cost to implement these changes because the costs would vary, depending on the many program design decisions that would need to be made; however, the costs could be significant. FNS officials said that they believe this option may be more costly to implement than a paper voucher system.

Table 2: Required Changes to Implement the Option Preferred by Expert Panelists

Stakeholder	Required changes, by role
FNS	<ul style="list-style-type: none"> • Monitor whether eligible foods were purchased and if the bonus is being calculated and applied properly. • Modify retailer monitoring systems to identify potential fraud. • Develop and impose regulations on both system standards and client and retailer sanctions related to administration of this program. • Provide information and training to federal, state, and local investigative staff and participating retailers.
States	<ul style="list-style-type: none"> • Modify the state information system to include up-to-date information on the amount of benefits participants have in their EBT accounts, if needed.
EBT contractors	<ul style="list-style-type: none"> • Develop EBT transaction standards to ensure that the transactions are implemented the same way across the country. • Develop software to calculate and apply the incentive for online and manual transactions. • Revise manuals and procedures. • Modify claims and error processes. • Modify the process for how to handle cross-state transactions (one EBT contractor serves the state where the participant has been provided benefits, while another EBT contractor serves a different state where the purchase occurred). • Modify retailer and customer complaint processes. Update customer support systems to support questions about this new benefit. Modify automated telephone systems and train customer service representatives. • Modify the software for the POS devices that the EBT contractors provide to retailers on behalf of the states, to include an additional targeted foods transaction field. Install the updated software and replace outdated devices.
Retailers	<ul style="list-style-type: none"> • Update POS device software to include a new targeted foods transaction type. • Modify software used on the electronic cash register systems to include an additional flag to allow targeted foods to be identified and subtotaled so that the subtotal of targeted foods can either automatically be communicated to the POS device or manually entered in by the retailer. • Flag the targeted foods in the information systems, and keep the database up to date, as with identifying WIC- or FSP-eligible items. • Develop new procedures for cashiers, and train cashiers on the new system.

Source: GAO.

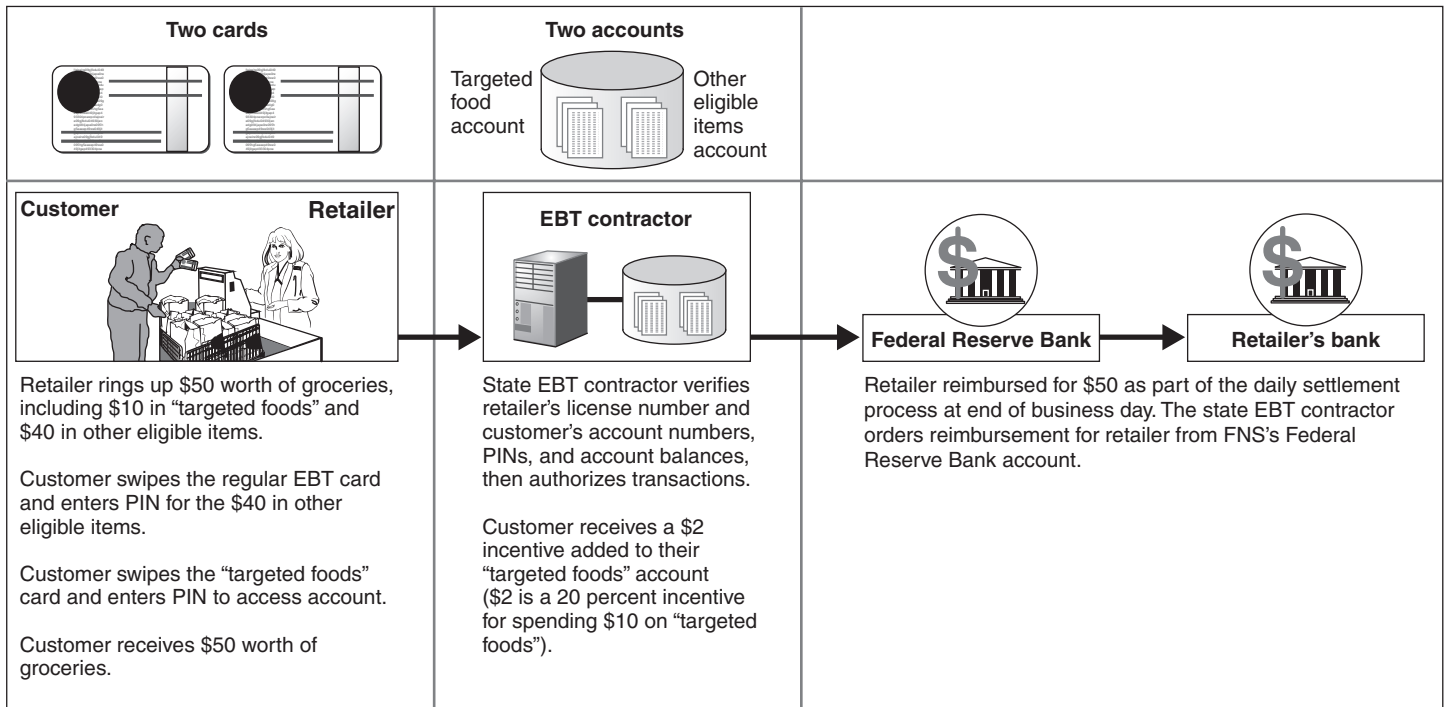
**Incentives Could Be
Delivered Electronically to
Separate Cards, but
Implementation Could Add
Cost and Complexity**

Several types of cards separate from participants' existing EBT cards could be used to deliver financial incentives.³² Two alternatives include issuing participants a new magnetic strip or smart EBT card that would be used for purchases of the targeted foods.³³ Under this type of system, a FSP participant would receive additional benefits in a new targeted foods account and be issued a new card to access the benefits. At check out, the participant would swipe the new card and enter a PIN to purchase the targeted foods and swipe their existing EBT card and enter that PIN for the other FSP-eligible items. An amount equal to a percentage of what a participant spends on the targeted foods could be added to a targeted food account, as shown in figure 6.

³²For a detailed description of card-based alternatives, see U.S. Department of Agriculture, Food and Nutrition Service, *Analysis of Alternatives for Implementing a Cash Value Voucher Program*, prepared by the State Information Technology Consortium (Herndon, Va.: March 2007).

³³Providing participants with gift cards containing a financial incentive amount that is stored on the card is another option. While this option may require fewer technical changes to the checkout system because some retailers already have systems in place to process gift card transactions, store gift cards can only be used at a limited number of store locations. Ensuring that only allowable foods are purchased may be more difficult with a store gift card because, typically, there is no limitation on what can be purchased in the participating stores with the gift cards and neither a PIN nor a signature is required to complete a transaction.

Figure 6: Incentive Amount Added to a Separate Targeted Foods Card on the Basis of the Amount Spent on Targeted Foods



Sources: GAO, Nova Development Corp.

A few stakeholders we interviewed suggested using smart cards to deliver incentives because these cards have the capacity to record and track purchases of individual items, which would be useful for monitoring and evaluation purposes.³⁴ The computer chip on the smart card could contain the product codes of the specific targeted items. The grocery store clerk would scan the items at check out, and the system could match each item’s product code to a list of approved targeted food product codes. This system would help ensure that only authorized food items are purchased and receive the financial incentives. The smart card transaction would require participants to enter a PIN, and the card could calculate and apply the incentive amount.

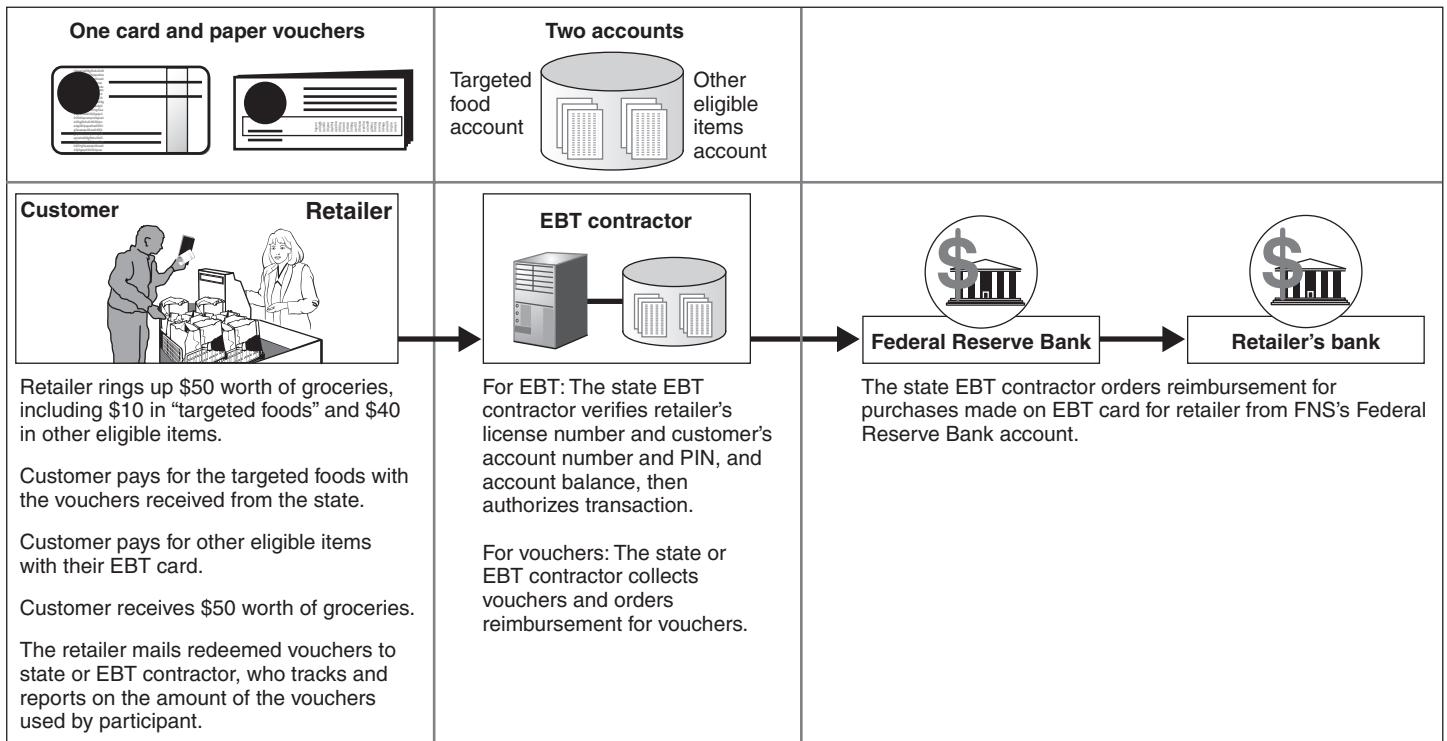
³⁴Smart cards are embedded with a computer chip that can perform calculations and store significant amounts of data. These cards are currently used in four states to process WIC EBT transactions.

Using separate cards to deliver incentives would be a more costly and complicated option than using existing EBT cards, according to expert panelists and some stakeholders we interviewed. State administrative costs could increase to purchase and replace the new cards, particularly smart cards, which cost more than magnetic strip EBT cards. Using a separate magnetic strip EBT card would require the same technical changes as using existing EBT cards; however, using smart cards would require greater changes to the EBT system. Currently, only the total amount spent on FSP-eligible items is tracked through the EBT system. Changing the FSP EBT system to one that communicates information on the individual items purchased would require significant and costly modifications to retailer and EBT contractor information systems. In addition, using a separate card may be more complicated for participants and grocery store clerks to implement and add time at the register to process the additional transactions, according to some stakeholders we interviewed.

Paper Delivery of Incentives Would Not Require Changes to the EBT System, but Could Increase State Administrative Costs and Fraud Risk

Delivering incentives using paper methods, such as vouchers or coupons, may be easier and less costly for some retailers to pilot because these methods would not require changes to the EBT system, according to a few of the retailers we interviewed. For example, one retailer suggested that the state provide participants with paper coupons that would discount the prices of certain foods because it would eliminate the need for retailers to modify their checkout systems, and retailers could use a system similar to the current process for redeeming manufacturers' coupons. A retailer representative that works with small grocery stores suggested that the easiest and least expensive method to pilot an incentive program would be for the state to provide participants with the coupons and reimburse retailers when the coupons are redeemed, since none of the EBT-related systems would need to be changed. Figure 7 illustrates one way that financial incentives could be delivered using paper vouchers. In this example, participants are provided with paper vouchers valued at \$10, which are to be spent on the targeted foods, rather than with a bonus that is based on the amount spent on the targeted foods.

Figure 7: Incentive Provided to Participants Using Paper Vouchers as a Fixed Amount to Be Spent on Targeted Foods



Sources: GAO, Nova Development Corp.

Paper vouchers have been used successfully to facilitate the purchase of fruits and vegetables in other programs. FNS’s farmers’ market programs and the WIC fruit and vegetable pilot program provided paper vouchers to WIC participants and elderly individuals so that they could purchase fruits and vegetables. For example, California piloted a program that provided vouchers for fruit and vegetable purchases for low-income women participating in the WIC program. A study evaluating the California WIC fruit and vegetable pilot reported that low-income women used the supplement almost fully and purchased a wide variety of fresh fruits and vegetables with the vouchers. Stakeholders we interviewed also identified projects funded with nonfederal dollars that provide supplemental coupons to FSP participants to encourage them to purchase fresh produce at farmers markets. For example, New York City’s Department of Health and Mental Hygiene is partnering with farmers’ markets to distribute Health Bucks—\$2 coupons for fresh produce—to EBT customers who spend \$5 in local produce at the markets.

However, there are potential disadvantages to using paper methods to deliver incentives. Participants might find paper options more burdensome because they cannot carry over balances and may have to spend the entire amount of the voucher in one shopping trip. In addition, participants may not use the financial incentives if they perceive that a stigma is associated with using paper vouchers at the grocery store. Although paper methods would spare retailers from making software modifications, some of the burden would be shifted to states to develop systems to collect the coupons and reimburse retailers, which could increase state administrative costs. Although any incentive program could affect fraud risk, expert panelists and stakeholders we interviewed said paper options could increase the risk of fraud because coupons can be exchanged for cash or used by ineligible individuals more easily.

Concluding Observations

Changing individuals' eating habits is difficult, given the many factors that influence food choices. However, the pilot projects authorized in the recent Farm Bill provide FNS with a unique opportunity to test whether financial incentives would help low-income Americans purchase and consume more of the foods that contribute to a healthy diet. Although research has found that financial incentives and nutrition education both show promise, not enough is known about the costs and long-term effectiveness of these approaches, either alone or in combination. Moreover, the financial incentives studied included coupons. Incentives using the current EBT technology, although technically feasible, are largely untested at this point. Also, the success of efforts to improve dietary intake may hinge in part on the availability of targeted foods, which may be limited in certain areas, such as small stores in large urban areas. Little is known about efforts to increase access to healthy foods. Only by testing these approaches, either alone or in combination, can the costs of such a program be estimated. Depending on the approaches selected for testing, estimates would need to include the costs of developing and administering the program, changing retailer checkout systems, training employees, educating participants, and providing increased benefit amounts. Program outcomes, such as changes to participant purchasing and consumption patterns, will also be challenging to assess and will not be useful unless similar outcome measures are developed that can be used across different projects to allow comparison. Evaluating the long-term effect of the changes on the health of program participants will likely prove to be even more difficult to assess. However, given the evidence linking poor nutrition to adverse health outcomes, finding cost-effective approaches to improve nutritional intake is important. Unless careful attention is paid to estimating both program and

administrative costs as well as the effects, Congress and USDA will not have the information required to judge whether the benefits outweigh the costs.

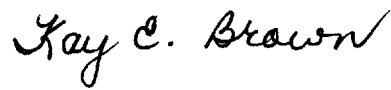
Agency Comments and Our Evaluation

We provided a draft of this report to the U.S. Department of Agriculture for review and comment. On June 20, 2008, we met with FNS officials and an ERS official to obtain their comments. In general, the officials agreed with our findings and concluding observations. However, the officials made some suggestions to enhance and clarify our report findings, which we incorporated. First, FNS officials suggested that we further emphasize the potential for fraud inherent in a financial incentive program and the challenge FNS believes it would face in incorporating any additional oversight responsibilities. FNS officials believe that any new incentive program that involves the issuance of an additional benefit once targeted foods are purchased would open up a new avenue for food stamp trafficking. Second, FNS officials believe that the preferred option for delivering financial incentives through the EBT system would be costly to implement, perhaps even more costly than a paper voucher system. We believe that each option for delivering the incentive would have cost implications; however, without piloting such a program, it is not clear which delivery method would be most costly. Third, FNS officials suggested that we incorporate additional references to FNS reports that directly relate to the topic of our report. Finally, FNS officials suggested we incorporate full information about the assumptions and limitations of ERS estimates of the cost of delivering financial incentives to FSP participants on the basis of their purchases of fruits and vegetables. FNS officials identified the following issues that may affect the accuracy of the estimates: the age of the data, assumptions about participants' purchasing decisions, recent increases in food prices, continuing increases in FSP participation, and whether the program would affect FSP participation. We acknowledged the limitations of the ERS estimates in the report. FNS also provided us with technical comments, which we incorporated where appropriate.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Agriculture, and other interested parties. We will also make copies available to others upon request. In addition, the report will be available at no charge on GAO's Web site at <http://www.gao.gov>.

If you or your staff have any questions regarding this report, please contact me at (202) 512-7215 or brownke@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributors to this report are listed in appendix II.

Sincerely yours,

A handwritten signature in black ink that reads "Kay C. Brown". The signature is written in a cursive style with a large, stylized 'K' and 'B'.

Kay Brown
Director, Education, Workforce,
and Income Security Issues

Appendix I: Objectives, Scope, and Methodology

The objectives of this report were to identify (1) what is known about the effectiveness of financial incentives and other approaches intended to increase purchases of targeted foods that could contribute to a healthy diet; (2) the key factors to consider in designing a program that provides Food Stamp Program (FSP) participants with financial incentives to purchase certain foods; and (3) options available to the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS) for implementing financial incentives, and the advantages and challenges involved in implementing such options.

To address the first objective, we searched relevant databases, such as ProQuest, National Technical Information Service, Wilson Social Science Abstracts, and Sociological Abstracts. We also consulted with USDA's Economic Research Service (ERS) and FNS staff. We limited the scope of our work by looking at studies published since 2000. Through this process, we identified more than 100 studies published from January 2000 through February 2008. We further narrowed the scope of our work to those findings from studies published as reviews or summaries of original research, ERS-published research, and studies of Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) farmers' market programs. We conducted detailed reviews of the 16 studies that met these criteria. Therefore, our results are not an exhaustive or historical treatment of the topic. The studies reviewed included both randomized controlled trials and nonrandomized controlled trials. Our reviews entailed an assessment of each study's research methodology, including its data quality, research design, and analytic techniques, as well as a summary of each study's major findings and conclusions. We also assessed the extent to which each study's data and methods support its findings and conclusions.

To address the second and third objectives, we interviewed representatives of stakeholder groups that would be affected by implementation of an incentive program, including USDA officials; officials from four states with WIC Electronic Benefit Transfer (EBT) (Ohio, Texas, Washington, and Wyoming); officials from one state (California) that passed legislation authorizing the provision of financial incentives to FSP participants for purchasing targeted foods; the three EBT contractors serving almost all of the states; retailer associations and retailers representing large chain and smaller independent grocery stores; food and nutrition advocacy groups; and researchers. We also facilitated group discussions about the options for delivering incentives and implementation issues with state officials, retailers, and industry representatives at three national conferences.

To further explore targeted food incentive options and implementation issues, we convened a panel of 17 experts representing USDA, states, retailers, EBT contractors, and manufacturers of retailer check out systems. On November 6, 2007, we held a half-day meeting with these panelists at our headquarters office in Washington, D.C. Before the day of the meeting, we provided each panel member with a set of discussion questions that covered specific topics, including the definition of foods targeted for promotion, incentive delivery options, tracking purchases, applying the incentive, and monitoring and evaluation. Each panelist was provided with time to respond to each question and discuss the impact of other panelists' responses on the panelist's stakeholder group interests. We transcribed responses and made verifications to ensure that we had accurately captured panel member statements. We identified the panelists through external parties who work on the issues covered in this report. We selected individuals who represent the different stakeholder groups that would likely be involved in developing a targeted foods incentive program for the FSP, if such a program was initiated. The panel included representatives from USDA; two states (Maryland and Washington); four retailers or retailer associations (Krasdale Foods, Kroger, National Grocers Association, and Safeway); the three EBT contractors serving almost all states (Affiliated Computer Systems, eFunds, and JPMorganChase); and three other industry representatives (Electronic Funds Transfer Association, IBM, and Verifone).

We conducted this performance audit from May 2007 through July 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: GAO Contact and Staff Acknowledgments

GAO Contact

Kay Brown, (202) 512-7215, brownke@gao.gov

Staff Acknowledgments

In addition to the contact named above, individuals making key contributions to this report include Kathy Larin (Assistant Director), Susannah Compton, Neil Doherty, Kevin Jackson, Avani Locke, Ashley McCall, Luann Moy, Andrew Nelson, Susan Offutt, Barbara Oliver, Scott Pettis, Cathy Roark, Max Sawicky, Daniel Schwimer, Jay Smale, Rosemary Torres-Lerma, and Kate van Gelder.

Related GAO Products

Electronic Payments: Many Programs Electronically Disburse Federal Benefits, and More Outreach Could Increase Use. [GAO-08-645](#). Washington, D.C.: June 23, 2008.

Food Stamp Program: Use of Alternative Methods to Apply for and Maintain Benefits Could Be Enhanced by Additional Evaluation and Information on Promising Practices. [GAO-07-573](#). Washington, D.C.: May 3, 2007.

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Food Stamp Program: Farm Bill Options Ease Administrative Burden, but Opportunities Exist to Streamline Participant Reporting Rules among Programs. [GAO-04-916](#). Washington, D.C.: September 16, 2004.

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