

# Chapter 1

## Introduction

The Food and Nutrition Service (FNS) of the U.S. Department of Agriculture (USDA), together with designated State agencies, administers the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The WIC program provides both nutrition education and supplemental foods containing nutrients determined by nutritional research to be lacking in the diets of pregnant, breastfeeding, and postpartum women, infants, and children. Funding is provided by FNS to State WIC agencies through annual appropriations from Congress. Each State's cash grant includes a food grant and a Nutrition Services and Administration (NSA) grant. In FY2001, food grants totaled \$3.0 billion, or approximately 73 percent of the total cash grant. Cost savings through infant formula rebates provided an additional \$1.5 billion in funding; FNS estimates that the rebates would support about 28 percent of the WIC caseload.

In an effort to ensure the best use of available funds and to provide for participation by all eligible individuals, State WIC agencies have implemented practices designed to reduce the cost of food packages containing these prescribed foods. For instance, one of the WIC program's primary cost-saving practices is negotiating rebate contracts with manufacturers of infant formula. Additional practices include limiting authorized food vendors (such as supermarkets and grocery stores) to outlets with lower food prices; limiting food-item selection according to brand, package size, form, or price (for instance, requiring purchase of least cost items); and negotiating rebates with food manufacturers or suppliers.

Concerns have been raised that vendor-selection practices may reduce WIC participants' access to authorized vendors, and that item-selection practices and manufacturers' rebates may reduce participant satisfaction with allowed food items. Lower satisfaction may lead to lower consumption of certain foods or a decision to leave the program. In either case, the cost-containment practices may have the inadvertent effect of countering the program's goal: to provide supplemental foods and nutrition education in order to safeguard and improve nutritional intake, birth outcomes, child development, and health outcome measures.

### Purpose of Study

As part of the William F. Goodling Child Nutrition Reauthorization Act of 1998, the U.S. Congress directed the Economic Research Service (ERS), USDA, to assess the impacts of WIC cost-containment practices on the following outcome measures:<sup>1</sup>

- Program participation
- Access and availability of prescribed foods
- Voucher redemption rates and actual food selections by participants
- Participants on special diets or specific food allergies
- Participant use and satisfaction of prescribed foods

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<sup>1</sup> In accordance with the legislation authorizing this study, the impacts of infant formula rebates were not assessed during this research.

- Achievement of positive health outcomes
- Program costs

In a competitive bidding process, ERS contracted with Abt Associates Inc. in September 1999 to conduct this research study. This report presents the findings of the study.

## Study Approach

The study examines the relationships between State WIC cost-containment practices, program costs, and WIC participant outcomes. Prior research has identified possible practices to lower WIC program food costs,<sup>2</sup> but little is known about the specific impacts, both on participants and State WIC agencies, of various measures taken to ensure benefits to all eligible mothers and children.

There is considerable variation in cost-containment practices used by State WIC agencies. Because of the potential differences in the use and implementation of these practices by States, ERS decided upon a case study research design that would serve to identify the linkages between various types of cost-containment and Agency and participant outcomes. After a detailed State-by-State review of WIC cost-containment practices, six States were selected for case study: California, Connecticut, North Carolina, Ohio, Oklahoma, and Texas.<sup>3</sup> These States represent a mixture of practices and, in particular, they had practices that were thought to be restrictive enough to have measurable outcomes. Throughout this study, those outcomes in States with specific practices are compared with outcomes in States without those practices.

As displayed in table 1-1, five of the six States (all but North Carolina) applied competitive pricing criteria at vendor application to ensure that stores with excessive prices were not authorized to participate. Connecticut, Oklahoma, and Texas, however, were the only States with explicit thresholds for price above which stores could not be authorized; the study treats these three States as the “restrictive” States (with respect to vendor restrictions) when comparing outcomes between restrictive and nonrestrictive States.<sup>4</sup>

All six States imposed food-item restrictions according to price, brand, package size or form, or number of allowed types within a food category. North Carolina and Ohio, however, had relatively few food-item restrictions; they were selected for the study to represent States without such restrictions. The States imposing specific restrictions varied by food category, so the “restricted” group of States also varies by food category in the analyses.

California, Connecticut, and Texas contracted with a single manufacturer for rebates on infant cereal. From a participant’s perspective, such rebates are similar to State limits on allowed brands, and the study treats these two cost-containment practices similarly with regard to their impact on participants.

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<sup>2</sup> *Food Assistance: A Variety of Practices May Lower the Cost of WIC*, GAO/RCED-97-225, September 17, 1997.

<sup>3</sup> The study’s interim report describes the process followed in selecting the six case study States. See John A. Kirlin and Nancy Cole, *Assessment of WIC Cost-Containment Practices: An Interim Report to Congress*, Economic Research Service, Washington, DC, February 2001 (electronic publication E-FAN-01-005).

<sup>4</sup> In California, price thresholds were used to identify excessive prices for individual items, not to deny authorization to vendors. Ohio’s use of competitive pricing applied only when numeric limits were reached, a condition that had never been met at the time of the study.

**Table 1-1—Summary of State cost-containment practices in FY2001**

<b>State (WIC caseload<sup>a</sup>)</b>	<b>Vendor restrictions</b>	<b>Food-item restrictions<sup>b,c</sup></b>
California (1,243,509)	Applied competitive pricing criteria at application to ensure that stores with excessive prices were not authorized. <sup>d</sup>	No items subject to least expensive brand restriction Many food items subject to restrictions on package size or form Narrow choice for cheese, infant cereal, cereal, and juice Rebates on infant cereal
Connecticut (49,253)	Applied competitive pricing criteria at application to ensure that stores with excessive prices were not authorized.	Many food items subject to least expensive brand restrictions Few restrictions on package size or form Narrow choice for infant cereal and peanut butter Rebates on infant cereal
North Carolina (200,121)	None <sup>e</sup>	Only milk was subject to least expensive brand restrictions Milk and cereals subject to restrictions on package size or form
Ohio (247,092)	Applied competitive pricing criteria at application to ensure that stores with excessive prices were not authorized. <sup>f</sup>	No items subject to least expensive brand restriction Few restrictions on package size or form
Oklahoma (87,467)	Applied competitive pricing criteria at application to ensure that stores with excessive prices were not authorized.	Many food items subject to least expensive brand restrictions Milk and cereal subject to restrictions on package size or form Narrow choice for juice and cereal
Texas (750,122)	Applied competitive pricing criteria at application to ensure that stores with excessive prices were not authorized.	Milk and juice subject to least expensive brand restrictions Milk, cereal, and juice subject to restrictions on package size or form Narrow choice for juice Rebates on infant cereal

a Average participation level in FY2001.

b “Narrow” choice means that State was in bottom quartile in number of approved items, among all 50 States.

c Food-item restrictions are in addition to Federal WIC requirements.

d California’s competitive pricing policy did not restrict vendor authorization in practice, but assessed the reasonableness of individual item prices.

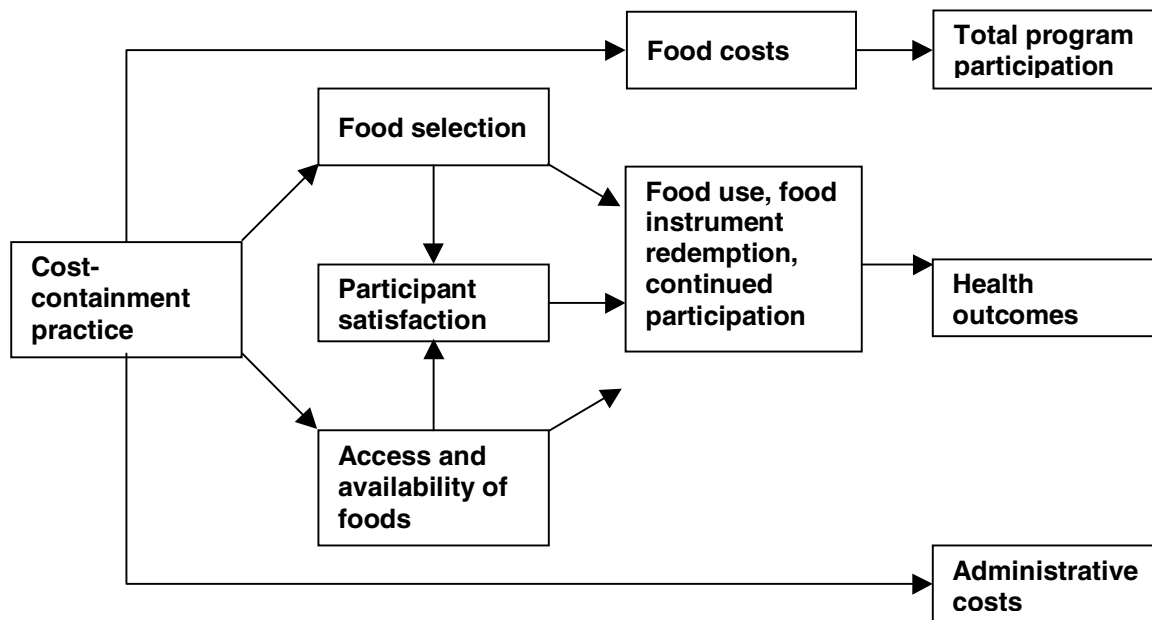
e North Carolina did not have a competitive pricing policy in place, but did require vendors to submit price lists at application, as well as twice a year thereafter. State officials did not have the authority to deny authorization due to high prices, but they could ask vendors to use “more reasonable” prices.

f Criteria used only when numeric limits were reached, a condition that had never been met at the time of the study.

This study does not provide national estimates of the impacts of WIC cost-containment practices because the six case study States were not randomly selected. In addition, the results of this study, for any of the six case study States, cannot be considered representative of any State outside of the study. Instead, as the case study approach allows, the focus is on understanding the linkages between specific cost-containment practices, or combinations of practices, and their outcomes.

Cost-containment practices are designed to lower the average cost of WIC food packages while maintaining Federal nutrition standards. These practices may have the desired impact on food costs, but they may also have unintended consequences for participant behavior and satisfaction. Figure 1-1 depicts the potential effects, direct and indirect, of cost-containment practices. The practices have direct effects on food and administrative costs. Food costs are expected to decrease as items and vendors are restricted to less expensive alternatives; administrative costs may increase in implementing and maintaining these procedures. In addition, cost-containment practices may have direct effects on participants through reduced food choice and restricted access and availability of prescribed foods. These direct, or “first-stage,” effects on participants may alter participant their with the WIC program, as indicated in the diagram.

**Figure 1-1—Impacts of cost-containment practices**



Direct effects of cost-containment practices on food selection, access to vendors, availability of food items, and participant satisfaction may lead to “second-stage,” or indirect, effects on several outcome measures: food use, food instrument redemption, and WIC participation. These second-stage outcomes each measure WIC food benefit use. In the diagram, all second-stage outcomes are grouped in one box because different outcomes represent different levels of response to cost containment.

Finally, figure 1-1 shows how cost-containment practices may have an effect on health outcomes. If cost-containment practices cause WIC participants to leave the program or to reduce their consumption of WIC foods, then potential health benefits of WIC supplemental foods may be lost. WIC foods, however, are only one of many factors that affect health, and it is beyond the scope of this study to isolate the singular impacts of changes in consumption of WIC foods on participants' health.<sup>5</sup> The study instead examines whether health outcomes are correlated with food instrument redemption rates, which in turn may be affected by cost-containment practices. If cost-containment practices are found to impact redemption rates, and if changes in health outcomes are correlated with redemption rates, then the possible link between cost-containment practices and health outcomes could be further explored in a separate study.

## Data Sources

The analysis of the impacts of WIC cost-containment practices relies on a variety of data sources, including both extant data and data collected from the case study States specifically for this study. These data include:

- State WIC administrative data
- Interviews with State and local WIC officials
- A survey of WIC participants
- A store survey of the price and availability of WIC food items
- WIC transaction data collected from supermarkets
- Focus groups with participants who dropped out of the WIC program
- Interviews with other concerned stakeholders

Each data source is summarized below.

### State WIC Administrative Data

Two types of State administrative data were collected: participant certification records and food instrument data.

Statewide administrative records for WIC participants were obtained from the six case study States at two points in time: November 2000 and April 2001. These files contain demographic characteristics of WIC participants and certification information such as nutritional risks, health status, food package prescription, and income level.

Statewide food instrument data were collected from each State for a 4-month period, from November 2000 through February 2001. The data typically include one record for each WIC food instrument issued, with data elements indicating its status (issued, paid, rejected, or void), date paid, and payment amount.

Administrative data on participants from November 2000 provided the sampling frame for the study. Three geographic areas were selected for primary data collection within each State, representing urban, suburban, and rural areas. Selection of geographic areas was based on caseload counts, with

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<sup>5</sup> It is important to note that WIC is designed to supplement the diet and does not provide for all dietary needs.

selection proportionate to caseload size. Primary data collections in the three geographic areas were the Survey of WIC Participants, the store survey, and the interviews with State and local WIC agencies.

Administrative data were also used for several lines of analyses. Statewide participant records were used to characterize participants for the analyses of food instrument redemption and to explore the association between redemption and change in health status (as measured from the November and April certification files). Food instrument data were used to measure food instrument redemption rates for each State and to examine the relationship between food instrument redemption and health outcomes.

### **Interviews with State and Local WIC Officials**

Interviews were conducted with representatives of all six State WIC Agencies selected for the study. These interviews, held between May and August 2001, provided information on the procedures for applying cost-containment measures, the results of the measures, staff time and other costs devoted to maintenance of the measures, and views of State staff on the impacts of cost-containment measures on program costs and participant outcomes.

In addition, three local agencies representing urban, suburban, and rural areas were selected in each State for telephone interviews. These agencies provided information on local agency involvement in, and experience with, cost-containment measures—principally the provision of training and assistance to participants about food-item restrictions. The local agency interviews were conducted between July and September 2001.

### **Survey of WIC Participants**

The Survey of WIC Participants interviewed a total of 1,285 WIC families in the six States.<sup>6</sup> All respondents were sampled from the same study sites selected for the interviews with local WIC officials. Interviews were conducted between February and June 2001. For the 12.3 percent of sampled participants who could not be reached by telephone, interviews were conducted by field staff at participants' homes. The overall survey response rate was 77 percent.

The Survey of WIC Participants collected information about the following topics:

- Satisfaction with WIC food items
- Food instrument pickup
- Food item purchase, consumption, and preferences
- Participant access to WIC vendors
- Program participation
- Presence of special diets or food allergies
- Health referrals
- Participant demographics

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<sup>6</sup> The Survey of WIC Participants was designed and conducted specifically for this study. It is not to be confused with USDA's National Survey of WIC Participants and Their Local Agencies (NSWP), conducted in 1998.

Appendix A presents information about sampling for the survey, as well as response rates by sampling stratum. A copy of the survey instrument is included at the end of the appendix.

### **Survey of the Price and Availability of WIC Food Items**

The Survey of Food Prices and Item Availability collected price information and data on food item availability from a sample of 150 food stores in the six case study States. Eighteen WIC-authorized vendors were sampled in each State, and up to 12 non-WIC food stores were sampled in four States with vendor restrictions: California, Connecticut, Ohio, and Texas.<sup>7</sup> WIC and non-WIC stores were sampled separately from two different population universes.<sup>8</sup>

Data collectors visited each sampled store and checked on the price and availability of over 400 food items approved for WIC under Federal guidelines. Differences in food prices between State-approved and nonapproved food items are used to estimate cost savings from food-item restrictions.

Sampling procedures for the Survey of Food Prices and Item Availability and a copy of the survey instrument are included in appendix B.

### **WIC Transaction Data from Supermarkets**

In retail food stores that scan food item bar codes at the checkout, the store's point-of-sale (POS) system automatically creates a record of the scanned item. The record typically includes a descriptor of the scanned item, the price paid for the item, the dollar amount of any manufacturer or store coupons/discounts applied to the item, the method of payment (for instance, cash, check, or credit card), the date and time of the transaction, and a store and checkout lane identifier. In many POS systems, the individual item records also contain a unique transaction identifier, enabling users to identify all items purchased during a single transaction.

The study contacted all the large supermarket chains in the six case study States to inquire whether their POS systems could identify food items paid for with WIC checks or vouchers. A number of POS systems could not, either because transaction identifiers were not used or the system grouped WIC checks with all other checks when identifying mode of tender. Supermarket chains whose POS systems could identify WIC transactions and the items included in those transactions were invited to participate in the study by providing copies of their WIC transaction data for a 5- to 6-week period in early 2001. Six supermarket chains agreed to provide data from some or all of their stores.<sup>9</sup> Together, these scanner data provide information for over one-half million WIC transactions in five of the six States; no supermarkets in Oklahoma were able to participate in the study.

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<sup>7</sup> Two States, Connecticut and Ohio, did not have enough non-WIC stores in the study areas to sample 12 stores in each State. At the time the survey was designed, it was not clear that Oklahoma also had a policy restricting high-cost vendors.

<sup>8</sup> WIC-authorized stores were sampled from lists of WIC vendors obtained from each State WIC agency. The sample frame includes all WIC vendors, except pharmacies and WIC-only stores, located in the three study sites in each State. Non-WIC stores are defined as supermarkets and grocery stores authorized to participate in the Food Stamp Program but not the WIC program. The FNS Store Tracking and Redemption Subsystem (STARS) database, which includes records for all FSP-authorized retailers, was used to draw the sample of non-WIC stores.

<sup>9</sup> These WIC transaction data cannot be matched to individual participants or food instruments because the store POS systems do not capture the serial number of the WIC check or voucher. For this reason the scanned food item data cannot be used to examine whether WIC participants fully redeem their food prescriptions.

Because most supermarket chains either could not provide the requested data or decided not to participate in the study, the WIC transaction data cannot be viewed as a representative data set. The data are used to inform the study about WIC participants' shopping patterns, especially the distribution of purchased types and brands of food items in States with and without food item restrictions. Appendix C describes the WIC transaction data.

### **Focus Group Discussions with WIC Program Dropouts**

Focus groups were conducted with WIC participants who did not pick up their WIC food instruments and who indicated, during a screener survey, that this was related to dissatisfaction with either WIC food items or access to WIC vendors.

Six focus groups were conducted in five States, collecting in-depth, qualitative information on the reasons WIC participants fail to make full use of their WIC food benefits.<sup>10</sup> Abt Associates contracted with Marketing Resources International (MRI) to recruit WIC participants for focus groups, provide facilities for focus group sessions, conduct the sessions, and report on the results.

A focus group moderator used the same topic guide in all States. Topics were broadly focused on WIC participants' satisfaction with the selection of WIC-approved foods, access to WIC vendors, and ease of using WIC food instruments (that is, WIC checks or vouchers). The goal of the focus groups was to determine the extent to which cost-containment practices affected these participants' decisions to stop picking up their WIC checks and vouchers.

Although focus groups do not provide data that can be compared across States in a quantitative way, they provide in-depth qualitative insights about WIC participants' satisfaction. The stories told by the focus group members allow the study to determine whether particular aspects of cost-containment practices are singled out by WIC participants when they describe their experiences with the program.

### **Interviews with Concerned Stakeholders**

In addition to collecting information from WIC agencies, the study contacted representatives from food industry associations and from the National WIC Association (NWA), formerly the National Association of WIC Directors (NAWD). These organizations, listed in appendix D, have expressed concerns in the past about WIC cost-containment practices. Many of these concerns, summarized below, were investigated as part of the study:

- The NWA is a voluntary membership organization representing State and local WIC agencies nationwide. NWA members expressed two main concerns about cost-containment practices: (1) the negative impact of food-item restrictions on program participation; and (2) obstacles to States' utilization of food cost savings to increase Federal NSA funds in support of higher WIC participation levels.<sup>11</sup> They stressed that States needed flexibility in designing food packages to attract and retain program participants.

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<sup>10</sup> A planned focus group in Hartford, Connecticut was cancelled because not enough participants who met the screening criteria could be recruited.

<sup>11</sup> NWA's concern with States' use of food cost savings has been addressed by FNS since the interview was conducted. In December 1999, FNS published a rule expanding conversion authority for cost-containment savings to NSA funds. According to the rule, a State WIC agency "may now convert food funds to NSA funds based on projected increases in



- The Grocery Manufacturers of America (GMA) is a trade organization representing companies that manufacture and market most of the best known national brand products. Their biggest concern with cost-containment efforts is those practices that reduce WIC participants' choices among brands of WIC-approved products, especially breakfast cereals. They believe that such restrictions reduce participant satisfaction and can lead to decreased participation in WIC.
- Members of the Private Label Manufacturers Association (PLMA) are pleased that private-label, or store-brand, items are being added to WIC-approved food lists in many States. They perceive, however, that some State WIC agencies are biased against private-label foods. Members also are concerned with policies that require WIC-approved food items to be available statewide, because not all food chains operate throughout a State. Finally, PLMA members believe that limiting vendors may (unintentionally) eliminate many private-label products from the WIC program and lead to increased costs and reduced product availability for the WIC program and participants.
- The Food Marketing Institute (FMI) and the National Grocers Association (NGA) are trade associations representing food retailers and wholesalers. These groups do not like cost-containment practices designed to limit the number of WIC-authorized vendors, arguing that such practices are inefficient and expensive to implement. These groups believe that the practices tend to reduce participation of smaller neighborhood stores, which in turn affects WIC participants' accessibility to WIC-authorized stores. The associations also do not like price ceilings, which they claim are unfair to small retailers whose cost structures are higher, and least expensive brand policies, which they claim confuse store clerks and WIC customers.

## **Report Organization**

This report on WIC cost-containment practices contains 11 chapters, including this introduction. Chapter 2 provides a description of the cost-containment practices used in each of the six case study States, as well as of their administrative costs. Chapters 3 and 4 then present the estimated relationships between cost-containment practices, food selection, and WIC food package costs.

The estimated relationships between WIC cost-containment practices and participant access to WIC vendors, and the availability of prescribed foods, are presented in chapter 5. Chapter 6 describes participant satisfaction with and use of prescribed foods. Chapter 7 provides information on the percentage of WIC participants in the six States who have food allergies or are on special diets, together with evidence on the extent of problems these participants encounter when shopping for WIC foods.

Chapters 8 and 9 present the study's findings on, respectively, food instrument redemption rates and program participation. Chapter 10 discusses the relationship between redemption rates and changes in participant health measures. Based on findings on all of the outcome measures specified in the authorizing legislation, chapter 11 summarizes what has been learned about each cost-containment

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participation instead of just actual participation increases.” The NSA expenditure standard was reduced to 10 percent to improve accountability for the new conversion authority and to prevent this expanded conversion authority from being used to substantially shift food money to NSA spending without increased cost-containment savings and participation.

practice implemented by the case study States. Technical appendixes are found at the end of the report.