

# Meals Offered by Tier 2 CACFP Family Child Care Providers: Effects of Lower Meal Reimbursements

## Introduction

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The Child and Adult Care Food Program (CACFP) is a Federal program supporting nutritious meals and snacks in participating child care and adult day care facilities. It is administered by the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture (USDA). Under CACFP, care providers receive a fixed reimbursement per meal served, with different reimbursement rates for different types of meals, such as breakfasts and lunches.

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) changed the meal reimbursement structure for family child care homes. The law established two tiers of reimbursement rates, with higher rates applying to homes in low-income areas or operated by low-income persons. The intent of these changes to the CACFP was to target program benefits mainly to low-income children.

The law also called for a study of how the new meal reimbursement structure affected CACFP family child care homes, their sponsoring organizations, and the families of children participating in the program. This report describes the food and nutrient content of meals and snacks offered to children in CACFP family child care homes receiving the lower rates of reimbursement and the effect of reimbursement tiering on these measures of nutritional quality. The report is one in a series of reports on the *Family Child Care Homes Legislative Changes Study*, which was carried out by Abt Associates Inc. under contract to the U.S. Department of Agriculture, Economic Research Service.<sup>1</sup>

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<sup>1</sup> Other reports in the series include a summary report (Hamilton *et al.*, FANRR-22) and examinations of the effect of tiering on sponsors (Bernstein and Hamilton, E-FAN-02-003), participating providers (Zotov *et al.*, E-FAN-02-004), households with children in CACFP family child care (Crepinsek *et al.*, E-FAN-02-005), and trends in the number of providers participating in the CACFP (Hamilton *et al.*, E-FAN-02-002).

## Description of the Child and Adult Care Food Program

The CACFP reimburses child care providers for qualifying meals served. Reimbursement is limited to a maximum of two meals and one snack or one meal and two snacks per day.<sup>2</sup> The program operates in nonresidential day care facilities including child care centers, after-school-hours child care centers, family and group child care homes, and some adult day care centers.<sup>3</sup> In fiscal year 1999, the child care component of the program served an average of 2.5 million children daily at an annual cost of \$1.6 billion. Thirty-six percent of these children (959,181) were served through family child care homes at a cost of \$668 million or 42 percent of total program expenditures. The CACFP is administered at the Federal level by FNS, an agency of USDA. State agencies generally oversee the program at the local level.

When the program was first established by Congress in 1968 under Section 17 of the National School Lunch Act (42 U.S.C. 1766), participation was limited to center-based child care in areas where poor economic conditions existed. Beginning in 1976, family child care homes became eligible to participate provided that they meet existing State licensing requirements where these are imposed, or obtain approval from a State or local agency. In addition, homes must be sponsored by a nonprofit organization that assumes responsibility for ensuring compliance with Federal and State regulations and that acts as a conduit for meal reimbursements.

Initially, reimbursement rates for meals and snacks served in homes, like those served in centers, were based on a means test of the family incomes of individual children.<sup>4</sup> Providers complained that the means test was overly burdensome and too invasive for their relationship with the families for whom they provided child care. In addition, sponsors claimed that meal reimbursements were insufficient to cover their administrative costs and allow for adequate reimbursement to the homes.<sup>5</sup> As a consequence, very few homes participated in the program—fewer than 12,000 in December 1978.

The 1978 Child Nutrition Amendments (P.L. 95-627) incorporated wide-ranging changes to the program with the purpose of expanding participation, particularly among family child care homes. Most significantly, the 1978 Amendments eliminated the means test for family child care homes. In

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<sup>2</sup> Prior to enactment of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (P.L. 104-193), CACFP centers were allowed to claim reimbursement for an additional meal or snack for children in care eight or more hours per day.

<sup>3</sup> As of July 1999, the CACFP also provides reimbursements for meals and snacks served to eligible children in homeless shelters. Eligibility for the child care portion of the CACFP is limited to children age 12 and under.

<sup>4</sup> Three categories of reimbursement were established for participating homes, corresponding to family incomes of participating children of: 125 percent or less of the applicable Federal poverty guideline for households of a given size; 126 to 195 percent of the poverty guideline; and more than 195 percent of the poverty guideline.

<sup>5</sup> Meal reimbursements generated by participating homes were paid directly to the sponsoring agency. The sponsor was permitted to deduct administrative costs before passing the remaining reimbursement on to the providers.

addition, the Amendments separated the reimbursement of sponsors' administrative costs from the meal reimbursement for family child care homes.<sup>6</sup>

In the years following the elimination of the means test, the family child care component of the CACFP grew tremendously. At the same time, it increasingly became a program serving higher-income children. The *Early Childhood and Child Care Study*, conducted in 1995, reported that over 190,000 homes were participating in the program, and more than 75 percent of the children served in these homes were from families with incomes above 185 percent of the Federal poverty guideline.<sup>7</sup>

### **CACFP Meal-Pattern Requirements**

From its inception, the goal of the CACFP has been to support the provision of nutritious meals to children while in child care. To this end, USDA established minimum requirements for the meals and snacks<sup>8</sup> offered by participating child care providers. The CACFP meal-pattern requirements are designed to ensure that meals and snacks are nutritionally well-balanced and supply the kinds and amounts of food required to make a reasonable contribution to children's daily energy and nutrient needs. The meal pattern specifies foods (meal components) to be offered at each meal and snack as well as minimum portion sizes for children of different ages: 1-2 years; 3-5 years; and 6-12 years.<sup>9</sup> The CACFP meal-pattern requirements for children age 1-12 years are summarized in Exhibit 1. In addition to the meal pattern, USDA makes available to CACFP providers a variety of guidance materials to assist in planning meals that are appealing, age-appropriate, and nutritious.

## **The Legislative Changes Implemented in 1997**

As part of the PRWORA, Congress acted to refocus the family child care component of the CACFP toward low-income children. PRWORA changed the reimbursement structure for the family child care component of the program to target benefits more specifically to homes serving low-income children. The new rate structure for family child care homes took effect July 1, 1997.

Under the new reimbursement structure, family child care homes located in low-income areas have reimbursement rates that are similar to the rates that existed for all family child care homes before PRWORA. A low-income area is defined operationally as either an elementary school attendance area in which at least half of the enrolled children are eligible for free or reduced-price school meals, or a 1990 census block group where at least half of the children lived in families with incomes at or below 185 percent of the poverty guideline. Homes where the provider's own income is at or below 185 percent of the poverty guideline have the same reimbursement structure as homes located in low-income areas. Homes meeting any one of these criteria are referred to as Tier 1 homes.

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<sup>6</sup> Other changes included the establishment of alternative procedures for approving homes and the provision of startup and expansion funds for family child care sponsors. Also, income eligibility thresholds for child care centers were changed from 125 and 195 percent of the poverty guideline to 130 and 185 percent.

<sup>7</sup> Glantz *et al.*, 1997.

<sup>8</sup> Regulations refer to mid-morning, mid-afternoon, and evening (nonsupper) eating occasions as "supplements." For simplicity, this report uses the more common term of "snacks."

<sup>9</sup> USDA also specifies a meal pattern for infants (birth-12 months). 7 CFR Ch. II, Part 226.20.

**Exhibit 1  
Child Care Meal Pattern for Children**

<b>Meal Components</b>	<b>Ages 1-2</b>	<b>Ages 3-5</b>	<b>Ages 6-12</b>
<b>Breakfast</b> – Select all 3 components			
Milk, Fluid	½ cup	¾ cup	1 cup
Fruit, Vegetable, or Fruit or Vegetable Juice <sup>1</sup>	¼ cup	½ cup	½ cup
Bread/Bread Alternate <sup>2</sup>			
Bread or	½ slice	½ slice	1 slice
Cornbread, biscuits, rolls, muffins <sup>3</sup> or	½ serving	½ serving	1 serving
Cereal: Cold dry <sup>4</sup> or	¼ cup or ⅓ oz	⅓ cup or ½ oz	¾ cup or 1 oz
Hot cooked or	¼ cup	¼ cup	½ cup
Cooked pasta or noodles or grains	¼ cup	¼ cup	½ cup
<b>Lunch and Supper</b> – Select all 4 components			
Milk, Fluid	½ cup	¾ cup	1 cup
Vegetable(s) and/or Fruit(s) <sup>5</sup>	¼ cup total	½ cup total	¾ cup total
Bread/Bread Alternate <sup>2</sup>			
Bread or	½ slice	½ slice	1 slice
Cornbread, biscuits, rolls, muffins <sup>3</sup> or	½ serving	½ serving	1 serving
Cooked pasta or noodles or grains	¼ cup	¼ cup	½ cup
Meat/Meat Alternate			
Meat, poultry, fish, <sup>6</sup> or cheese or	1 oz	1½ oz	2 oz
Eggs (large) or	1	1	1
Cooked dry beans or peas or	¼ cup	⅜ cup	½ cup
Peanut/other nut or seed butters or	2 tbsp	3 tbsp	4 tbsp
Nuts and/or seeds <sup>7</sup> or	½ oz=50%	¾ oz=50%	1 oz=50%
Yogurt <sup>8</sup>	4 oz or ½ cup	6 oz or ¾ cup	8 oz or 1 cup
<b>Supplement</b> – Select 2 of the 4 components			
Milk, Fluid	½ cup	½ cup	1 cup
Fruit, Vegetable or Fruit or Vegetable Juice <sup>1,9</sup>	½ cup	½ cup	¾ cup
Bread/Bread Alternate <sup>2</sup>			
Bread or	½ slice	½ slice	1 slice
Cornbread, biscuits, rolls, muffins <sup>3</sup> or	½ serving	½ serving	1 serving
Cereal: Cold dry <sup>4</sup> or	¼ cup or ⅓ oz.	⅓ cup or ½ oz	¾ cup or 1 oz
Hot cooked or	¼ cup	¼ cup	½ cup
Cooked pasta or noodles or grains	¼ cup	¼ cup	½ cup
Meat/Meat Alternate			
Meat, poultry, fish <sup>6</sup> or cheese or	½ oz	½ oz	1 oz
Eggs (large) or	½	½	1
Cooked dry beans or peas or	⅓ cup	⅓ cup	¼ cup
Peanut/other nut or seed butters or	1 tbsp	1 tbsp	2 tbsp
Nuts and/or seeds or	½ oz	½ oz	1 oz
Yogurt <sup>8</sup>	2 oz or ¼ cup	2 oz or ¼ cup	4 oz or ½ cup

<sup>1</sup> Fruit or vegetable juice must be full-strength.

<sup>2</sup> Bread, pasta or noodle products, and cereal grains shall be whole-grain or enriched. Cornbread, biscuits, rolls, muffins, etc., must be made from whole-grain or enriched meal or flour. Cereal must be whole-grain or enriched or fortified.

<sup>3</sup> Serving sizes for specific bread/bread alternates are published separately in FNS guidance materials for providers.

<sup>4</sup> Either volume (cup) or weight (ounce), whichever is less.

<sup>5</sup> Two servings of fruits and/or vegetables fulfill the lunch or supper requirement. Full-strength fruit or vegetable juice may be counted to meet up to one half of this requirement.

<sup>6</sup> A serving consists of the edible portion of cooked lean meat or poultry or fish.

<sup>7</sup> No more than one-half of the total meat/meat alternate requirement may be met with nuts or seeds. Nuts or seeds must be combined with another meat/meat alternate to fulfill the lunch or supper requirement. One ounce of nuts or seeds is equal to 1 ounce of the edible portion of cooked lean meat or poultry or fish.

<sup>8</sup> Yogurt may be plain or flavored, unsweetened or sweetened.

<sup>9</sup> Juice may not be served to fulfill the supplement requirement when milk is served as the only other component.

All other homes are reimbursed at substantially lower rates. This latter group of homes, referred to as Tier 2 homes, includes those that are neither located in a low-income area nor operated by a low-income provider. Tier 2 homes can receive the higher Tier 1 reimbursement rates for meals served to children from families with incomes at or below 185 percent of the poverty guideline.

The new reimbursement structure cut CACFP reimbursements almost in half for Tier 2 family child care homes. The applicable rates in 1999, when the data were collected for this study, are shown in Exhibit 2. In fiscal year 1999, Tier 2 homes received meal reimbursements averaging \$177 per month (including some meals reimbursed at the Tier 1 rates). Had they been reimbursed at the Tier 1 rates for all meals, their monthly reimbursements would have averaged \$326.

The new CACFP meal reimbursement structure changed the economics of family child care for those homes classified as Tier 2. Unless the providers could raise fees or reduce expenses, the reduced reimbursement revenue would translate into a lower net income from the business. Higher fees, longer hours, and taking on more children have all been suggested as possible responses of providers; these are addressed in a separate report (Zotov *et al.*, E-FAN-02-004). Another possible provider response would be to reduce meal costs by serving fewer meals, reducing the amount of food served at a meal, or adjusting menus to emphasize less costly food. The question of whether the reduction in reimbursements for Tier 2 providers has affected the types and nutritional adequacy or quality of meals served to children in Tier 2 family child care homes is the subject of this report.

## The Family Child Care Homes Legislative Changes Study

After mandating changes in the CACFP reimbursement structure, the PRWORA also called for a study of the effects of those changes. A number of questions were posed about effects on CACFP sponsors, participating family child care homes, and the families served by those homes. USDA accordingly designed, and contracted with Abt Associates Inc. to implement, the *Family Child Care Homes Legislative Changes Study*.

**Exhibit 2**  
**Meal Reimbursement Rates by Tier<sup>a</sup>**  
**July 1, 1998 - June 30, 1999**

Meal	Tier 1 Rate	Tier 2 Rate	Difference between Tier 2 and Tier 1	
			Amount	Percentage
Breakfast	\$0.90	\$0.34	-\$0.56	-62.2%
Lunch/Supper	1.65	1.00	-0.65	-39.4
Supplement (snack)	0.49	0.13	-0.36	-73.5

a Reimbursement rates are higher in Alaska and Hawaii.

The *Family Child Care Homes Legislative Changes Study* involved extensive data collection with nationally representative samples of family child care homes, their sponsors, and the parents of children they serve. A multistage probability sampling approach was used. Twenty States were selected in the first stage. A sample of sponsors was drawn within each of the selected States, and the sampled sponsors provided lists of the family child care homes they sponsor. A sample of family child care homes was then drawn from each sponsor's list. In the final sampling stage, a subsample of the family child care homes was used to draw a sample of households whose children were in the care of those providers. The sample design is described in more detail in Appendix A.

Conducted in January-August 1999, the data collection included two elements that are the principal data sources for this report:

- A sample of Tier 2 providers completed a *menu survey*, in which they recorded information on all food items included in meals and snacks offered to children age 1-12<sup>10</sup> during a five-day period. The survey sample included 741 Tier 2 providers eligible for the study, of whom 542 provided a complete menu survey for 3 to 5 days.
- For a subsample of 97 Tier 2 providers, *meal observations* conducted by field interviewers measured the portion sizes of food items served to children on 2 of the 5 days covered by the menu survey. Information from this subsample of providers was used to validate items recorded in the menu surveys for these homes and to impute portion sizes for items recorded in all of the menu surveys.

Appendix B contains sample pages of the menu survey and meal observation instruments.

As is often the case in analysis of survey data, nonresponse and the potential for nonresponse bias call for caution in interpreting the results. The response rates for the menu survey and meal observation survey were 73 percent and 42 percent, respectively. Compound response rates, which take into account the 96-percent response rate of CACFP sponsors in providing lists of providers for sampling, are somewhat lower. Nonresponse analyses, presented in Appendix A, did not reveal any meaningful patterns of nonresponse bias. Nonetheless, the possibility of bias cannot be completely ruled out.

The report also uses some data from an *operations survey of family child care providers*, which was administered to the Tier 2 providers who completed the menu survey and also to a sample of 576 Tier 1 providers. A more detailed analysis of this survey, which covers numerous aspects of the providers' experience in the CACFP, is presented in a separate report (Zotov *et al.*, E-FAN-02-004).

Because of the complex structure of the samples, survey responses must be weighted in order to portray distributions in the overall population appropriately. All percentages, means, and other distributional statistics presented in this report have been weighted using procedures described in Appendix A. Tables also show the unweighted number of observations on which the statistics are based. Standard errors and significance tests are estimated with correction for the complex sample design.

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<sup>10</sup> The menu survey did not request information on foods and formula offered to infants less than 1 year. Previous research suggested that this was too infrequent to provide a sample size large enough for separate analyses, and the types of foods offered to infants are too different to warrant combining them with other age groups.

Additional elements of the *Family Child Care Homes Legislative Changes Study* include a self-administered *survey of family child care sponsors*, a telephone *household survey* of parents of children in Tier 1 and Tier 2 homes, and an *operations survey of former CACFP providers*. Analyses of these data sets are presented in the following reports: Bernstein and Hamilton, E-FAN-02-003; Crepinsek *et al.*, E-FAN-02-005; and Zotov *et al.*, E-FAN-02-004.

## Analysis Approach and Limitations

The analysis presented in this report has two principal objectives:

- Describe characteristics of the meals and snacks offered in Tier 2 CACFP family child care homes in 1999.
- Determine, to the extent possible, how tiering affected these meals and snacks.

To learn about the effect of tiering, we compare data on the Tier 2 meals and snacks offered in 1999 with the meals and snacks offered by CACFP providers in 1995, as measured in the *Early Childhood and Child Care Study*. The data collection strategy for the present study was essentially identical to that used in the earlier study, which makes it possible to compare the data for the two time periods.

Two factors make it difficult to draw inferences about the effect of tiering, however. First, the menu survey and meal observations in 1999 were conducted only for Tier 2 providers, while the 1995 study represented all CACFP providers participating at that time. Second, it is not possible to identify clearly that subset of the 1995 providers who would have been classified as Tier 2 had tiering existed. Data are available for two of the three criteria used in tier classification: the provider's income relative to the poverty guideline, and the percent of children in the provider's census block group living in low-income households. These two factors are strongly but not perfectly correlated with providers' tier status in 1999.<sup>11</sup> By including these factors as covariates in regression analyses, we can examine the differences between meals and snacks offered by Tier 2 providers in 1999 and those offered by reasonably similar providers in 1995. (The statistical approach is described in more detail in Appendix D.)

We did not attempt to limit the 1995 sample to those providers who would have been Tier 2 had they been classified in 1995, for two reasons. First, as described above, we were doubtful of our ability to identify those providers. Second, the gains in statistical power from using the entire sample of 1995 providers, rather than just those that were higher income and served higher-income children, were considerable. These gains were obtained in the portion-size models by assuming that the same general relationships held between portion sizes and characteristics of foods, menus, etc. for the entire 1995 sample and the 1999 sample, with tiering-related variables (provider and neighborhood income) simply shifting the relationship. In the nutrition outcomes models, we obtained the gains by assuming that the tiering-related variables were related in a smooth fashion to measures (such as percent of *Recommended Dietary Allowances* (RDA) for food energy in lunches offered), rather than that there was a sharp break in these relationships for Tier 1 versus Tier 2 households.

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<sup>11</sup> The third criterion used in tier classification, the percent of children in the elementary school serving the provider's location that are certified to receive free or reduced-price meals, was not available for a sufficient number of providers in the sample.

A two-stage modeling approach was used in estimating tiering effects on nutrient quantities. The first stage used the subsample of providers for whom meal observations were conducted to estimate a model of portion sizes. This model was used to impute portion sizes to all foods recorded on the menus of the full sample of providers who responded to the menu survey. Nutrient quantities, which were determined by both what was offered and how much was offered, were analyzed in the second-stage model. The standard errors in the second-stage model were adjusted to take into account the prediction error inherent in the imputed portion size values. This adjustment resulted in larger standard errors, and hence fewer statistically significant differences, than would be estimated from the second-stage model alone. The adjustment had no qualitative effect on the findings, however. With or without the adjustment, most of the significant differences are in the direction of larger nutrient quantities in 1999 rather than in 1995.

Differences between groups are reported in the text as statistically significant if they have a less than 5-percent probability of arising by chance. Some disciplines conventionally consider differences to be significant if their probability of arising by chance is less than 10 percent. Accordingly, differences that would be significant at the 10-percent level but not the 5-percent level are noted, but indicated as ( $p < 0.10$ ). Differences that are significant at the 5-percent level or better are simply reported as statistically significant. In the tables, three levels of statistical significance are noted, 1-percent, 5-percent, and 10-percent.

It is important to note that tiering is not the only logically possible cause of differences observed between Tier 2 providers in 1999 and similar providers in 1995. Such differences could be caused by:

- Changes over time in the preferences and behaviors of CACFP providers, parents, and children.
- Changes in the composition of providers participating in the CACFP. Compositional changes could occur as a result of tiering—for example, low-margin providers classified as Tier 2 might leave the child care business—or could be caused by demographic or economic changes unrelated to tiering.
- The lower reimbursement rates introduced by tiering.

Given these multiple possible causes, any differences (or lack of difference) between meals and snacks offered by Tier 2 providers in 1999 and similar providers in 1995 must be interpreted with caution.