

# Appendix F

## Survey of Former CACFP Providers: Meals and Snacks Offered and Their Nutrient Content

---

One component of the *Family Child Care Homes Legislative Changes Study* was designed to examine the experiences of CACFP providers who left the program shortly before or after tiering was implemented. It was hypothesized that many providers who were (or who expected to be) classified as Tier 2 might drop out of the CACFP but continue to operate a child care business. Policy-makers were concerned about the possibility that, without the CACFP meal reimbursement and training, providers operating these homes might offer fewer or less nutritious meals and snacks to children in their care.

The study was therefore designed to include a three-part survey of these former providers: (1) a self-administered survey of their current operating characteristics and reasons for leaving the CACFP (the *operations survey*), (2) a week-long record of foods and beverages the providers offered at each meal and snack (the *menu survey*), and (3) on-site *meal observations* of actual portion sizes served by a subsample of providers. The samples for these surveys would consist of providers who were active in the CACFP in January 1997, who were not on the program roster in January 1998, and who were providing care and still not participating in the CACFP at the time of the survey in the summer of 1999.

As it turned out, the number of providers who left the CACFP but remained in the child care business was far less than anticipated. Of those providers who left the CACFP between January 1997 and January 1998, only 10 percent were still in the child care business and not participating in the CACFP at the time of the survey (spring-summer 1999). The majority (66 percent) had stopped providing child care and 24 percent turned out to be “temporary exits” who were once again active in the CACFP at the time of the survey. (These findings are discussed further in Hamilton *et al.*, E-FAN-02-002).

Because of the small percentage of former providers who were still operating a child care business but not in the CACFP, the operations survey and the menu survey each obtained fewer than 100 respondents. (The meal observation survey, which was to be based on a subsample of the respondents, was not implemented after it became clear that there would be too few responses for a meaningful analysis.) We therefore consider the results of these surveys to have limited generalizability and do not present a full analysis of the data.

Despite their limited sample size, the surveys provide a useful picture of a group of providers who left the CACFP but continued to operate family child care businesses. This appendix therefore summarizes data from the menu survey of former CACFP providers. Data from the former provider operations survey are examined in Zotov *et al.*, E-FAN-02-004.

## Sample Design and Nonresponse

The sample design for the survey of former CACFP providers was parallel to that described in Appendix A for the survey of active CACFP providers. The first two sampling stages (States and sponsors) were identical for the active and former providers.

When sponsors submitted their lists of Tier 1 and Tier 2 homes active in January 1998, which became the sample frames for the active provider surveys, they were also asked to submit a list of all providers active in January 1997. The 1997 and 1998 lists were compared to identify providers who left the CACFP between January 1997 and January 1998. It was hypothesized that most providers who left the CACFP because of tiering would do so during this period, which bracketed the tiering implementation date of July 1, 1997.

A sample of 300 sponsors was selected within the 20 States.<sup>1</sup> Of the selected sponsors, 289 supplied lists of 1998 and 1997 providers, and 280 of these had at least one 1997 provider meeting the definition required for inclusion in the survey, for a response rate of 93.3 percent.<sup>2</sup> Within the list of dropout homes constructed for each sponsor, a random sample of five was drawn (for sponsors with five or fewer dropouts, all were drawn).<sup>3</sup> This process resulted in a sample of 1,971 former providers.

Telephone “screening interviews” were attempted with these providers. The purpose of the screening interview was to determine the current status of the provider and, for those still providing care but not in the CACFP, to recruit them for the operations and menu surveys.

The former provider’s current status was determined for 1,275 providers, or 64.6 percent of the sample, through the telephone screening survey. This includes five individuals who were not actually interviewed, but who were determined to have moved or died. In-person screening was then attempted for a subsample of 195 of the 701 providers who could not be reached by telephone. Of these, current status was determined for 123, or 63.1 percent (including 16 who had either moved or died). The remaining former providers could not be reached or definitively located.

Among the respondents reached in the telephone screener survey, 153 were determined to be eligible for the operations and menu surveys.<sup>4</sup> Of those, 59 provided usable responses to the menu survey. This represents a response rate of 38.6 percent among those determined eligible. It represents a

---

<sup>1</sup> A total of 311 were selected, but 11 were not eligible because they had left the CACFP.

<sup>2</sup> The data submitted by sponsors do not always allow us to distinguish between a sponsor who had no homes leave the CACFP between January 1997 and January 1998 and a sponsor who provided insufficient data to identify these homes. For this calculation, we take the conservative approach of assuming that these 11 sponsors are all nonrespondents with regard to the list of 1997 providers. If we assume that none of them actually had any dropouts, the response rate would be 96.3 percent.

<sup>3</sup> The number of dropouts selected depended on the number of times the sponsor was selected (i.e., if the sponsor was selected twice, 10 dropouts rather than 5 would be selected from the sponsor’s list).

<sup>4</sup> Eleven providers were considered eligible for the operations survey but not for the menu survey because they did not serve any meals or snacks to children in their care.

response rate of 33.5 percent among all members of the original sample estimated to be still providing care but not in the CACFP.<sup>5</sup>

It is sometimes useful in multistage samples to consider the compound response rate, which is the product of the response rates at each stage. The compound response rate for the screening survey is 66.2 percent, based on the sponsor response rate of 93.3 percent and a 70.9 response rate within the provider sample.<sup>6</sup> The menu survey compound response rate is 31.3 percent, based on the sponsor response rate of 93.3 percent and the response rate of 33.5 percent within the former provider sample.

Because the compound response rate is low enough to raise concerns about nonresponse bias, we compared the responding former providers with nonrespondents on those dimensions that are known for both groups. This analysis was necessarily limited because the only information available for nonrespondents was their location and the characteristics of the sponsors upon whose list the former providers appeared. The analysis showed that the responding providers were distributed across the four census regions in almost exactly the same proportion as the overall sample that was drawn; the percent of respondents in each region was within 2 percentage points of the percent of the sample. The sponsors of responding former providers tended to be slightly larger and to sponsor slightly greater numbers of Tier 2 homes; the average number of homes sponsored was 4.5 percent greater for the respondents' sponsors, and the average percentage of sponsored homes that are Tier 2 was 8.3 percent greater for respondents. None of the differences were statistically significant in a one-sample *t*-test comparing the mean of the respondents with the mean of the total sample, taking into account the standard error of the mean of the respondents but treating the mean of the overall sample as a constant. (The data are unweighted in this analysis because sampling weights were not computed for nonrespondents.)

The sample weighting procedures, which are the same for former providers as active providers, are described in Appendix A. All means, percentages, and other distributional statistics described below use weighted data. Tables show the unweighted number of observations on which the statistics are based. Significance tests and measures of variability are adjusted for the complex sample design using SUDAAN software.

## **Nutritional Aspects of Meals Offered by Former CACFP Providers**

This analysis describes the meals and snacks offered by a select group of former CACFP child care homes—those active in CACFP in January 1997 but not in January 1998 and still not at the time of the survey. These providers represent approximately 5,500 providers nationwide who were operating child care homes without CACFP meal reimbursements in 1999 but presumably had some period of CACFP training and monitoring prior to January 1998. The analysis provides little evidence that the former providers offer meals and snacks of suboptimal nutritional quality. Some meals are offered less frequently than in homes operated by Tier 2 providers, but it is unclear whether this is related to the CACFP or to a difference in hours of operation between the two groups.

---

<sup>5</sup> Among all subsample members whose status was determined, 3.4 percent were still providing child care and not in the CACFP. Applying this percentage to the 696 sample members whose status was not determined by the telephone survey yields an estimate of 23 providers. This is added to the 153 determined by the telephone survey to be still providing child care but not in the CACFP.

<sup>6</sup> Responses for the telephone and in-person surveys are summed in this response rate.

The principal source of data for the analysis is the menu survey, completed by a sample of 59 former CACFP providers. The menu survey asked for information on all food items included in meals and snacks offered to children age 1-12 during a specified 5-day period. (This was the same instrument that was administered to Tier 2 providers. See Appendix B.) Portion sizes were imputed from meal observations conducted with a subsample of Tier 2 providers, as described in Appendix C. Comparisons are based on data from the menu survey of 542 Tier 2 CACFP providers, the subject of the main report.<sup>7</sup>

### **Meals and Snacks Offered by Former CACFP Providers**

One concern raised about providers leaving the CACFP was the possibility that they might cut back on the number of meals and snacks they offer to children in care to offset the loss of meal reimbursements. The sections below review data relevant to that hypothesis and find some reduction in the proportion of former providers offering certain meals and snacks on a daily basis relative to active Tier 2 providers during the same time period. It is unclear whether the differences are related to leaving the CACFP or to a difference in the hours of operation between the two groups of providers.

The vast majority of former CACFP providers in the 1999 sample offered lunch, with 90 percent of providers offering it on all days (Exhibit F.1).<sup>8</sup> About three-fourths offered breakfast, and most (85 percent) offered an afternoon snack, on at least some of the days for which menus were recorded. Among the other meals and snacks, only the morning snack was common, offered in just over half of the former CACFP homes. Very few providers recorded an instances of offering supper or an evening snack (unweighted n=5 and 2 providers, respectively).

Using Tier 2 CACFP participants during the same time period as a benchmark, the analysis suggests that significantly fewer former CACFP providers in 1999 offered breakfast than Tier 2 providers. Almost 20 percent fewer former providers offered breakfast everyday compared with Tier 2 providers, and those who did offered it did so on fewer days during the week. This finding may well be related to the shorter operating day for former CACFP homes relative to Tier 1 and Tier 2 homes in 1999, which is discussed in detail in another report (Zotov *et al.*, E-FAN-02-004). It seems unlikely that providers would have children in care during early morning hours and not feed them, although it is possible that providers ask parents to bring their children to child care after breakfast or to send food with their child from home, perhaps to help reduce expenses. For some providers, not offering breakfast may be a response to the loss of CACFP meal reimbursements, but we have no way of testing this possibility.

---

<sup>7</sup> Data presented in a separate report show that not all providers that left the CACFP between January 1997 and January 1998 would have been classified as Tier 2 had tiering been in effect (Hamilton *et al.*, E-FAN-02-002). A more ideal comparison group might have been a sample of both Tier 1 and Tier 2 providers, but the menu survey was not administered to active Tier 1 providers.

<sup>8</sup> Based on all CACFP age groups combined (1-2, 3-5, and 6-12).

**Exhibit F.1**  
**Proportion of Former CACFP Providers Offering Specified Meals and Snacks During the Sample Week**

	Former Providers 1999	Tier 2 1999	Difference Former - Tier 2
Breakfast offered	75.3%	94.6%	-19.3%**
All days	70.4	89.3	-18.9**
Some days	4.9	5.3	-0.4
Breakfast not offered	24.7	5.4	19.3**
Morning snack offered	54.1	56.4	-2.3
All days	31.7	49.2	-17.5*
Some days	22.4	7.2	15.2
Morning snack not offered	45.9	43.6	2.3
Lunch offered	92.2	98.6	-6.5*
All days	90.0	96.2	-6.3
Some days	2.2	2.4	-0.2
Lunch not offered	7.9	1.4	6.5*
Afternoon snack offered	84.9	95.6	-10.7
All days	73.0	89.5	-16.5*
Some days	12.0	6.2	5.8
Afternoon snack not offered	15.1	4.4	10.7
Supper offered	8.0	13.6	-5.6
All days	4.5	9.8	-5.3*
Some days	3.5	3.8	-0.3
Supper not offered	92.0	86.4	5.6
Evening snack offered	3.3	5.1	-1.8
All days	0.7	3.3	-2.6**
Some days	2.6	1.8	0.8
Evening snack not offered	96.7	94.9	1.8

Unweighted sample	59	542	601
-------------------	----	-----	-----

Significance levels:

\* = .10

\*\* = .05

\*\*\* = .01

Lunch may have been offered by fewer former providers than Tier 2 providers ( $p < 0.10$ ), but more than 9 out of 10 former providers offered this meal. While there are no important differences in the proportions of former and Tier 2 providers offering morning and afternoon snacks or supper, former providers offered them somewhat less frequently over the course of a week ( $p < 0.10$ ). The estimated difference in the proportion of former and Tier 2 providers offering an evening snack everyday is statistically significant, but represents only a handful of providers.

### ***Common Meal Combinations***

Exhibit F.2 shows the most common combinations of meals and snacks offered by former CACFP providers in 1999, based on their recorded menus.<sup>9</sup> The most common meal combination, offered by nearly half of former providers, includes breakfast, lunch, and either the morning or the afternoon snack. The breakfast-lunch-afternoon snack combination is most typical.

Two other meal and snack combinations were offered by a meaningful proportion of former CACFP providers. About 15 percent offered lunch and either a morning or afternoon snack. Another 13 percent offered the combination of breakfast, lunch, and both morning and afternoon snacks. All other combinations were rare, recorded by no more than 5 percent of the providers.

Former CACFP providers in 1999 were significantly less likely to offer the combination of breakfast, lunch, and morning and afternoon snacks and more likely to offer lunch and just one snack than Tier 2 providers. These differences are consistent with shorter operating hours and might reflect an effort to cut back on the expense of serving meals and snacks to help compensate for the loss of meal reimbursements. Alternatively, these may simply be characteristics of the types of providers that tend to leave CACFP while remaining in the child care business.

---

<sup>9</sup> For this analysis, each provider is considered to offer only one meal combination, with the assigned combination being the one that is offered on at least 3 of the recorded days. Only one provider did not record the same meal combination on at least 3 days.

**Exhibit F.2**  
**Proportion of Former and Tier 2 Providers Offering Various Meal and Snack Combinations in 1999 (All Age Groups)**

<b>Meal and Snack Combination</b>	<b>Former Providers 1999</b>	<b>Tier 2 1999</b>	<b>Difference Former - Tier 2</b>
Breakfast, lunch, 1 snack <sup>a</sup>	47.7	42.6	4.8%
Breakfast, lunch, 2 snacks <sup>a</sup>	12.8	38.1	-25.2***
Breakfast, lunch, supper, 2 snacks	2.2	4.5	-2.3
Lunch, 2 snacks	4.3	3.6	0.7
Breakfast, lunch, supper, 3 snacks	1.3	2.4	-1.0
Breakfast, lunch, supper, 1 snack	0.0	1.8	-1.8**
Lunch, 1 snack	14.9	1.2	13.7**
Breakfast, lunch	5.1	1.0	4.1
Supper, 1 snack	1.0	0.2	0.4
Other combinations	9.0	3.5	5.4
No combination served for 3 days	2.4	1.2	1.3
<b>Unweighted sample</b>	<b>59</b>	<b>542</b>	<b>601</b>

<sup>a</sup> Morning and afternoon snacks only.

Significance levels:

\* = .10

\*\* = .05

\*\*\* = .01

### **Compliance with CACFP Meal-Pattern Requirements**

CACFP regulations pose minimum requirements for the types and amounts of food that must be included in each meal and snack qualifying for reimbursement.<sup>10</sup> While former CACFP participants are no longer held to these standards, most would at one time have been trained and monitored for compliance with the CACFP meal-pattern requirements. The analysis below uses the meal-pattern requirements as a benchmark for evaluating the quality of meals offered by former CACFP providers with respect to important categories of foods and the degree of variety of foods offered within those categories.<sup>11</sup> A comparison is also made with compliance rates achieved by Tier 2 providers participating in the CACFP in 1999. While there is some evidence of noncompliance with CACFP

<sup>10</sup> CACFP meal-pattern requirements vary by age group and are described in the Introduction section of this report.

<sup>11</sup> The analysis does not include a determination of whether the amount offered was in compliance with the CACFP requirement. The amount offered was measured in meal observations, which were conducted for only a subsample of Tier 2 providers and none of the former CACFP providers.

requirements for specific meal components, most former providers offered compliant meals with a good mix of items within each meal component.

The majority of snacks offered in former CACFP homes in 1999 complied with CACFP meal-pattern requirements. Compliance rates were somewhat higher for snacks than for meals, as shown in Exhibit F.3. Compliance rates varied little across age groups; data are shown for meals offered to all age groups served. Approximately 90 percent of morning and afternoon snacks were found to be in compliance. The rates for breakfast and lunch were 70 percent and 63 percent, respectively. Supper and evening snack showed compliance rates of about 80 percent, although these are based on very few meals.

Compared with Tier 2 providers in 1999, compliance rates for breakfasts and lunches offered by former providers were significantly lower. These differences are fairly substantial (almost 30 percent lower than Tier 2 providers for each meal) but, as noted above, a majority of former providers still offered breakfasts and lunches that were consistent with CACFP requirements.

Morning snacks were also more likely to be noncompliant ( $p < 0.10$ ), but the difference was much smaller and, again, the vast majority of former CACFP providers offered compliant snacks. It is not known whether leaving the CACFP increases the likelihood that family child care providers will offer noncompliant meals or snacks or whether providers who offer noncompliant meals are more likely to be among those who leave the program.

**Exhibit F.3**  
**Percentages of Former and Tier 2 CACFP Providers' Meals Complying with CACFP Meal-Pattern Requirements for All Age Groups**

	Former Providers		Tier 2 Providers		Difference Former - Tier 2
	Un-weighted sample <sup>a</sup>	Percent	Un-weighted sample <sup>a</sup>	Percent	
Breakfast	195	69.4%	2,393	97.3%	-27.9%***
Morning snack	125	89.4	1,304	96.8	-7.4*
Lunch	233	62.8	2,535	91.5	-28.6***
Afternoon Snack	251	91.6	2,373	95.3	-3.7
Supper	28	79.3	417	82.3	-3.1
Evening snack	12	80.7	148	85.5	-4.8

<sup>a</sup> Number of meals/snacks.

Significance levels:

\* = .10

\*\* = .05

\*\*\* = .01



### ***Meal Components Offered***

Exhibit F.4 illustrates the particular CACFP meal components included in meals and snacks offered by former providers.<sup>12</sup> The primary source of noncompliance at breakfast and lunch is the fruit-vegetable-juice component. Almost 30 percent of breakfasts omitted the required one serving from this food category, and 10 percent of providers offered no fruit or vegetable at breakfast over the course of a week. At lunch, where two items from the fruit-vegetable-juice category are required, one-fourth of former provider meals failed to meet this requirement. On the other hand, former providers offered fruit, vegetables, or juice in about two-thirds of snacks. This is essentially the same frequency with which this component was included in snacks offered by Tier 2 providers, as described in the main part of this report.

Nearly all breakfasts and most lunches (84 percent) offered in former CACFP homes include milk. In the absence of CACFP requirements, some providers may have offered an alternative beverage at lunch in place of milk. This behavior could help control food costs, depending on the item substituted (e.g., water, juice drinks). It might also reflect a desire to cater to children's preferences. Milk was provided in about half of morning and afternoon snacks, but food items from the bread/bread alternate component were the most common in both snacks and at breakfast and lunch. Interestingly, a substantial percentage of breakfasts (22 percent) included a meat or meat alternate—a component that is not required by the CACFP meal pattern and is typically associated with higher food costs.

### ***Variety of Foods Offered***

Although CACFP regulations pose no requirements for variety, providers may offer multiple items within a particular component category and are encouraged to vary the particular food items offered over the course of the week. With the possible exception of fruit and vegetables at breakfast and lunch, there is little evidence that former providers limited choice or variety over the week in the meals or snacks offered relative to Tier 2 providers in 1999.

Relatively small proportions of former CACFP providers offered more than one food item within a particular meal component, except for those who offered two fruits or vegetables at lunch (Exhibit F.4).<sup>13</sup> The greatest amount of variety within meal components occurred at lunch, especially for bread and bread alternates where about one-fifth of all meals included more than one item. Another 13 percent of lunches included more than two servings of fruits and vegetables, and 17 percent offered more than one meat or meat alternate. Ten percent or fewer breakfasts included more than the required number of items in each meal component category. Fruit, vegetables, or juice were more common at morning snacks, where more than 20 percent include more than one item from this category.

---

<sup>12</sup> Supper and evening snack are omitted from this analysis. Because only a few providers offer them, the sample sizes are small.

<sup>13</sup> Practically no meals include more than one type of milk, so these data are not shown for this meal component.

**Exhibit F.4  
Frequency of Major Meal Components and Variety within Meal Components in Meals Offered  
by Former CACFP Providers**

	<b>Breakfast</b>	<b>Lunch</b>	<b>Morning snack</b>	<b>Afternoon snack</b>
<b>Milk</b>				
% of meals with milk offered	95.2	83.5	44.2	57.5
<b>Fruit, Vegetables, or Juice</b>				
% of meals with at least 1 offered <sup>a</sup>	71.3	75.5	69.8	64.1
% with more than 1 offered <sup>a</sup>	9.7	13.2	21.7	4.5
% of providers offering any in week <sup>a</sup>	89.2	100.0	100.0	97.1
<i>Mean different items offered in week (if at least 1)<sup>a</sup></i>	3.0	7.7	3.5	2.7
<b>Bread and Bread Alternates</b>				
% of meals with at least 1 offered	99.6	94.4	73.4	73.5
% with more than 1 offered	6.9	19.7	0.6	0.0
% of providers offering any in week	100.0	100.0	99.1	100.0
<i>Mean different items offered in week (if at least 1)</i>	3.4	3.5	2.4	2.5
<b>Meat and Meat Alternates</b>				
% of meals with at least 1 offered	21.5	96.2	25.3	22.3
% with more than 1 offered	9.2	17.4	1.1	0.0
% of providers offering any in week	89.3	100.0	71.1	63.3
<i>Mean different items offered in week (if at least 1)</i>	1.6	4.6	1.5	1.5
<b>Unweighted sample</b>	<b>195</b>	<b>233</b>	<b>125</b>	<b>251</b>

<sup>a</sup> For lunch, read "at least 2" or "more than 2." The minimum CACFP requirement at lunch is two fruits or vegetables.

Meals in former CACFP homes do show a substantial degree of variety over the course of a week. A week of lunch menus features an average of eight different foods in the fruit-vegetable-juice category, four from the bread/bread alternates, and five different meat/meat alternates. The weekly breakfast menu includes three different fruit-vegetable-juice items and bread/bread alternates, and two different items from the meat/meat alternate component.

Compared with Tier 2 menus, former providers offered one fewer fruit-vegetable-juice item in a week at both breakfast and lunch (data not shown). However, they may have offered a greater variety of fruit-vegetable-juice items in morning snacks, over the week, relative to Tier 2 providers ( $p < 0.10$ ).

**Nutrient Composition of Meals and Snacks Offered by Former CACFP Providers**

This section examines the nutrient content of meals and snacks offered in former CACFP family child care homes and compares them with the composition of meals offered by Tier 2 providers in 1999. The analysis is motivated by the hypothesis that providers who leave the CACFP might adjust to the loss of meal reimbursements by serving less nutritious meals and snacks than they would have under the program. As noted earlier, portion sizes were not measured directly for former providers, but are estimated from data for active 1995 and 1999 providers.

Results show that meals and snacks offered by former CACFP providers in 1999 generally met the RDA benchmarks and NRC recommendations used for this study, the exceptions being food energy and iron in lunches. Few of the meals and snacks offered, however, were consistent with the *Dietary Guidelines* recommendations for saturated fat. The nutrient profile of former CACFP provider meals and snacks is very similar to that of active Tier 2 providers. The data do not suggest that providers who left the CACFP were serving meals and snacks of lesser nutritional quality than providers receiving some meal reimbursements in the program or that providers changed their menus after leaving the CACFP.

***Nutrient Content of Breakfasts Relative to RDAs, Dietary Guidelines, and NRC Recommendations***

Former CACFP providers in 1999 offered breakfasts that provided, on average, substantially more than the 25 percent of the RDA benchmark for all nutrients examined, with the exception of food energy (Exhibit F.5). For children aged 3-5, the average breakfast supplied about 90 percent of the RDA for vitamins A and C, over half of the RDA for protein and iron, and over one-third of the RDA for calcium. For food energy, the average breakfast provided about one-fifth of the RDA. This is essentially the level of food energy young children are consuming in breakfasts nationally (USDA, 1999).

Breakfasts offered to children aged 3-5 in former CACFP homes were largely consistent with the *Dietary Guidelines* and NRC recommendation benchmarks applied in this study. The average provider offered breakfasts that met these recommendations for the percentage of energy from fat and carbohydrate, as well as falling under one-fourth of the daily recommendation for cholesterol and sodium. The exception to this pattern concerns the percent of energy from saturated fat for which the average estimate exceeds the recommended level of less than 10 percent of energy from saturated fat by almost 2 percentage points.

In breakfasts offered by former CACFP providers, the mean percentage of RDA for vitamin A and iron was greater ( $p < 0.10$ ) than the comparable figures for Tier 2 providers. The differences may be due to a somewhat higher frequency of offering fortified ready-to-eat cereal at breakfast (data not shown).<sup>14</sup> Breakfasts offered by former providers also included significantly more sodium and less carbohydrate as a percentage of energy than Tier 2 providers. And although not statistically different, the former providers' breakfasts contained, on average, about 25 percent more cholesterol. Despite those differences, both groups of providers offered breakfasts in which all nutrient measures were within the recommended ranges.

---

<sup>14</sup> Bacon and breakfast sausage (noncreditable items) were also offered more frequently by former CACFP providers than Tier 2 providers and might have contributed to higher point estimates for the fat and cholesterol content of the breakfasts, as well as the higher sodium levels.

***Nutrient Content of Lunches Relative to RDAs, Dietary Guidelines, and NRC Recommendations***

The average lunch in former CACFP homes in 1999 provided more than one-third of the RDA for protein, vitamin A, vitamin C, and calcium for children aged 3-5 (Exhibit F.5). The protein level is far above the one-third of RDA benchmark, at more than 90 percent. For food energy and iron, the average falls somewhat short of this benchmark at 28 percent and 25 percent of the RDA, respectively. This finding is of some concern given the small proportions of providers meeting the RDA benchmark for these nutrient measures (less than 10 percent; data not shown).

Lunches offered by former providers to children aged 3-5 did not meet the *Dietary Guidelines* or NRC recommendations for any of the nutrient measures except cholesterol. The average values for lunches offered were well above the recommended maxima for the percent of energy from fat and saturated fat and below the recommended minimum for the percent of energy from carbohydrate. The average amount of sodium was also above one-third of the recommended daily level.

**Exhibit F.5  
Nutrient Composition of Meals and Snacks Offered by Former CACFP Providers to Children Ages 3-5**

	Daily Recommendation	Breakfast		Lunch		Morning snack		Afternoon snack	
		Former providers	Difference from Tier 2	Former providers	Difference from Tier 2	Former providers	Difference from Tier 2	Former providers	Difference from Tier 2
<b>% of RDA for:</b>									
Food energy	100%	21.4	0.2	27.9	-0.9	14.6	1.1	15.0	0.4
Protein	100%	59.9	5.5	92.6	-7.2	31.4	1.4	31.9	0.3
Vitamin A	100%	87.8	24.9*	64.2	-10.3	23.7	5.1	19.3	1.4
Vitamin C	100%	94.5	15.3	51.2	2.8	35.2	4.4	25.2	-3.6
Calcium	100%	37.6	0.6	39.8	-2.7	19.2	-0.2	21.1	2.3
Iron	100%	55.0	13.9*	25.1	-1.5	13.0	-1.0	11.5	-1.9
<b>% of food energy from:</b>									
Fat	≤30%	25.1	3.0	35.7	-1.2	26.7	-0.4	29.5	0.8
Saturated fat	<10%	11.6	1.0	14.9	-0.5	11.0	-0.2	12.6	1.2*
Carbohydrate	>55%	62.1	-4.1**	48.3	2.1	65.4	1.8	61.6	-0.5
<b>Milligrams of:</b>									
Cholesterol	≤300	73.4	20.6	52.0	-7.4	16.4	-1.2	19.1	3.6
Sodium	≤2,400	529.3	68.8**	873.4	-63.1	239.9	2.4	237.6	-29.6
Unweighted sample		31		42		25		45	

Significance levels:

\* = .10

\*\* = .05

\*\*\* = .01

The lunches offered by former providers were very similar in nutrient composition to those offered by Tier 2 providers in 1999. The analysis found no statistically significant differences for food energy or other key nutrients as a percentage of RDA. Former providers and current Tier 2 providers were equally as likely to fall short of meeting the *Dietary Guidelines* and NRC recommendations at lunch.

***Nutrient Content of Snacks Relative to RDAs, Dietary Guidelines, and NRC Recommendations***

Snacks are not expected to contribute any specific proportion of the RDA or *Dietary Guidelines* and NRC recommendations. Information on the nutrient content of snacks is presented, however, because it is useful to assess the extent to which snacks are likely to contribute to or detract from the recommended patterns over the full day. Because only a few former CACFP homes in the sample offered an evening snack, the present analysis is limited to morning and afternoon snacks.

The nutrient profiles for morning and afternoon snacks offered to children aged 3-5 in former CACFP homes were quite similar. Both morning and afternoon snacks offered about 15 percent of the RDA for food energy and from 12-35 percent of the RDA for the key nutrients considered here (Exhibit F.5). The percentages are highest for protein and vitamin C; morning and afternoon snacks each supplied between one-fourth and one-third of the RDA for these two nutrients.

The average nutrient makeup of snacks offered is consistent with the *Dietary Guidelines* and NRC recommendations for the percent of food energy from fat and carbohydrate, respectively. An average of 11-13 percent of food energy comes from saturated fat, however, which exceeds the recommendation for less than 10 percent for the day. Both morning and afternoon snacks supplied, on average, 5-6 percent of the recommended daily limit of 300 mg. of cholesterol and 10 percent of the recommended daily limit of 2,400 mg. of sodium.

There was only a single difference approaching statistical significance between the former CACFP providers' snacks and those offered by Tier 2 providers in 1999. Former providers offered afternoon snacks with a slightly higher percentage of food energy from saturated fat than Tier 2 providers ( $p < 0.10$ ).