

# Foods Served in Child Care Facilities Participating in the *Child and Adult Care Food Program*: Menu Match and Agreement with the New Meal Patterns and Best Practices

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## ABSTRACT

**Objective:** To assess the agreement of posted menus with foods served to 3- to 5-year-old children attending federal *Child and Adult Care Food Program* (CACFP)-enrolled facilities, and the degree to which the facilities met the new meal patterns and best practices.

**Design:** On-site observations and menu coding.

**Participants/Setting:** Nine early care and education centers.

**Main Outcome Measures:** Agreement of posted menus with foods served, and comparison of foods served and consumed with the new CACFP meal guidelines and best practices.

**Analysis:** Data were compiled for each meal (breakfast, lunch, and snacks). Frequencies and percentages of agreement with the posted menu (coded matches, substitutions, additions, and omissions) were calculated for each food component in the CACFP menu guidelines. Menu total match was created by summing the menu match plus acceptable substitutions. Menus were compared with the new CACFP meal guidelines and best practices.

**Results:** The match between the posted menus and foods actually served to children at breakfast, lunch, and snack was high when the acceptable menu substitutions were considered (approximately 94% to 100% total match). Comparing the menus with the new meal guidelines and best practices, the 1 guideline that was fully implemented was serving only unflavored, low-fat, or 1% milk; fruit and vegetable guidelines were partially met; fruit juice was not served often, nor were legumes; the guideline for 1 whole grain-rich serving/d was not met; and regular beef and full-fat cheese products were commonly served.

**Conclusions and Implications:** Early care and education centers enrolled in CACFP provided meals that met the current CACFP guidelines. Some menu improvements are needed for the centers to meet the new guidelines and best practices.

**Key Words:** best practices, CACFP menus, early childhood education, meal patterns, preschool children, *Head Start* (*J Nutr Educ Behav.* 2018;■■:■■–■■.)

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## INTRODUCTION

The *Child and Adult Care Food Program* (CACFP), funded by the US Department of Agriculture (USDA), is a federal nutrition program designed to reimburse the costs of foods to sites that are enrolled in the program and to

provide healthy meals and snacks to low-income children and adults receiving day care.<sup>1</sup> These include family day care homes, traditional early child care education (ECE) centers, at-risk after-school care facilities, outside school hours care facilities, adult care facilities, and emergency shelters.<sup>1</sup>

Participating sites receive federal reimbursement for meals and snacks they serve through the CACFP, if program meal standards are met. In fiscal year 2016, >4.2 million children and 130,000 adults received CACFP meals and snacks each day, with about 2.1 billion meals served; approximately 72% of all meals were served in ECE centers, 24% in family day care homes, and 4% in adult day care centers at a cost of about \$3.5 billion.<sup>2</sup> Early child care education centers and day care homes may be approved to claim up to 2 reimbursable meals (breakfast, lunch, or supper) and 1 snack, or 2 snacks and 1 meal, to each eligible participant each day.<sup>1</sup> The CACFP reimburses the centers and homes for free, at a reduced price, or for paid rates for these meals and

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snacks. Eligibility to receive CACFP benefits is based on household income<sup>1</sup>; children or adults are eligible for free meals if their gross monthly household income is  $\leq 130\%$  of the US federal poverty level guidelines (ie,  $\leq 1.3$  times the current federal poverty level), and for reduced-price meals if their gross monthly household income is 130% to 185% of the US federal poverty level guidelines (ie, 1.3 to 1.85 times the current federal poverty level).<sup>3</sup> For example, with the 2017 federal poverty level income for a family of 4 (\$24,600), if the family's gross monthly household income is  $\leq \$31,980$  ( $1.3 \times \$24,600$ ), it is eligible for free meals.

The current meal patterns for the CACFP include up to 4 components: fluid milk, fruits/vegetables, grain/bread, and meat/meat alternates, depending on the meal occasion.<sup>4</sup> The minimum required amounts of meal components and serving sizes differ by age group. For children aged 3–5 years, breakfast includes 3 meal components: 1 serving each of milk (6 oz), fruit or vegetable (0.5 cup), and grain or bread (0.5 serving). Lunch and supper meal patterns include 4 components: 1 serving each of milk (6 oz), grain or bread (0.5 serving), meat/meat alternate (1.5 oz), and 2 different servings of fruit or vegetable or a combination of fruit and vegetable (0.5 cup total). Snacks include 2 of the 4 meal components: milk (4 oz), fruit or vegetable (0.5 cup), grain or bread (0.5 serving), or meat/meat alternate (0.5 oz). Facilities may choose to serve 2 meals and a snack, or 2 snacks and a meal each day.<sup>4</sup> Prior research documented that menus from ECE centers that participated in CACFP offered more fruits, vegetables, and milk, and fewer sugar-sweetened beverages and sweet and snack foods than did non-participating ECE centers.<sup>5</sup>

Through the Healthy, Hunger-Free Kids Act of 2010, the USDA made the first major changes in the CACFP meal and snack menu patterns since the program began in 1968.<sup>6</sup> As of October, 2011, only nonfat and low-fat (1%) unflavored milks were to be served to children aged  $\geq 2$  years attending ECE centers receiving CACFP reimbursements.<sup>7</sup> Updated CACFP nutrition standards were implemented in October, 2017. These provided a

greater variety of vegetables and fruits, more whole grains, and less added sugar and saturated fat in snacks and meals.<sup>8</sup> There are also optional best practices that will enable ECE centers and day care homes to improve meal quality further.<sup>8</sup> These build on the CACFP meal patterns and highlight areas in which centers may take additional steps to improve the nutritional quality of the meals they serve and reflect recommendations from the Dietary Guidelines for Americans<sup>9</sup> and the National Academy of Medicine (formerly known as the Institute of Medicine)<sup>6</sup> to increase participants' consumption of vegetables, fruits, and whole grains and reduce the consumption of added sugars and saturated fats.<sup>8</sup>

Whether the posted menus match the foods served to children attending CACFP-enrolled ECE centers is an important question, particularly with the eminent meal pattern changes. Only a few studies examined the match between posted menus in ECE centers and the foods and beverages actually served to children.<sup>10,11</sup> Another concern is the amount of menu changes that the centers will have to make to meet the new guidelines.<sup>12</sup> This article presents results from a study that assessed (1) the agreement of posted menus with foods served to 3- to 5-year-old children attending CACFP-enrolled facilities, and (2) how closely the facilities met the new meal patterns and best practices.

## METHODS

Early childhood education centers operating in the Houston, TX, area enrolled in the CACFP participated in this study, which included on-site observations and menu coding. This study was approved by the Institutional Review Board of Baylor College of Medicine.

### Sample Recruitment

A convenience sample of 12 ECE centers operating in Houston, TX, were invited to participate in the study. These centers were invited because at the time of recruitment, they were not participating in other projects that required changes in menu. Nine ECE

centers agreed to participate in this study. Four were day care centers with a mean of 52 3- to 5-year-old children/center (range, 14–70 children/center). These were recruited through their sponsor, Food for Kids, Inc. Five were *Head Start* centers with a mean of 99 3- to 5-year-old children/center (range, 40–132 children/center). These were recruited with the help of the nutrition director of the *Head Start* program at the Harris County Department of Education. Two of the day care centers served meals catered by a private company and 2 prepared meals in their kitchens. The *Head Start* centers also prepared meals in their kitchens. The ECE centers were located across different parts of Houston and served children from different ethnic groups: about 55% Hispanic, 39% African American, 3% white, and 3% other (Asian, American Indian/Alaska Native, and Native Hawaiian/Pacific Islander).

### Procedures

Posted menus were obtained from each center. To assess foods actually served to the children, trained observers visited each center to conduct anonymous observations during breakfast, lunch, and snack meal service from February through May, 2016.

Observers were trained to conduct dietary observations using the protocol developed by Ball and colleagues<sup>13</sup> to assess food intake of young children in child care and visual portion size estimation, which was used in previous studies.<sup>13,14</sup> The observers attended a 1-day training to review protocol and observation form and classify the foods into correct categories. Each observer conducted 2 practice observations; the research coordinator also recorded consumption. Interrater reliability was assessed and practice continued until there was acceptable agreement (90%).

The same person observed each center 6–8 times on different weekdays. One classroom was observed each day, following an observation protocol used in previous studies.<sup>13,14</sup> The research coordinator conducted quality control checks with each observer once a month for quality control.

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