

## Memorandum

**Date:** July 26, 2018

**To:** Stephanie Tatham, OMB Desk Officer, Food and Nutrition Service

**Through:** Christina Sandberg, Food and Nutrition Service, Information Collection Clearance Officer, Planning & Regulatory Affairs;  
Ruth Brown, United States Department of Agriculture, Office of Chief Information Office, Department Clearance Officer

**From:** Alicia White, Chief, Nutrition Education and Promotion Branch, NETTA, Child Nutrition Programs, USDA - Food and Nutrition Service

**Re:** Under Approved Generic OMB Clearance No. 0584-0524 Request for Approval to Perform Formative Research to Develop Multicultural Nutrition for Child Care

The Food and Nutrition Service (FNS) of the United States Department of Agriculture (USDA) is requesting approval for formative research under approved Generic OMB Clearance No. 0584-0524 Generic Clearance to Conduct Formative Research.

This request is to acquire clearance to conduct formative research in Child and Adult Care Food Program (CACFP) sites with attending children, parents of attending children, child care providers, and child care directors to inform the development of multicultural nutrition education materials. This research will collect feedback from the target audience to understand critical perceptions, attitudes, and preferences to inform the development of these materials and recipes as well as evidence of the impact of the materials and recipes on children's knowledge, attitudes, and preferences. Participation in this research activity is voluntary.

The following information is provided for your review:

1. **Title of the Project:** Formative Research to Develop Multicultural Nutrition Education for Child Care
2. **Control Number:** 0584-0524, Expires 09/30/2019
3. **Public Affected by this Project:**
  - Individuals/Households
    - Children ages 3-12 years from low-income households attending CACFP child care centers or family daycare homes
    - Low-income parents/guardians ("parents") of children ages 3-12 years attending CACFP child care centers or family daycare homes

State and Local/Tribal Employees

- Directors at CACFP child care centers that serve children ages 3-12
- Directors at CACFP family daycare homes that serve children ages 3-12
- Providers/classroom teachers in child care centers and family daycare homes participating in CACFP that serve children ages 3-12 years

See section 7, *Project Purpose, Methodology & Formative Research Design*, for a description of the number of participants for each audience by research methodology.

#### 4. Number of Respondents:

Table 4.1 – Site Recruitment\* & Approval for Formative Research Sites\*

Audience	# of Participants
Site Directors (Recruitment)	160
Site Directors (Approval)	8
<b>Total</b>	<b>160<sup>^</sup></b>

\*Includes non-responders, ineligible, and those choosing not to participate in the formative research. We're assuming a 5% success rate.  
<sup>^</sup>The 8 directors providing approval are counted among the 160 in recruitment

Table 4.2 – Consent Forms\*

Audience	# of Participants
Children ages 3-12 years <sup>1</sup>	332
Parents of children ages 3-12 years <sup>1</sup>	332
Child Care Providers: Classroom Providers <sup>2</sup>	90
Child Care Providers: Site Directors <sup>2,3</sup>	1,000
<b>Total</b>	<b>1,754</b>

\*Includes non-responders and those choosing not to participate.

<sup>1</sup>Calculated at 20 children/parents per child care center classroom and 8 children/parents per family day care home.

<sup>2</sup>Calculated attrition and eligibility would require consent from 500% of target sample.

<sup>3</sup>**This sample of directors is distinct from the 160 providers participating in formative research in Table 4.1**

Table 4.3 – Research Activities by Audience

Target Audience	Research Activity	# of Participants
Child Care Providers: Site Directors	Survey	200
	Follow Up Interview	10
Child Care Providers: Classroom Providers	Assisting Recruitment	18
	Provider Journal	14
	Administer Taste Test Ballot	14
	In depth interview	14
Children ages 3-12 years	Survey <sup>^</sup>	332

	Taste Test Ballot	332
Parents of children ages 3-12 years	Focus Groups*	64
<b>Total</b>		<b>998</b>

\*Focus groups will invite 8 to 10 to seat 6 to 8

^Separate surveys will be created to meet children's developmental needs: one for ages 3-5, and one for ages 6-12.

## 5. Time Needed Per Response:

Table 5.1 - Time Needed per Initial Recruitment & Consent Form\*

Target Audience	Time (minutes)	Time (hours)
Child Care Providers: Site Directors (Approval <sup>1</sup> )	20	0.33
Child Care Providers: Site Directors (Recruitment <sup>2</sup> )	20	0.33
Child Care Providers: Site Directors (Survey Consent <sup>3</sup> )	5	0.08
Child Care Providers: Classroom Providers <sup>4</sup>	15	0.25
Children ages 3-12 years <sup>5</sup>	10	0.17
Parents of children 3-12 years <sup>6</sup>	25	0.42

\*The time is an average response per respondent.

<sup>1</sup>Approval for research to be conducted at the child care site; distinct from consent for the directors to participate in the survey. Includes communication with research team as well as site agreement letter.

<sup>2</sup>Includes recruitment communications

<sup>3</sup>This sample of Site Directors completing the survey is distinct from those hosting formative research.

<sup>4</sup>Includes recruitment communications as well as consent documents.

<sup>5</sup>Includes time to transport the consent package home and review relevant sections with parents.

<sup>6</sup>Includes recruitment communication and an average of consent for child participation and consent for parent participation.

Table 5.2 - Time Needed for Research Activities by Audience\*

Target Audience	Research Activity	Time (minutes)	Time (hours)
Child Care Providers: Site Directors	Survey	5	0.08
	Follow Up Interview	15	0.25
Child Care Providers: Classroom Providers	Assisting Recruitment	45	0.50
	Provider Journal	80	1.33
	Administer Taste-Test Ballot	2	0.03
Children ages 3-12 years	In-depth interviews	35	0.58
	Survey	20 <sup>2</sup>	0.33
	Taste Test Ballot	2	0.03

Parents of children ages 3-12 years	Focus Groups	60	1.00
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\* The time is an average response per respondent.

<sup>1</sup>Surveys will be administered as both online surveys and hard copies, but the average burden is estimated to be the same.

<sup>2</sup> Includes both pre- and post-test surveys for both the 3-5 and the 6-12 year old surveys.

### 6. Total Burden Hours on Public:

(a) Affected Public	(b) Screeners, Surveys	(c) Append-ices	(d) No. Respon-dents <sup>^</sup>	(e) Frequenc-y of Respon-se	(f) Est. Total Annual Responses per Respondent (d x e)	(g) Hours per Respon-se	Total Burden Hours (f x g)	
State, Local/Tribal Employees	Site Directors	Formative Site Recruitment <sup>1</sup>	A	160 <sup>^</sup>	1	160	0.33	52.80
		Formative Site Approval	C	8	1	8	0.33	2.64
		Consent for Director Survey	M.1, M.2	1000 <sup>^</sup>	1	1000	0.08	80.00
		Director Survey	M.1, M.2	200	1	200	0.08	16.00
		Follow Up Interview <sup>2</sup>	V, W	10	1	10	0.25	2.50
	Classroom Care Providers	Consent Package <sup>3</sup>	B	90 <sup>^</sup>	1	90	0.25	22.50
		Assisting with Parent Recruitment <sup>4</sup>	-	18	1	18	0.50	9.00
		Conducting Recipes & Activities <sup>5</sup>	E, R, T	14	1	14	6.67	93.38
		Provider Journals	G	14	1	14	1.33	18.62
		Administering Taste Test Ballot	L	14	40	560	0.03	16.80
		In-Depth Interview <sup>6</sup>	F, O, P, Q	14	1	14	0.58	8.12
<b>Subtotal</b>			<b>1250</b>		<b>2088</b>		<b>322</b>	
Individuals & Households	Children ages 3-12 years	Consent Package <sup>7</sup>	D	332 <sup>^</sup>	1	332	0.17	56.44
		Survey	I, J, K	332	1	332	0.33	109.56
		Taste Test Ballot <sup>8</sup>	L	332	1.686	560	0.03	16.80
	Parents of children ages 3-12	Consent Package <sup>9</sup>	D, D.1, D.2	332 <sup>^</sup>	1	332	0.42	139.44
		Focus Group <sup>10</sup>	H, O, P, Q, S	64	1	64	1.00	64.00
<b>Subtotal</b>			<b>664</b>		<b>1620</b>		<b>386</b>	
<b>Total</b>			<b>1914</b>		<b>3,708</b>		<b>708</b>	

<sup>^</sup>=Unique respondents affected by this data collection. All other numbers provided for tasks in *columns c* represent duplicate respondents.

<sup>1</sup>=Initial Recruitment Email (3 Min.), Follow Up Email to Interested Sites (2 Min.), Initial Recruitment Call (5 Min.), Follow Up Call with Interested Site Directors (5 Min.) Follow Up Call to Determine Interested Providers (3 Min), Follow Up Interview Recruitment Email (1 Min.), Follow Up Interview Recruitment Call Script (1 Min).

<sup>2</sup>=The 12 minutes time estimate for Attachment W (Research Stimulus: Recipe Review) is included in the time estimate of Attachment V (Provider Follow-Up Interview), Recipe Review.

<sup>3</sup>=Burden Includes: Information about Pilot Opportunity for Child Care Provider (5 Minutes), Consent Cover Letter (2 Minutes), Informed Consent Form (5 Minutes), & Questionnaire for Participation in Research (3 Minutes)

<sup>4</sup>=Estimated 30 minutes for distributing and collecting flyers for parent focus groups, though there is no attachment for this task.

<sup>5</sup>=Burden Includes: Estimated at 6 hours to complete educational activities in Attachment R, 30 minutes for to explain and reference the Poster in Attachment T, and 10 minutes to review the research instructions in Attachment E.

<sup>6</sup>= The time estimate for Attachments O, P, and Q (15 minutes in total) are included in the time estimate of Attachment F (Child Care Provider

Interview Guide), Specific Recipes and Training Videos (15 minutes).

<sup>7</sup>=Burden Includes discussing Parent/Caregiver Consent for Child Participation (5 Minutes) with parent and transporting consent form.

<sup>8</sup>=Children will be randomly selected to complete taste test ballots. We have estimated that each of the 332 children will complete an average of 1.686 ballots for a total of 560. The number 560 is derived from 40 total taste test ballots from 14 classrooms (40 x14).

<sup>9</sup>=Burden Includes: Parent/Caregiver Consent Cover Letter (2 Minutes), Parent/Caregiver Consent for Child Participation (5 Minutes), Questionnaire for Child's Participation in Research (3 Minutes); Parent Focus Group Flyer (3 Minutes); Parent/Caregiver Focus Group Consent Cover Letter (2 Minutes); Parent/Caregiver Focus Group Informed Consent Form (5 Minutes); Follow Up Communications for Parent Focus Group Participants (2 Minutes); Questionnaire for Participation in Focus Group Research (3 Minutes) on Attachment D.1 (Print Version) and Attachment D.2 (Online Version). The Questionnaire for Participation in Focus Group Research is the only item that is available in both paper or electronically. The rest of the materials in Attachment D are either in one format or the other. The total estimated time for this activity is 25 minutes. Everyone will get the communications and other materials in Attachment D, which is estimated to take 22 minutes. Those choosing the paper option for the Questionnaire for Focus Group Research will get Appendix D.1, while those who choose the electronic option will receive Appendix D.2; these appendices are estimated to take 3 minutes to complete.

<sup>10</sup>= The time estimate for Attachments O, P, and Q (15 minutes in total) are included in the time estimate of Attachment H, Section IVd (15 minutes). In addition, the time estimate of Attachment S (25 minutes) is included among Sections IV a, b, and c of Attachment H.

## **Total burden hours on public: 708.60**

### **7. Project Purpose, Methodology, and Formative Research Design:**

#### Background

The United States Department of Agriculture (USDA) Food and Nutrition Service (FNS) administers nutrition assistance programs for the USDA. The mission of FNS is to provide children and low resource families better access to food and a more healthful diet through its nutrition assistance programs, which includes the Child Nutrition Program's Child and Adult Care Food Program (CACFP). The CACFP provides aid to child care institutions and family or group daycare homes for the provision of nutritious foods that contribute to the wellness, healthy growth, and development of young children via reimbursement for meals and snacks that meet set nutrition standards.

As authorized under Section 6(a)(3) of the Richard B. Russell National School Lunch Act, 42 USC 1755(a)(3), FNS provides training and technical assistance for school foodservice, nutrition education for children and their caregivers, and encourages school and community support for healthy eating and physical activity. These activities are implemented under the Agency's Team Nutrition initiative that is designed to improve children's lifelong eating and physical activity habits by using the principles of the *Dietary Guidelines for Americans*.

In 2010, updates to the nutrition requirements of meals and snacks served in the CACFP to reflect the nutritional needs of CACFP's diverse participants were mandated. As a result, the CACFP Meal Pattern was revised, and a Final Rule was released in April 2016. Additionally the purpose of CACFP was expanded to promote health and wellness in child care settings and USDA was tasked with providing training and technical assistance to help CACFP providers comply with current guidelines and recommendations focused on nutrition, physical activity, and limiting electronic media use.

USDA conducted formative research in 2013 with CACFP audiences regarding current nutrition,

physical activity, and electronic media usage<sup>1</sup> which, among other findings, indicated providers are interested in recipes that reflect cultural influences, mirroring food options served at home. Under the Team Nutrition initiative, FNS is collecting formative research to develop nutrition education resources based on 40 culturally inspired recipes for sites participating in the CACFP. These recipes will assist CACFP providers in successfully implementing the CACFP Meal Pattern Final Rule, (<https://www.fns.usda.gov/fr-042516>), while reflecting the most recent guidance from the *2015-2020 Dietary Guidelines for Americans*, and introducing CACFP participants to new flavors and foods early in life to help support healthful food choices and habits.

### Purpose

The overall research objectives for this study are to:

- Verify the materials are easy-to-use, clear, and feasible for Child and Adult Care Food Program (CACFP) providers; engaging, appealing, and educational for children; and relevant, engaging, and easy-to-read for parents;
- Identify and understand contextual, logistical, and attitudinal factors that may engender and/or inhibit use of the materials in child care and family day care home (FDCH) sites, including necessary equipment and technology;
- Assess the impact of completing the materials on children's knowledge, attitudes, and behavioral intentions related to healthy eating, willingness to try new foods, physical activity, and cultural awareness, as well as provider's knowledge of food groups and compliance with CACFP meal patterns; and
- Identify evidence to support the cultural accuracy of the recipes and materials.

### Methodology/Research Design

To meet the objectives described above, we will conduct a formative evaluation of the educational materials across eight (8) CACFP sites utilizing a mixed-methods, pre-post design with a control group. We estimate that two CACFP providers from each child care center will implement the materials in their classrooms. Providers will be asked to implement 8 of the 12 recipe/activity pairs and full activities (Attachment R: *Nutrition Education Guide*) over a period of at least six weeks. This period is necessary for a few reasons: a) many children attending child care, particularly those ages 3-5, have multiple child care arrangements, attending multiple child care or home day care centers on different days; and b) child care centers, particularly those receiving Universal Pre-K or Head Start funding, have highly structured days to meet mandated requirements or best practices for free-play time, meals, naps, physical activity, and group activities. A longer implementation period will allow providers sufficient time to conduct all the activities. Researchers will assign four recipe/activity pairs to each provider, such that each of the 10 recipe/activity pairs will be implemented at least twice<sup>2</sup>, and providers will be asked to select four additional recipe/activity pairs to conduct. This will allow researchers to ask why providers choose particular recipe/activity pairs.

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<sup>1</sup>HHFKA CACFP Focus Group (OMB # 0584-0024 of September 2013)

<http://www.fns.usda.gov/cacfp/formative-research-nutrition-physical-activity-and-electronic-media-use-cacfp>

<sup>2</sup> All attempts will be made to encourage sites to implement the site-wide activities, but these may be limited given the level of organization and resources required for site-wide, community events.

In addition, we will recruit one additional provider at four of the child care centers to serve as a control group. In the control classroom, children will not be exposed to the nutrition education materials but will complete pre- and post-test surveys. Including a control group in the research design will allow for a more robust analysis of student data, as we can compare changes to students' knowledge, attitudes, and reported behavior between students that were exposed to the materials and those that were not. Only one provider from each FDCH will implement the materials, as FDCH's have fewer children.

Site Type	# of sites	# of research classrooms	# of control classrooms	Total Classrooms
Family Day Care Home	n=2	n=2	n=0	n=2
Child Care Centers	n=6	n=12	n=4	n=16

The research plan will include four qualitative and quantitative methods with different audiences: 1) focus groups with parents (n=80); 2) in-depth interviews (IDIs) with CACFP providers (n=14); 3) structured journals with CACFP providers (n=14); and 4) survey interviews and taste tests with children (n=332). In addition, surveys will be conducted with a larger sample of CACFP site directors (n=200).

**Parent Focus Groups.** Eight focus groups will be conducted across the full sample of research sites. We will attempt to conduct one focus group at each site but may need to oversample from the child care sites depending on the size of the recruited FDCHs and the availability of target audience members. Eight to ten parents will be invited to seat up to eight parents, for an expected sample of 64 parents. Parents will review the family cookbooks, describe any experience with the materials and recipes, share perceived child engagement, and evaluate the usefulness, relevance, and comprehension of the family materials. While each recipe is being reviewed, the group of parents will be asked if they have any ancestry that matches the focus of the recipe. If so, they will be asked about the cultural accuracy and authenticity of the recipe. This will be done for each recipe so as not to single out parents from particular cultural groups. Finally, parents will also be asked to provide feedback on the video scripts and audition clips for the cooking videos. Focus groups will take place during the post-test phase of research at the research sites at a time that is convenient for parents.

**In-Depth Interviews.** In-depth interviews (IDIs) will be conducted with all providers that use the educational materials (N=14). Providers will share feedback about barriers and supports for implementing the materials, describe any modifications that were made, the extent to which materials were appropriate for children ages 3-5 and 6-12, expand on child engagement and indicators of educational effectiveness, and describe their reasons for selecting specific activities. Providers will also provide feedback on the video scripts and audition clips for the cooking videos. Finally, providers will be asked if their ethnicity/ancestry matches the culture that inspired the featured recipes (specified in *Design/Sample Procedures*). If so, they will be asked to review the recipes that related to their ethnicity/ancestry and provide feedback about its cultural accuracy and authenticity. IDIs will take place after implementation of the activities

and educational materials at a time that is convenient for the providers. Efforts will be made to conduct interviews in person at the site.

**Provider Journals.** All providers conducting activities (n=14) will complete a journal (see Attachment G) throughout implementation of the activities and educational materials. Journals will measure which activities were completed, how many children participated, ages of participating children, required time for activity preparation, complexity of recipe preparation and tools needed, perceived child engagement, and process measures.

**Child Surveys.** Pre- and post-test surveys will be administered to children in both the research and control classrooms (See attachments I, J, & K). We estimate 20 children from each child care classroom and six from each FDCH will complete pre- and post-test surveys, for a total of 332 child surveys. Surveys will measure children's willingness to try fruits and vegetables and other behavioral and attitudinal constructs related to Social Cognitive Theory, aligned with the educational content of the materials. The survey will be adapted into an interactive storybook and administered to children ages 3-5 by trained researchers. A traditional, non-storybook version of the survey will be administered by child care providers to any children ages 6-12 that participate in the activities. The survey will be composed using simple language and contain images to support comprehension, and will be based on existing, validated survey measures<sup>3</sup>. Providers will be given specific instructions for administering the survey and researchers will be available for any questions prior to administration.

**Child Taste Test Ballots.** After completing each recipe, a brief visual rating scale will be used to measure child's perception of the taste, look, smell, and ease of use for each recipe (see Attachment L). Providers will be instructed to administer the ballot to at least five random children after each of the eight recipes using a paper ballot. It is estimated that we will collect 40 taste test ballots (5 children after each of 8 recipes) in each of the 14 child care classrooms and FDCHs implementing the activities, for a total of 560 ballots.

**Director Surveys.** A separate sample of 200 CACFP directors will complete a survey that assesses the frequency and type of cooking activities conducted with children, the frequency and type of nutrition education they provide, the availability of cooking equipment and technology, and the sources used to find recipes and nutrition education materials (see Attachments M.1 and M.2). Surveys will be administered online and through paper mailers. We estimate that 50% of directors will complete digital surveys and 50% will return paper screeners via pre-paid addressed envelopes.

**Director Follow Up Interviews.** Brief phone interviews (see Attachment V) will be conducted with 10 directors that complete the director survey. The purpose of these interviews will be to follow up with directors from diverse ancestral backgrounds to provide their opinions about the cultural accuracy and appropriateness of select recipes (see Attachment W).

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<sup>3</sup> Edmunds, L.D. & Ziebland, S. (2002). Development and validation of the Day in the Life Questionnaire (DILQ) as a measure of fruit and vegetable questionnaire for 7-9 year olds. *Health Education Research, 17*(2):211-220;

Moore, G. F., Tapper, K., Murphy, S., Clark, R., Lynch, R., & Moore, L. (2007). Validation of self-completion measure of breakfast foods, snacks, and fruits and vegetable consumed by 9-11 year old school children. *European Journal of Clinical Nutrition, 61*:420-430.



## Design/Sampling Procedures

**Formative Evaluation:** The full sample of CACFP providers, parents, and children will be drawn from eight *family daycare homes* (FDCH) and *child care centers* that are recruited to implement the educational materials (research sites). Research sites will include six CACFP child care centers and two FDCHs, and we will utilize specific criteria to ensure: 1) a diverse sample of research sites and participants; and 2) representation from specific cultures that are featured in the nutrition education materials.

**Geographic Diversity.** Research sites will be recruited from three FNS Regions. Specific regions will depend on the success of recruitment efforts, but will include a combination of the West, Northeast, Southeast, or Midwest regions (see below for a discussion of target counties that match the cultural groups included in the educational materials).

**Population Density.** (i.e. rural, suburban, urban): We will sample at least two rural research sites, as measured by the *USDA Rural-Urban Continuum (RUC)* codes. We will also reference the *National Center for Education Statistics' (NCES) Locale Code* for nearby public schools to ensure accurate measure of population density. The *Locale Code* is preferable to RUC as it measures the precise location of a specific building instead of collapsing all locations in a county, but *Locale Codes* are only available for public schools.

**Race/Ethnicity/Ancestry.** We will use data available from the *U.S. Census* and the *Office of Civil Rights* to identify communities that match those featured in the educational materials. In order to ensure representation of each target audience in the sample of children and parents drawn from each participating research site, we will utilize the following conservative sampling targets<sup>4</sup> (note: it may be possible to meet more than one sampling target at one site, but they are presented separately for clarity):

- One site > 33% African American, specifically from a community with a high percentage of individuals reporting Sub-Saharan African ancestry;
- Two sites > 33% Hispanic, specifically from communities with a high percentage *Mexican* and *Puerto Rican* populations;
- Two sites >25% Asian Pacific Islanders, specifically from communities with a high percentage of *Indian* and *Chinese* populations;
- One site >25% Native American;
- One site >15% French Ancestry<sup>5</sup>;
- One site >10% Alaskan Native<sup>6</sup>.

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<sup>4</sup> It is necessary to set moderately high community-level population targets for each audience of interested for a few reasons: 1) it's not possible to accurately estimate the number of CACFP attendees that match the ethnic/ancestral sub groups at each CACFP site; 2) the audience of interested at each site needs to be adequately large to recruit at least 1 -2 parents to participant in focus groups assuming normal parent consent rates of 5%-10%; and 3) it is more likely that individuals from each audiences of interest can accurately speak to their cultural ancestry if they live in a community with other members of that cultural group.

<sup>5</sup> This target is lower given that 833,880 US individuals from French ancestry live in poverty and there are limited examples of communities with high percentages of low-income French families.

<sup>6</sup> The target for Alaskan Native is lower given the small number of the contiguous US population (<40,000) that identifies as Alaskan Native.

*Site types.* Six CACFP child care centers will be recruited, including Head Start centers, school-based pre-schools, and community-based child care centers. Only two FDCHs will be recruited as the National Center for Education Statistics<sup>7</sup> reports fewer 3-5 year-old children attend non-relative home-based care (~7%) than center-based care (~55%). In addition, FDCHs will not easily facilitate the specific race, ethnicity, and ancestry targets as these sites have significantly lower attendance.

*Age of children.* The primary sample will include children ages 3-5, as the number of children in this age range that spend time in nonrelative child care (50%) is dramatically higher than children ages 6-12 (4%) according to U.S. Census data<sup>8</sup>. Further, we would need to oversample very specific child care sites and family daycare homes in order to obtain a statistically valid sample of children ages 6-12, which would drastically increase the scope and cost of the research. Children ages 6-12 attending research sites will not be excluded from the research, but sites that serve children ages 6-12 will not be specifically targeted for recruitment.

Some of the audiences being sampled for this research represent small percentages of the total US population and are clustered in a limited geographic area. Further, the level of measurement specificity needed to find particular research sites (e.g. Sub-Saharan African, Alaskan Native) is not commonly collected or reported, making it difficult to obtain for precise locations (i.e. CACFP locations, or specific rural towns). These and other factors may inhibit these specific sampling targets, but every effort will be taken to obtain feedback from members of the audiences specified in this sampling plan.

We will sample research sites from multiple states within each region to ensure the intended sample diversity is achieved. The following is a list of priority target counties, cities, and states to illustrate how the intended sample will be obtained. The final list will depend on the willingness of sites to participate and whether sites are in good standing with their State agency.

- *Northern Washington:* Three counties in northern Washington will be targeted to recruit sites that serve *Native Alaskans* – King County, Snohomish County, and Pierce County. These counties were selected as they have the largest concentration of *Native Alaskans* (n=7,425<sup>9</sup>) outside of Alaska. These three counties also have moderately large *Chinese* (n>120,000) and *Mexican* (n~250,000) populations, which may support additional site recruitment.
- *Columbus, Ohio Metropolitan Area:* This area was selected due to a high concentration of individuals with *Sub-Saharan African* ancestry (n=46,578). Columbus and the surrounding areas also have moderate *Asian* (n=81,224) and *Mexican* (n=42,404) populations, which may support additional site recruitment.
- *New York:* The state of New York offers convenient recruiting for multiple audiences of interest. New York City has the largest *Puerto Rican* (n>700,000) community outside of Puerto Rico. In addition, the population of Chinese individuals is over 570,000 and the

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<sup>7</sup> [https://nces.ed.gov/programs/digest/d14/tables/dt14\\_202.30.asp](https://nces.ed.gov/programs/digest/d14/tables/dt14_202.30.asp)

<sup>8</sup> U.S. Census, 2013

<sup>9</sup> Estimates in this section are from U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

population of Asian Indian is over 280,000. Finally, upstate New York may provide access to Native American populations.

- *Rhode Island*: We will attempt to recruit sites with higher populations of low-income families with French ancestry from Rhode Island for two reasons: 1) the state has the 6<sup>th</sup> highest percentage of population with French ancestry (8.9%, total n=94,265); and 2) among states that have at least 5% statewide population with French ancestry, Rhode Island has the highest estimated poverty rate of 10.7% among individuals with French ancestry.

**Site Director Survey:** In addition to this sample of research sites, a separate sample of 200 CACFP site directors will be recruited to complete a survey assessing frequency and type of cooking activities conducted with children, the frequency and type of nutrition education, the availability of cooking equipment and technology, and the sources used to find recipes and nutrition education materials. CACFP site directors will be sampled across all seven FNS regions and represent a diversity of population density (RUC code) and race/ethnicity served (as measured by US Census and OCR). Directors will also be asked to identify if their sites serve any of the specific target audiences described above. This information may be used to facilitate recruitment of research sites or parents and childcare providers that represent the target audiences.

#### Recruitment and Consent

Using the sampling plan detailed above, we will utilize multi-method, OMB-compliant recruitment strategies to efficiently recruit research sites, child care directors, child care providers, and parents. These strategies will be adapted from previously successful efforts to recruit educational sites, site operators/educators, parents, and children in previous FNS contracts. All consent forms and research methods were reviewed by an external IRB and determined to be exempt from IRB oversight (see Attachment X).

**Provider & Director Recruitment.** In order to ensure recruitment and fielding occur on schedule, we will work with FNS to identify potentially interested stakeholders and gatekeepers by networking through relevant professional organizations (e.g. National CACFP Sponsors Association, National Association for the Education of Young Children, and National Head Start Association) that can facilitate site recruitment after OMB clearance. In addition, we will build a database of potential sites that fit the specifications described above using reliable data sources (e.g. child care councils, state agency websites, community action groups NCES). This database will include contact information and site characteristics that are relevant to the sampling plan.

Once OMB approval is granted, we will use the database and established contacts to reach out to site directors directly with details on the research objectives, participant responsibilities, and sample materials (see Attachment A). Before any research is conducted with providers, parents, or children, the full scope of the project will be explained and director approval will be obtained (see Attachment C). After receiving director approval, we will contact providers to gauge their interest in the project and explain the details of the project before getting their consent to

participate (see Attachment B). No information collection activities will begin until OMB approval is obtained. We will utilize clear, engaging, and actionable communications, adopting strategies and templates that have been successful in recruiting similar participants in applied, community research for Federal agencies such as USDA-FNS, CDC, and FDA.

The same database of child care sites will be used to administer the director surveys, combining paper mailers and online surveys. An embedded consent form will be included with the survey so that interested participants can complete both at the same time.

Consent forms ask participants to provide their age. While we have no specific targets based on age, we intend to recruit participants that reflect a variety of diverse views. Identifying this information on the screener helps us describe the demographics of the formative research participants so there is a clear understanding of who participated. Participant's age may be related to different opinions towards multicultural education and or health/nutrition.

**Parent/Child Recruitment.** Providers participating in formative research will distribute the family recipe books and parent consent packets (see Attachment D) to all parents of attending children through multiple methods: directly distributing during child pickup and drop off, distributing in children's cubbies, or asking children to bring home to their parents. The packets will include detailed information on the research, instructions for returning consent forms to providers, and instructions for signing up for parent focus groups. In addition, flyers will be posted at sites and distributed to parents to inform them of the focus groups and encourage their participation. Flyers will contain the research team's contact information (phone, email, text) and a link to a screener for parents to sign up. The screener (see Attachments D.1 and D.2) will contain basic demographic questions to ensure a diversity of race/ethnicity and gender. The consent form asks for parents' age. While we have no specific targets based on age, we intend to recruit participants that reflect a variety of diverse views. Identifying this information on the screener helps us describe the demographics of the formative research participants so there is a clear understanding of who participated. Participant's age may be related to different opinions towards multicultural education and or health/nutrition.

The consent form also asks parents to identify their child's gender. Again, we have no specific targets based on gender, but identifying this information on the consent form helps us describe the demographics of the formative research participants so there is a clear understanding of who participated. Further, it may be that children's gender is related to outcomes measured on the student survey, so gender could be a useful analytic variable.

### Compensation

Stipends will be provided to the research sites, participating providers, and parents participating in focus groups. The approach of providing compensation for both the research sites and the providers leading educational activities was successfully utilized in the *Team Nutrition Digital Middle School Resources* data collection, which was approved on 3/31/2017 under generic clearance # 0584-0524 Generic Clearance to Conduct Formative Research.

*Site Stipend.* Research sites will receive a \$250 stipend to cover the cost of purchasing materials and ingredients needed to conduct the educational activities (see Attachment U: for a detailed justification of recipe costs).

To estimate the potential financial burden of cooking the recipes included in the nutritional education materials, we randomly sampled 4 of the 10 recipes and calculated the cost of cooking the recipe with 40 children. This number of children was selected based on two classrooms of 20 children completing the recipes at each child care site. The average cost of these four recipes is \$33.03. Since sites are asked to prepare 8 recipes, the total estimated cost of preparing the recipes is \$264.24. However, there are a few redundant items (e.g. canola oil, nonstick cooking spray), so we strongly encourage a total stipend of \$250 to cover the potential costs that sites may incur preparing the recipes.

*Provider Stipend.* In addition to the site stipend, classroom providers will receive an incentive of \$50 to lead the recipes and activities. An incentive is included to increase provider participation given the burden associated with this information collection. As the burden chart demonstrates, providers are expected to spend more than 9 hours keeping records, preparing materials and ingredients, leading recipes and educational activities, and participating in research. All of these requirements are beyond their expected responsibilities as classroom providers.

The selection of \$50 was chosen to encourage participation without coercing participants or providing undue influence on their decision, while still attempting to offset some of the burden required for participation. This figure was derived from our past experience, the research literature on the use of incentives, and estimated calculation of four hours of child care providers wages. Using data from the Bureau of Labor Statistics, we calculated the average annual salary and average hourly wage for child care providers in the four target states for this information collection (see table below). Four hours of providers time at \$12.55 an hour comes to just over \$50, rounded down for convenience.<sup>10</sup>

*Average child care provider wages for target research states.*

State	Hourly mean wage	Annual mean wage
New York	\$13.35	\$27,770.00
Ohio	\$10.82	\$22,510.00
Rhode Island	\$12.67	\$26,360.00
Washington	\$13.37	\$27,800.00
<b>Average</b>	<b>\$12.55</b>	<b>\$26,110.00</b>

*Parent Stipend.* To achieve the required parental response rate for focus group participation and reduce non-response bias within this defined population, we recommend each focus group participant receive a monetary incentive to offset costs that may be incurred by them or their households as a result of participation.

We expect \$50 will cover the average mix of costs to be incurred by individual participants without coercing participants or providing undue influence on their decision (see Attachment N: Incentive Justification for Focus Group Participants for complete justification). This incentive will

<sup>10</sup> Though wages were used to inform the \$50 incentive, providers are not being paid to participate and the payment will not exceed their effort (4 hours of estimated wages for 9 hours of estimated effort.).

ensure that the potential burden of participation does not bias the final research sample. The incentive will be distributed in the form of a monetary incentive (debit card with PIN). This figure of \$50 was derived from our past experience, including the FNS project titled *Team Nutrition Educational Materials for Summer Meals* (OMB# 0584-0524) of May 11, 2015 and the research literature on the use of incentives.

Parents participating in focus groups will be provided bottled water and healthy snacks that support the nutrition messages of the campaign.

### Data Analysis

*Qualitative Data.* All focus groups will be audio-recorded (with respondent permission) and transcribed. This text will become the data for qualitative analysis. Codes, representing new insights and relevant participant experiences and opinions, will be identified using Grounded Theory, by which codes and themes are allowed to emerge from the text (Corbin & Strauss, 1990; Glaser, 1992; Henwood & Pidgeon, 2003; Walker & Myrick, 2006) and entered into the NVivo software package in order to organize themes. In order to ensure that individuals did not bias findings, multiple researchers will code interview transcriptions, and themes will be compared and synthesized in Qualitative Debriefing Sessions. Findings will be considered descriptive and directional, but not definitive. No attempt will be made to generalize findings as nationally representative.

*Quantitative Data.* All children's pre- and post-test surveys will be entered into the SPSS statistics program for quantitative analysis. Paired-samples t-tests will be conducted to evaluate any gains in participants' knowledge. In addition, between-group analysis will be conducted for each classroom using Analysis of Variance (ANOVA) to determine if there are differences in children's knowledge based on increased exposure to the materials (Tabachnick & Fidell, 2007). Finally, analysis of covariance (ANCOVA) will be conducted to compare reported gains across age groups. If an adequate control group is obtained, additional analysis will be conducted to determine differential gains between conditions based on the sample size.

### Outcomes/Findings

Information and formative input gathered from target audiences through the research will help refine materials so the materials are relevant, meaningful, and easy-to-use. Research summary findings may be published either electronically or in print, but such documents will not include information that personally identifies any of the research participants.

### **8. Confidentiality:**

Personally identifiable information will be collected via the parent/consent form, which include the Privacy Act Statement, and these information will be protected as described in this section. Participants completing focus groups and in-depth interviews will be informed of safeguards and privacy act provisions before the interviews (see Attachments F and H). System of Record FNS-8, FNS Studies and Reports, published in the Federal Register on 4/25/1991 at 56 FR 19078, covers personal information collected under this research and identifies safeguards for the information collected.

The research team will take several precautions to maintain the privacy of research participants, including de-identification of screener responses, notes, and transcripts. The research team will not disclose the participant's name or any personally identifiable information in any report or presentation. The information will be kept secure and only used for research purposes, except as otherwise required by law. All data will be identified only by an ID number assigned by the research team, not by any name. Only de-identified data will be shared with individuals outside of the immediate research team, unless it is necessary to protect participants, or if required by law.

All of the information collected will be kept for three years. The information, audio files, notes, and transcripts will be stored on a password-protected computer and/or in locked cabinets that only the research team can access. After three years, all of the collected information will be destroyed by securely shredding documents and/or permanently deleting electronic information.

As with all research, there is a chance that privacy could be breached. For example, despite the best efforts of the research team to keep the information we collect during the study private, a breach may occur as a result of accidental human error or hacking. In the event a breach occurs, it will be reported. If needed, participants will be contacted and notified as to the extent of the breach, any damages incurred, and future potential risks.

Results from this study may appear in professional journals or at scientific conferences. However, no individual participants will be identified or linked to the results. Results may also be used in future research or shared with other researchers. However, other researchers will not have access to any identifying information of participants.

**Federal Costs:** \$635,695.01

#### **9. Research Tools/Instruments:**

- Attachment A: Recruitment Communications for Child Care Providers & Directors: Initial Recruitment E-mail, Follow-Up Email to Interested Sites, Initial Recruitment Call, Follow up Call with Interested Site Directors, Follow Up Call to Determine Interested Providers, Follow Up Interview Recruitment Email, Follow Up Interview Recruitment Call Script
- Attachment B: Consent for Child Care Providers: Information about Pilot Opportunity for Child Care Providers, Child Care Provider Consent Cover Letter, Provider Informed Consent Form, Questionnaire for Participation in Research
- Attachment C: Site Confirmation Letter
- Attachment D: Recruitment Communications and Consent Documents for Parents/Caregivers: Parent/Caregiver Consent Cover Letter, Parent/Caregiver Consent for Child Participation, Questionnaire for Child's Participation in Research, Parent/Caregiver Focus Group Flyer, Parent/Caregiver Focus Group Consent Cover Letter, Parent/Caregiver Focus Group Informed Consent Form, Questionnaire for Participation in Focus Group Research, Follow Up Communications for Parent Focus Group Participants

- Attachment D.1: Questionnaire for Participation in Focus Groups (Print Version)
- Attachment D.2: Questionnaire for Participation in Focus Groups (Online Version)
- Attachment E: Research Introduction and Overview for Providers
- Attachment F: Child Care Provider Interview Guideline
- Attachment G: Child Care Provider Journal
- Attachment H: Parent/Caregiver Focus Group Guideline
- Attachment I: Storybook Interview Form for Children 3-5
- Attachment J: Storybook Measure for Children 3-5
- Attachment K: Survey for 6-12 Year Old Students
- Attachment L: Child Taste Test Ballot: Instructions for Completing the Taste Test Ballots with Children, Taste Test Faces, Taste Test Records Sheet
- Attachment M.1: Child Care Director Consent Letter and Survey, Print Version
- Attachment M.2: Child Care Director Email, Consent Letter, and Survey – Web Version
- Attachment N: Incentive Justification for Focus Group Participants
- Attachment O: Research Stimulus: Cooking Video Audition Clips
  - i. O.1\_Audition Clip\_Africa Female
  - ii. O.2\_Audition Clip\_Africa Male
  - iii. O.3\_FNS\_MC\_Audition Clip\_Asia Female
  - iv. O.4\_Audition Clip\_Asia Male
  - v. O.5\_Audition Clip\_Central and South America Female
  - vi. O.6\_Audition Clip\_Central and South America Male
  - vii. O.7\_Audition Clip\_Europe Female
  - viii. O.8\_Audition Clip\_Europe Male
  - ix. O.9\_Audition Clip\_North America Female
  - x. O.10\_Audition Clip\_North America Male
- Attachment P: Research Stimulus: Cooking Video Scripts
- Attachment Q: Research Stimulus: Cooking Video Storyboards
- Attachment R: Research Stimulus: Food Explorers: Tasting the World! Nutrition Education Guide
- Attachment S: Research Stimulus: The Food Explorers: Tasting the World! Family Cookbook
- Attachment T: Research Stimulus: Food Explorers Poster
- Attachment U: Stipend Justification for Child Care Sites
- Attachment V: Provider Follow Up Interview
- Attachment W: Research Stimulus: Recipe Review
- Attachment X: IRB Letter