

CACFP Participation Among Child Care Providers: Data Analysis II

Validation Study Report

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Owen Schochet, Liana Washburn, Maria Boyle, Katherine Allison-Clark, Sophia Navarro,
Julia Kindler, and Juha Sohlberg

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Mathematica
1100 First Street, NE, 12th Floor
Washington, DC 20002-4221
Phone: (202) 484-9220
Fax: (202) 863-1763
Project Director: Owen Schochet
Reference Number: 52223

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Contents

I.	Introduction	1
A.	Background and study objective	1
B.	Purpose of the analysis	2
C.	Research questions	3
II.	Methodology	5
A.	Data sources	5
1.	National Survey of Early Care and Education	5
2.	Administrative data from form FNS-44	5
B.	Analytic sample and measures	6
1.	National Survey of Early Care and Education	6
2.	Administrative data from form FNS-44	7
C.	Analytic strategy	8
1.	Analysis of primary and secondary validation study research questions	8
2.	Additional analysis of exploratory research questions	9
III.	Results	11
A.	Primary research questions: Do CACFP participation counts from the 2019 NSECE align with those from the FNS-44 for child care centers and homes?	11
1.	How do national CACFP participation counts reported by centers and homes in the NSECE compare to those documented in the FNS-44?	11
2.	How do regional CACFP participation counts reported by centers and homes in the NSECE compare to those documented in the FNS-44?	12
3.	In States with sufficient sample size, how do State-level CACFP participation counts reported by centers and homes in the NSECE compare to those documented in the FNS-44?	14
B.	Secondary research questions: Do CACFP participation counts from the 2019 NSECE align with those from the FNS-44 among Head Start centers?	17
IV.	Discussion and implications	19
	References	23
	Appendix A. Supplemental methods exhibits	A-1
	Appendix B. Full results from the primary and secondary analyses	B-1

Appendix C. Exploratory research questions: Are the primary and secondary findings robust to
potential sources of variability in the data? C-1

Exhibits

I.1	Terminology used in the validation study report.....	1
I.2	Validation study research questions.....	3
II.3	Validation study measures.....	8
III.1	National CACFP participation levels in the FNS-44 and 2019 NSECE by provider type.....	12
III.2	Regional CACFP participation levels in the FNS-44 and 2019 NSECE among centers.....	13
III.3	Regional CACFP participation levels in the FNS-44 and 2019 NSECE among homes.....	14
III.4	Ratio of CACFP participation levels from the 2019 NSECE and FNS-44 among centers, by State.....	15
III.5	Ratio of CACFP participation levels from the 2019 NSECE and FNS-44 among homes, by State.....	16
III.6	National CACFP participation levels in the FNS-44 and 2019 NSECE among Head Start centers.....	17
III.7	Ratio of CACFP participation levels from the 2019 NSECE and FNS-44 among Head Start centers, by region	18
A.1	FNS-44 data elements used in the validation study	A-3
A.2	Sample characteristics used to impute CACFP participation status in the NSECE.....	A-4
B.1	CACFP participation totals in the FNS-44 and estimates in the NSECE among centers, by geographic location	B-3
B.2	CACFP participation totals in the FNS-44 and estimates in the NSECE among homes, by geographic location	B-5
B.3	CACFP participation totals in the FNS-44 and estimates in the NSECE among Head Start centers, by geographic location	B-7
C.1	CACFP participation levels in the FNS-44 among centers, by reporting period	C-4
C.2	CACFP participation levels in the FNS-44 among homes, by reporting period.....	C-6

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I. Introduction

A. Background and study objective

The Child and Adult Care Food Program (CACFP), administered by the U.S. Department of Agriculture, (USDA)’s Food and Nutrition Administration (FNA), reimburses participating providers for the nutritious meals and snacks they serve to the children and adults in their care. This study focuses exclusively on early child care providers based in centers and homes. CACFP is a critical component of the Federal food safety net, serving more than 4 million children each day (USDA FNA n.d.) and playing an important role in their health and well-being. The benefits of the program have been well-documented (Gurzo et al. 2020; Ritchie et al. 2012; Zaltz et al. 2020; Andreyeva et al. 2022); however, many eligible child care providers do not participate in CACFP. Although researchers have begun investigating the extent to which CACFP is underused and potential barriers to participation, there is a lack of research exploring the predictors of CACFP participation among eligible providers and nationally representative information regarding which eligible providers participate in CACFP across the United States.

Funded by USDA, FNA, the CACFP Participation Among Child Care Providers: Data Analysis study previously explored provider participation in CACFP using data from the National Survey of Early Care and Education (NSECE), a national survey of early child care providers, and compared the characteristics of child care centers and day care homes by CACFP participation status (Schochet et al. 2024). In this report, our objective is to evaluate the validity of the CACFP participation question in the 2019 NSECE data through comparisons with administrative data from the FNS-44 Report of the Child and Adult Care Food Program (referred to throughout this report as the FNS-44).

Exhibit I.1 defines key terms used throughout the report, drawing on how each is defined in the FNS-44 and NSECE data sources.

Exhibit I.1. Terminology used in the validation study report

Term	Report definition	FNS-44 definition	NSECE definition
Participant	Providers (centers or homes) participating in CACFP, as reported by the FNS-44 or NSECE.	CACFP child care outlets, defined as any sponsored facility, whether a day care home or sponsored center, or any independent center where meals were served, as reported by State agencies.	Child care providers serving children birth through age five years, not yet in kindergarten, who self-report serving meals and participating in CACFP.
Center	Participants that provide child care services in a center-based setting.	CACFP outlets that are centers and provide child care services (including public and nonprofit private child care centers, eligible for-profit private Title XX centers, outside school hour care centers, and Head Start programs). Excludes center-based CACFP outlets that do not provide child care services (those classified as emergency shelters or at-risk afterschool care centers).	Participating child care providers identified from state or national administrative lists of operating centers and represented by a center director or instructional leader (NSECE Project Team 2024).

Term	Report definition	FNS-44 definition	NSECE definition
Home	Participants that provide child care services in a home-based setting.	CACFP outlets that are sponsored Tier 1, Tier II High, Tier II Lower, and Tier II Mixed day care homes.	Participating child care providers who were identified from state or national administrative lists of operating homes or from a sampled household and represented by an individual providing care at least five hours weekly in a home-based setting to children not their own (NSECE Project Team 2023).

B. Purpose of the analysis

To produce useful evidence on CACFP participation among child care providers, it is important to have a robust, valid measure of their participation in the program. In the NSECE, CACFP participation was self-reported by child care providers—specifically, by a center director or instructional leader for centers, and by the individual providing care in the case of homes. We do not know the extent to which these self-reported levels of CACFP participation in the NSECE align with those documented by State Agencies and reported to FNA on the FNS-44. Differences in participation levels could result from reporting errors in the survey or differences in the providers represented by each data source. NSECE data rely on survey respondents truthfully and accurately reporting program participation.

Although, to our knowledge, no prior research has directly validated provider-reported CACFP participation against FNS-44 data, several studies have focused on misreporting in other nutrition assistance programs. Research on school meal programs, such as the National School Lunch Program (NSLP) and School Breakfast Program (SBP), suggests that parents tend to overreport their children's participation relative to administrative data (Guinn et al. 2002; Moore et al. 2009; Paxton-Aiken et al. 2012; USDA FNS 2004). In contrast, studies on household participation in programs like the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) indicate a tendency toward underreporting (Fox and Hokayem 2022; Meyer and Mittag 2019). However, whether misreporting occurs in CACFP and in which direction remains an open question.

Differences in CACFP participation could also result from differences in the populations each data source represents. Both the NSECE and FNS-44 data produce counts of CACFP participants that are intended to reflect the full population of child care providers in the program across the nation. FNS-44 data include direct counts of the full population of program participants from State Agencies. The NSECE, however, relied on a random sample of providers that mirrors the characteristics of the full population. It used a cutting-edge sampling method to select these providers, and further 'weighted,' or adjusted their data to account for remaining differences in the likelihood that certain providers were included. The NSECE also adjusted data for survey non-response—within the selected sample, not all providers responded to the survey, and those who did may have differed systematically from those who did not (including according to CACFP participation). Together, these sampling and nonresponse adjustments allow the NSECE to produce nationally representative estimates of CACFP participation among child care providers that can be directly compared with participation numbers based on FNS-44 data. However, all estimates carry some degree of uncertainty that may lead to differences with the FNS-44 data.

Differences in alignment between the NSECE and FNS-44 because of provider reporting errors or differences in the populations represented in each data source might also vary according to provider type and program classification as well as location. For instance, differences in the characteristics of centers and homes—including size, familiarity with CACFP, and licensing status—could influence how accurately providers report CACFP participation. Additionally, while the NSECE is designed to provide a nationally representative sample, more localized estimates of CACFP participation may be less accurate. Some States—particularly smaller or less densely populated States—may have fewer providers included in the sample, and the providers selected may not fully reflect the characteristics of all CACFP participants in that State. We explore these potential sources of variability in detail throughout the study.

The NSECE is the best available source of nationally representative survey data on CACFP participation among child care providers, and the only data source that allows users to explore the correlates and potential consequences of participating in the program. The present study compares provider-reported data on CACFP participation in the NSECE with FNS-44 data to provide valuable insights for other NSECE data users and inform future data analyses.

C. Research questions

This analysis explores several research questions with the general aim of validating provider-reported CACFP participation levels in the 2019 NSECE Center-Based and Home-Based Provider Surveys with those recorded in FNS-44 data from the corresponding period (Exhibit I.2). This comparison is conducted at multiple levels—nationally, regionally, and by State where feasible—by child care provider type (centers and homes), and among Head Start centers.

Exhibit I.2. Validation study research questions

A. Primary research questions: Do CACFP participation counts from the 2019 NSECE align with those from the FNS-44 for child care centers and homes?	
A1	• How do national CACFP participation counts reported by centers and homes in the NSECE compare to those documented in the FNS-44?
A2	• How do regional CACFP participation counts reported by centers and homes in the NSECE compare to those documented in the FNS-44?
A3	• In States with sufficient sample size, how do State-level CACFP participation counts reported by centers and homes in the NSECE compare to those documented in the FNS-44?
B. Secondary research questions: Do CACFP participation counts from the 2019 NSECE align with those from the FNS-44 among Head Start centers?	
B1	• For Head Start centers, how do national CACFP participation counts from NSECE align with corresponding counts in the FNS-44?
B2	• For Head Start centers, how do regional CACFP participation counts from NSECE align with corresponding counts in the FNS-44?
B3	• In States with sufficient sample size, how do State-level CACFP participation counts for Head Start centers reported in the NSECE compare to those documented in the FNS-44?
C. Exploratory research questions: Are the primary and secondary findings robust to potential sources of variability in the data?	
C1	• How stable are CACFP participation counts in the FNS-44 over time within the NSECE data collection period? Does temporal variation influence interpretation of findings from comparisons with the NSECE?

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II. Methodology

Below, we describe the data sources, analytic sample, data analysis elements, and analytic strategy. We present additional details in the [Methods Supplement \(Appendix A\)](#).

A. Data sources

We used two data sources: the 2019 NSECE and FNS-44.

1. National Survey of Early Care and Education

We drew provider-reported CACFP participation levels from the Center-Based and Home-Based Provider Level 1 Restricted-Use Data Files from the 2019 NSECE. Sponsored by the Office of Planning, Research and Evaluation (OPRE) in the Administration for Children and Families and conducted by NORC at the University of Chicago, the NSECE is a nationally representative, cross-sectional study of the child care landscape (NSECE Project Team 2020).

In total, the 2019 NSECE fielded four surveys of the following populations: home-based providers, center-based providers, the workforce at center-based providers, and households with children younger than age 13 using child care providers. The current study analyzes data from the center- and home-based provider surveys, collected in all 50 States and the District of Columbia from January 2019 to July 2019. The NSECE used a multistage probability-based sampling design to select representative samples of providers for the survey (NSECE Project Team 2022). In the first stage of this process, the NSECE selected counties or clusters of counties designed to represent the geographic diversity of the United States. Within each area, the NSECE then identified several groups of child care providers that were sampled to ensure broad representation of localized child care markets. Certain groups of providers were oversampled (such as those in areas with high levels of poverty). Accuracy of estimates for a given State depends on the representativeness of the counties or clusters of counties sampled from within that State in the first stage, and the number of providers sampled from those areas in the second stage.

In the second stage, the NSECE team selected centers and “listed” homes from State or national listings, usually licensing or accreditation lists. The team also identified “unlisted” home-based child care providers through a screener included at the beginning of the household survey. The provider survey captured a wide range of information, including provider characteristics, enrolled children and paid staff, financial information, interaction with public child care policies and systems, engagement with accreditation and professional development activities, time use and learning activities, and ancillary services. Providers reported on CACFP participation at the time of the survey.

2. Administrative data from form FNS-44

Form FNS-44 collects detailed reports on CACFP participation from State agencies that administer CACFP. To align with NSECE data on child care service providers, we (1) used FNS-44 counts of CACFP child care outlets (day care homes, sponsored centers, or independent centers that serve meals), because each outlet is operated by a provider; and (2) focused our analyses on day care homes and the subset of CACFP centers most likely to provide child care services—namely, public and nonprofit, eligible for-profit, outside

school hour care, and Head Start centers. We describe the FNS-44 analysis sample in more detail in the next section.

The form captures a range of data elements, which State agencies report quarterly or biannually. This analysis used data elements reported in Lines 9 and 12. Line 9 includes quarterly reports on the number of CACFP outlets that are child care centers (overall) and day care homes (Tier I and Tier II High, Low, and Mixed). Line 12 includes biannual reports on the number of child care centers classified as for-profit centers, outside-school-hours care centers, Head Start centers, at-risk afterschool centers, and emergency shelters. Most centers are public or nonprofit and are not assigned a specific classification in Line 12 but are included in the overall Line 9 total. Although center-based outlets are typically assigned to only one classification, some may operate under more than one (for example, a public or nonprofit center also offering outside-school-hours care). State agencies report information for the current month (for instance, Line 12, reported biannually, includes counts for March and October of each year).

The study team used the data elements reported in Line 9 to count the number of child care centers and day care homes participating in CACFP. We used the data elements reported in Line 12 to subtract the number of CACFP centers with certain classifications not sampled by the NSECE (see Analytic sample and measures). We also use the number of child care centers classified as Head Start centers to conduct subpopulation analysis in the secondary study research questions. We were not able to reliably identify other child care center classifications (for-profit centers and outside -school-hours care centers) using what was collected by the NSECE. In Appendix Exhibit A.1, we present additional details on the data elements reported to the FNS-44 and their reporting period(s).

B. Analytic sample and measures

1. National Survey of Early Care and Education

In 2019, the NSECE project team collected survey data from 6,917 center-based and 5,901 home-based provider respondents (Schochet et al. 2024). For the current study, we included all center-based and listed home-based providers that reported participating in CACFP in 2019. We also included all unlisted home-based providers that reported participating in CACFP in the eight states that allowed these providers to participate as of 2019 (California, Colorado, Illinois, Louisiana, New Mexico, New York, Oregon, and Washington; Adams et al. 2023). Only providers that reported serving meals to children were asked about CACFP participation (respondents selected from 'Yes,' 'No,' or 'Not eligible'):

- Centers were asked, "Does your program participate in the Child and Adult Care Food Program?"
- Homes were asked, "Do you participate in the Child and Adult Care Food Program?"

For centers, we further identified those participating in Head Start by whether they reported enrollment of one or more children funded by Head Start or Early Head Start. The NSECE Project Team shared geographic (State) identifiers, which we linked to the NSECE datafiles at the provider level, and further used to categorize providers according to the seven FNA regions (Mid-Atlantic, Midwest, Mountain Plains, Northeast, Southeast, Southwest, and Western Regions).

We also included centers and listed homes whose respondents were asked about CACFP participation and did not respond but that we predicted have a high likelihood of participating. We first separately

predicted the probability of CACFP participation among centers and listed homes as a function of an extensive set of sample characteristics included in the prior study (see Appendix Exhibit A.2). We then imputed CACFP participation status among centers or listed homes with at least a 95 percent probability of participating in the program. We did not impute missing records for unlisted homes, given higher rates of missingness due to lower awareness of CACFP among this population (Adams et al. 2023). Taken together, about 3,280 centers and 2,560 homes (about 20 of which were unlisted) that participated in CACFP formed the validation study analysis sample from the NSECE, including about 80 centers and 20 listed homes from the imputation procedure (we round all unweighted sample sizes to the nearest '20' to comply with NSECE reporting protocols).

2. Administrative data from form FNS-44

Data from the FNS-44 are aggregated to the State/Territory level. We first excluded data from three U.S. Territories (Guam, Puerto Rico, and U.S. Virgin Islands) not included in the NSECE. The analysis primarily drew counts of CACFP outlets (reported in Lines 9 and 12) for the 50 U.S. States and the District of Columbia in March of fiscal year (FY) 2019. We selected March 2019 for three reasons:

- March aligns best with the NSECE data collection period (January to July 2019). About 75 percent of centers and homes responded to the survey between February and May 2019 (NSECE Project Team 2023; NSECE Project Team 2024).
- March provides a representative measure of CACFP participation during a typical school-year month, consistent with how providers may have interpreted the NSECE question about CACFP participation, which did not ask whether they specifically received reimbursement from the program that month.
- March is the only reporting period common to FNS-44 Lines 9 and 12. States report Line 9 data quarterly, in December, March, June, and September, whereas they report Line 12 data biannually in October and March (also see Appendix Exhibit A.1).

We further explore our decision to use March 2019 data through the exploratory analysis examining the stability of FNS-44 participation counts over time (see [Appendix C](#)).

For each State, we computed the total number of day care homes as the total number of Tier I, Tier II High, Tier II Low, and Tier II Mixed homes (counts of each are reported separately in Line 9). We calculated the total number of child care centers by subtracting the total numbers of child care centers classified as emergency shelters and at-risk afterschool centers (each reported in Line 12) from the total count of all child care centers (reported in Line 9). As previously discussed, child care centers with these CACFP classifications were not sampled by the NSECE because they do not provide child care services to children age five or younger. We used the number of Head Start centers (reported in Line 12) to validate CACFP participation levels in this subpopulation. For each subpopulation (provider type and Head Start centers), we then calculated the total number of CACFP outlets at the regional level, grouping States into the seven FNA regions, and nationally.

Exhibit II.3 summarizes how the validation study measures—spanning both data sources—are defined and organized for the analysis.

Exhibit II.3. Validation study measures

Measure	Description of measure
Dependent variable	
Number of CACFP participants	Number of child care providers who reported participating in CACFP (NSECE); number of CACFP child care outlets (FNS-44)
Independent variable	
Data source	Total number of CACFP participants is based on the NSECE or FNS-44 data
Subpopulation	
Provider type	Total number of CACFP participants corresponds to centers or homes
CACFP classification	Total number of CACFP participants corresponds to Head Start centers
Strata	
Geography	Total number of CACFP participants captures participation levels across the nation, for each region, or for each State (where feasible)

C. Analytic strategy**1. Analysis of primary and secondary validation study research questions**

We began by conducting descriptive comparisons of the total number of centers and homes in the NSECE with the total number of centers and homes in the FNS-44 data. We weighted CACFP participation levels in the NSECE by the appropriate provider-level weights for centers or homes to preserve the nationally representative survey design. To provide a quantitative measure of the relative alignment between the NSECE and FNS-44, we also expressed the difference in CACFP counts between data sources as their ratio, where a value of one indicates that the two data sources are perfectly aligned. We calculated weighted counts of CACFP participants in the NSECE, the difference between these counts and the FNS-44 data, and the ratio at the national, regional, and State levels (where feasible), and separately by provider type and for Head Start centers.

NSECE reporting protocols require suppression of estimates that are based on fewer than 50 centers or 20 homes. We are able to report State-level estimates of CACFP participation among centers in 21 States and among homes in 31 States (including DC). We are only able to report State-level estimates of CACFP participation among Head Start centers in three states (California, Illinois, and New York). Analysis of CACFP participation levels in the NSECE by region and nationally do not pose disclosure risks.

Because the NSECE is a nationally representative survey, we also calculated confidence intervals around the survey estimates to assess whether observed differences between CACFP participation levels in the NSECE and FNS-44 may have been a result of sampling variability or more systematic bias. A confidence interval is a range of values that is likely to contain the true population parameter (in this case, the true number of providers participating in CACFP). These intervals consider the sampling variability—the natural fluctuations that occur because the NSECE only captures a sample of the total population. If the FNS-44 data fall within the confidence interval of the NSECE estimate, it suggests that any differences between them could be due to this natural variability rather than a more systematic error in the provider reports.

To calculate these confidence intervals, we used the variability associated with the weighted total number of CACFP participants estimated using the NSECE. This estimated total has variability because it is based

on a sample rather than a census. To understand this variance, we computed the standard error of the total using the NSECE's provider-level survey weights, further specifying the primary sampling stratum and cluster to generate standard errors consistent with the stratified sampling design. We then calculated the margin of error by multiplying the standard error by the appropriate value for our desired confidence level (corresponding to a 95 percent confidence level in the full sample). We then added and subtracted the margin of error from our estimated total to construct the confidence interval.

This confidence interval allowed us to conduct hypothesis testing to determine whether the total estimated from the NSECE significantly differed from a known value (in this case, the participation total according to the FNS-44 data). This method assumes that the participation levels provided by the FNS-44 data are the 'true' population parameter—the accurate measure of CACFP participation. If the participation total from the FNS-44 data fell outside of the 95 percent confidence interval of the survey estimate, then we consider the observed difference between these totals as *statistically significant*; otherwise, we cannot rule out that such a difference would not be observed simply due to chance if the survey and FNS-44 totals were truly aligned.

2. Additional analysis of exploratory research questions

We explored the sensitivity of the primary analysis findings to temporal variability in CACFP participation counts reported in the FNS-44 data. Specifically, we examined how participation counts in March 2019—the focal month for our primary analysis—compared with those from two other months (December 2018 and June 2019) adjacent to the NSECE data collection period (January to July 2019, as previously discussed).

For each of December 2018 and June 2019, we calculated the percent change from March 2019 counts, separately for child care centers and homes, and at the national, regional, and State levels. We highlight CACFP participation differences of 5 percent or greater. Because the exploratory analysis required comparing participation across different months, we could not adjust the total number of child care centers reported in Line 9 to exclude specific classifications reported in Line 12 (at-risk afterschool care centers and emergency shelters), because Line 12 data are reported biannually and on a different cadence (October and March). Therefore, the total number of centers included in the exploratory analysis differs from the primary analysis.

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III. Results

We present results in the order of our research questions. The primary and secondary research questions consider alignment between NSECE estimates and FNS-44 counts of CACFP participation at the national, regional, and State levels, as well as differences by provider type and program classification. In [Appendix B](#), we include full data tables for the primary and secondary research questions, including additional details about comparisons between NSECE and FNS-44 data by State (where feasible). In [Appendix C](#), we present findings from the exploratory analysis examining variability in the FNS-44 data over time during the NSECE data collection period.

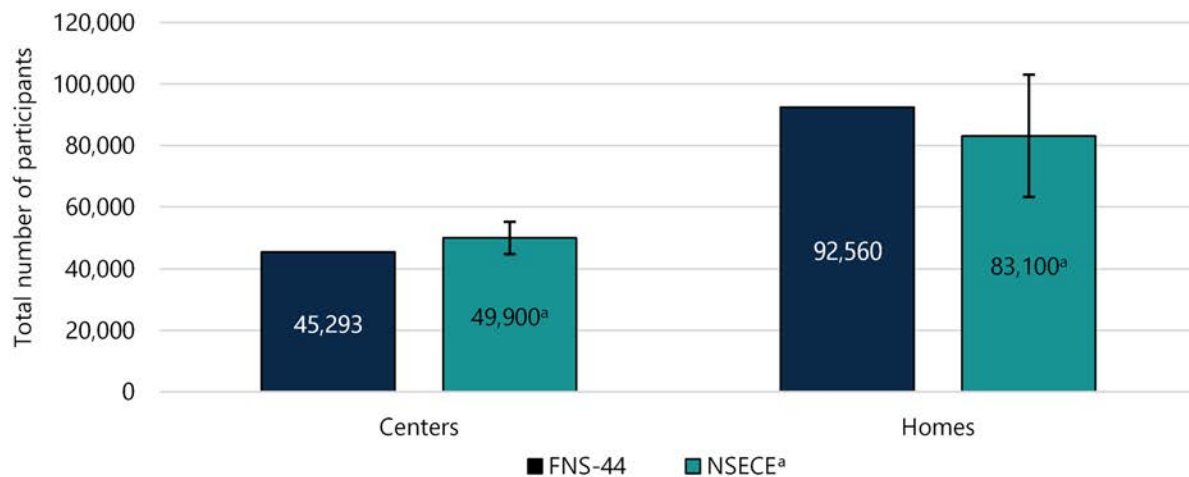
A. Primary research questions: Do CACFP participation counts from the 2019 NSECE align with those from the FNS-44 for child care centers and homes?

To address our primary research questions, we first compared CACFP participation levels in the NSECE and FNS-44 data for centers and homes nationally, before conducting comparisons by FNA region, and then by State, where feasible given the number of CACFP participants surveyed by the NSECE. We present findings graphically in the main report. Appendix Exhibits B.1 and B.2 present the full set of estimates from the primary analysis for centers and homes, respectively.

1. How do national CACFP participation counts reported by centers and homes in the NSECE compare to those documented in the FNS-44?

Exhibit III.1 presents national CACFP participation counts from the FNS-44 and the 2019 NSECE, separately for centers and homes. For centers, the NSECE estimate (approximately 49,900) is slightly higher than the FNS-44 count (45,293), and the difference is small relative to the range of expected sampling variation in the NSECE; the FNS-44 count falls within the 95 percent confidence interval around the NSECE estimate. The estimate for centers is also relatively precise, with a standard error that is about 5 percent of the estimated total (Appendix Exhibit B.1).

For homes, the NSECE estimate (approximately 83,100) is lower than the FNS-44 count (92,560), but the difference is also not statistically significant. The wider confidence interval for homes reflects greater sampling variability in the NSECE estimates for this provider type. Even so, the national estimate for homes is reasonably precise by conventional standards, with a standard error that is about 11 percent of the estimated total (Appendix Exhibit B.2). In both cases, the results suggest general agreement in CACFP participation levels between the two data sources at the national level.

Exhibit III.1. National CACFP participation levels in the FNS-44 and 2019 NSECE by provider type

Source: Data from the 2019 National Survey of Early Education (NSECE) Home-Based and Center-Based Provider Surveys and the FNS-44 Report of the Child and Adult Care Food Program.

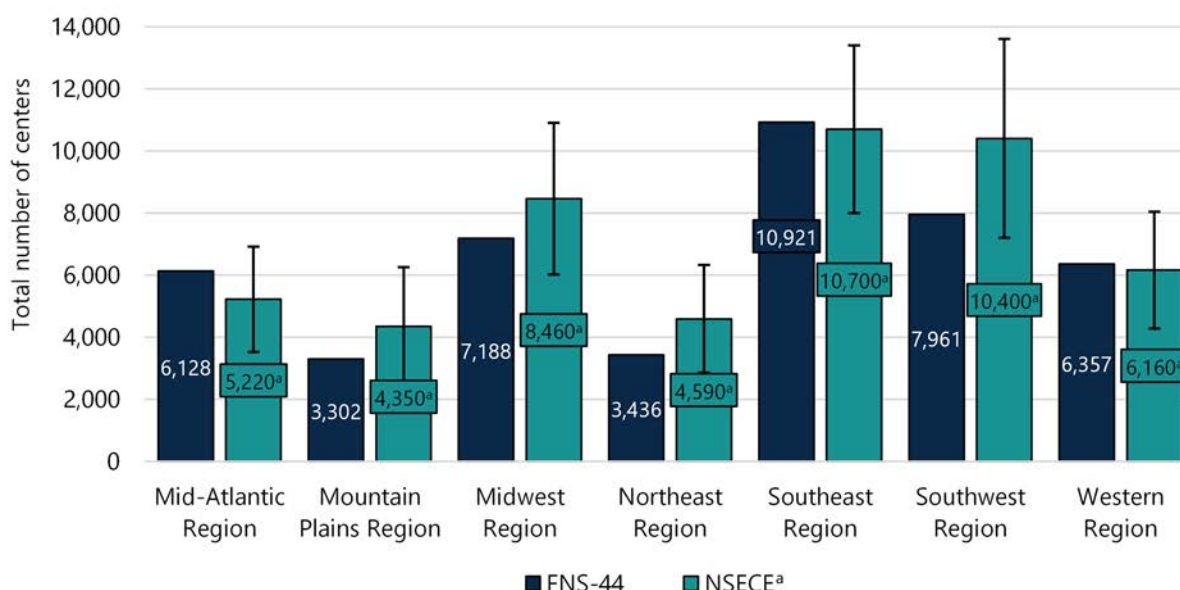
Note: Analysis uses FNS-44 administrative data from March 2019. NSECE data were collected between January and July 2019. Guam, Puerto Rico, and the U.S. Virgin Islands were excluded because these areas were not included in the NSECE. NSECE estimates are based on responses from approximately 3,280 centers and 2,560 homes. Data are drawn from Appendix Exhibits B.1 and B.2. All NSECE estimates apply sampling weights to produce nationally representative totals. Confidence intervals reflect a 95 percent range around the weighted NSECE estimate. Differences are considered statistically significant when the FNS-44 total falls outside the 95 percent confidence interval for the NSECE estimate. In accordance with NSECE restricted-use data reporting requirements, all estimates are reported out to three significant digits, and unweighted sample sizes are rounded to the nearest 20.

Differences between NSECE and FNS-44 participation totals are not statistically significant at the 0.05 level (two-tailed).

2. How do regional CACFP participation counts reported by centers and homes in the NSECE compare to those documented in the FNS-44?

Exhibit III.2 displays CACFP participation counts from the FNS-44 and the 2019 NSECE across the seven FNA regions for centers. In all regions, the differences between data sources are not statistically significant; FNS-44 counts fall within the 95 percent confidence intervals around the corresponding NSECE estimates. Although regional NSECE estimates for centers are less precise than the national estimate—with standard errors representing 15 to 20 percent of the point estimates (Appendix Exhibit B.1)—they are generally precise enough to support regional comparisons.

Point estimates vary across regions, but the overall alignment is consistent with the national findings. For example, in the Southeast Region—the largest region by CACFP center participation—FNS-44 and NSECE counts are nearly identical (10,921 and approximately 10,700, respectively). In other regions, small to moderate differences are observed (for example, Mid-Atlantic: 6,128 versus approximately 5,220; Midwest: 7,188 versus approximately 8,460), that in all cases fall within the expected range of sampling variability in the NSECE. These results suggest general agreement between the two data sources at the regional level for centers.

Exhibit III.2. Regional CACFP participation levels in the FNS-44 and 2019 NSECE among centers

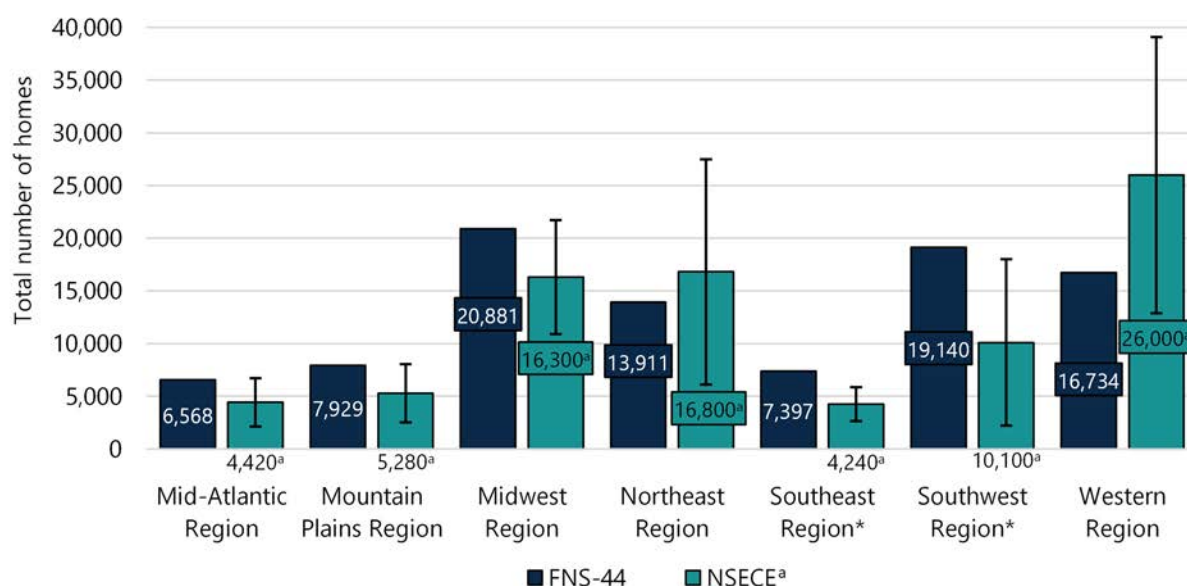
Source: Data from the 2019 National Survey of Early Education (NSECE) Center-Based Provider Survey and the FNS-44 Report of the Child and Adult Care Food Program.

Note: Analysis uses FNS-44 administrative data from March 2019. NSECE data were collected between January and July 2019. Guam, Puerto Rico, and the U.S. Virgin Islands were excluded because these areas were not included in the NSECE. NSECE estimates are based on responses from approximately 3,280 centers. Data are drawn from Appendix Exhibit B.1. All NSECE estimates apply sampling weights to produce nationally representative totals. Confidence intervals reflect a 95 percent range around the weighted NSECE estimate. Differences are considered statistically significant when the FNS-44 total falls outside the 95 percent confidence interval for the NSECE estimate. In accordance with NSECE restricted-use data reporting requirements, all estimates are reported out to three significant digits, and unweighted sample sizes are rounded to the nearest 20.

Differences between NSECE and FNS-44 participation totals are not statistically significant at the 0.05 level (two-tailed).

Exhibit III.3 compares CACFP participation levels among homes by FNA region using data from the NSECE and FNS-44. While patterns vary more across regions for homes than for centers, differences in the number of participants between the two data sources are not statistically significant in five of the seven regions. In the Southeast and Southwest Regions, however, the FNS-44 counts exceed the NSECE point estimates by several thousand providers; these differences are statistically significant.

The largest absolute difference is in the Southwest Region, where the FNS-44 reports 19,140 participating homes compared with approximately 10,100 homes in the NSECE. In the Southeast Region, these counts are 7,397 and approximately 4,240 providers, respectively. In the Western Region, the NSECE estimate is higher than the FNS-44 count (approximately 26,000 versus 16,734), though the difference is not statistically significant due to a wide confidence interval around the NSECE estimate. NSECE estimates for homes at the regional level are substantially less precise than for centers, with standard errors representing 17 to nearly 40 percent of the point estimates (Appendix Exhibit B.2). These regional patterns show that differences between the NSECE and FNS-44 vary in both size and direction across the country among homes. Some of these differences offset one another, which is why the national totals appear more closely aligned.

Exhibit III.3. Regional CACFP participation levels in the FNS-44 and 2019 NSECE among homes

Source: Data from the 2019 National Survey of Early Education (NSECE) Home-Based Provider Survey and the FNS-44 Report of the Child and Adult Care Food Program.

Note: Analysis uses FNS-44 administrative data from March 2019. NSECE data were collected between January and July 2019. Guam, Puerto Rico, and the U.S. Virgin Islands were excluded because these areas were not included in the NSECE. NSECE estimates are based on responses from approximately 2,560 homes. Data are drawn from Appendix Exhibit B.2. All NSECE estimates apply sampling weights to produce nationally representative totals. Confidence intervals reflect a 95 percent range around the weighted NSECE estimate. Differences are considered statistically significant when the FNS-44 total falls outside the 95 percent confidence interval for the NSECE estimate. In accordance with NSECE restricted-use data reporting requirements, all estimates are reported out to three significant digits, and unweighted sample sizes are rounded to the nearest 20.

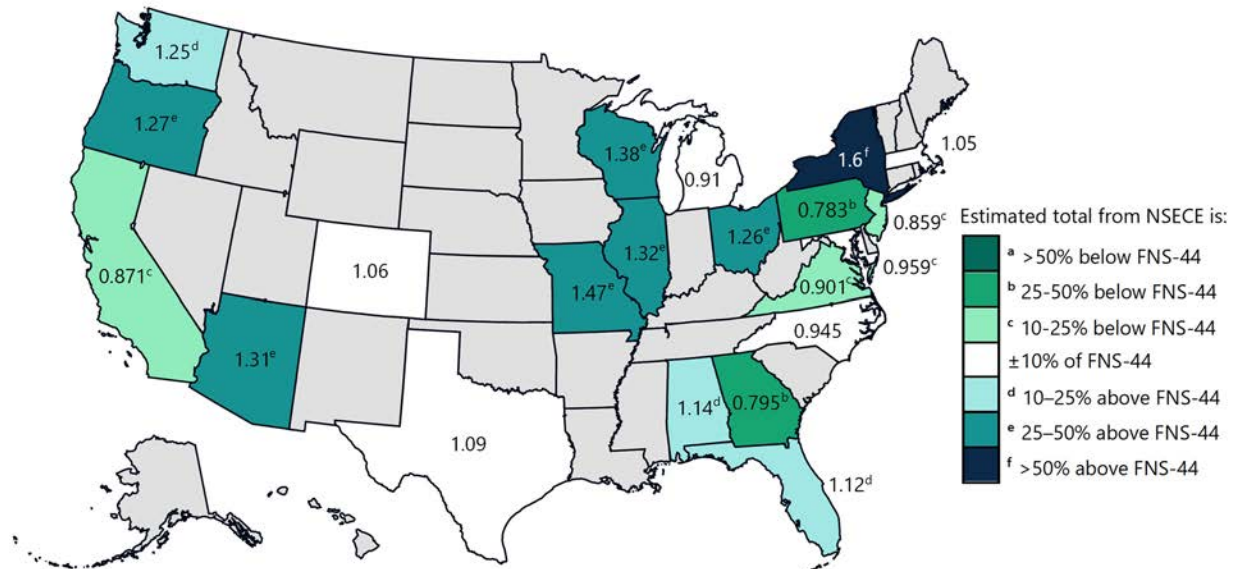
* Differences between NSECE and FNS-44 participation totals are statistically significant at the 0.05 level (two-tailed).

3. In States with sufficient sample size, how do State-level CACFP participation counts reported by centers and homes in the NSECE compare to those documented in the FNS-44?

Exhibit III.4 summarizes CACFP participation ratios between the 2019 NSECE and FNS-44 data among centers, by State. The ratio standardizes comparisons between the two sources, with values below 1 indicating lower NSECE estimates relative to the FNS-44 and values above 1 indicating higher NSECE estimates relative to the FNS-44. A ratio of 1 indicates perfect alignment between the two sources. This approach enables descriptive comparisons across States of different sizes.

To aid interpretation, we group States into categories based on their ratios. The categories are defined symmetrically: for example, a ratio of 1.5 means the NSECE total is 50 percent higher than the FNS-44 total. A ratio of 0.67 (the reciprocal of 1.5) means the NSECE total is 50 percent lower than the FNS-44 total (when expressed as a percentage of the NSECE total). Appendix Exhibit B.1 includes the full set of ratios for centers in each State, along with the underlying estimates and 95 percent confidence intervals for the NSECE totals used to assess whether differences from the FNS-44 totals are statistically significant.

Exhibit III.4. Ratio of CACFP participation levels from the 2019 NSECE and FNS-44 among centers, by State



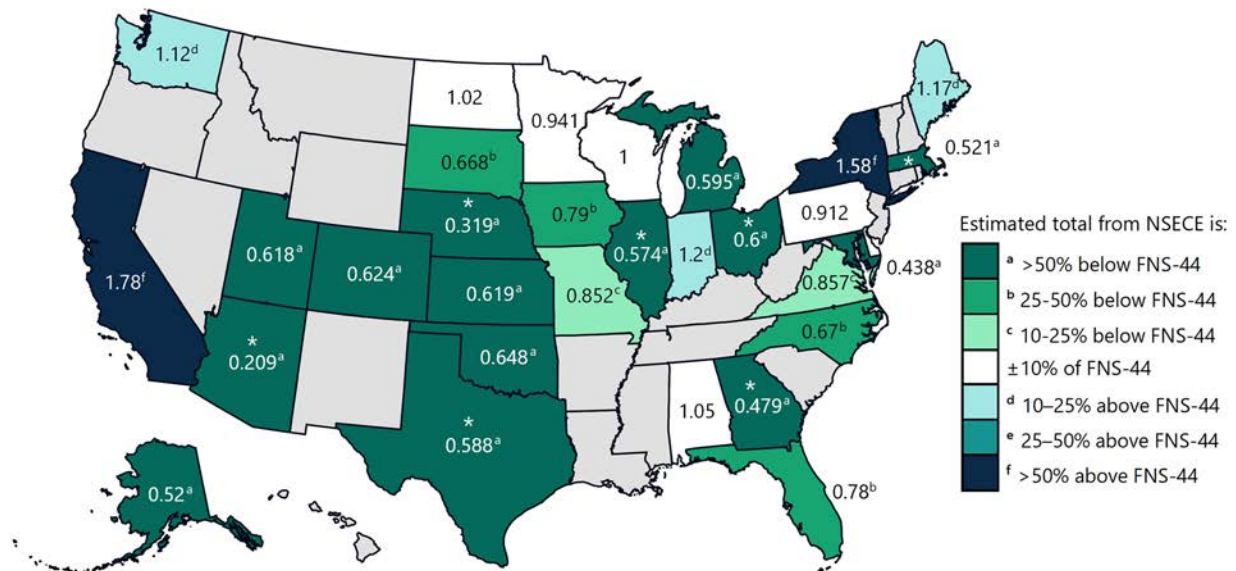
Source: Data from the 2019 National Survey of Early Education (NSECE) Center-Based Provider Survey and the FNS-44 Report of the Child and Adult Care Food Program.

Note: Analysis uses FNS-44 administrative data from March 2019. NSECE data were collected between January and July 2019. Guam, Puerto Rico, and the U.S. Virgin Islands were excluded because these areas were not included in the NSECE. NSECE estimates are based on responses from approximately 3,280 centers. Data are drawn from Appendix Exhibit B.1. All NSECE estimates apply sampling weights to produce nationally representative totals. Differences are considered statistically significant when the FNS-44 total falls outside the 95 percent confidence interval for the NSECE estimate. Ratios of CACFP participation levels from the NSECE and FNS-44 data. In accordance with NSECE restricted-use data reporting requirements, all estimates are reported out to three significant digits, unweighted sample sizes are rounded to the nearest 20, and cells that come from fewer than 50 centers are suppressed.

Overall, the State-level results for centers mirror the national and regional findings that the two data sources are in alignment. In 6 of the 21 States with sufficient sample size to report State-level estimates from the NSECE, the NSECE and FNS-44 totals differ by less than 10 percent. Another 6 states fall within the ±10–25 percent range. Two states have ratios suggesting the NSECE total is between 25 and 50 percent lower than the FNS-44 total, whereas six states have NSECE estimates that are between 25 and 50 percent above the participation levels in the FNS-44. New York is the only state with a ratio exceeding 1.5. In all States, differences in CACFP participation levels for centers are not statistically significant, although the precision of NSECE estimates varies, with smaller States generally yielding less precise estimates (Appendix Exhibit B.1).

Exhibit III.5 presents CACFP participation ratios between the 2019 NSECE and FNS-44 data among homes, by State. Compared with centers, the State-level findings for homes show greater variability and larger differences between the two sources, consistent with the regional comparisons. While the national estimates for homes differed but were not statistically significant, several States exhibit relatively larger differences between the NSECE and FNS-44 data, and some of these differences are statistically significant.

Exhibit III.5. Ratio of CACFP participation levels from the 2019 NSECE and FNS-44 among homes, by State



Source: Data from the 2019 National Survey of Early Education (NSECE) Home-Based Provider Survey and the FNS-44 Report of the Child and Adult Care Food Program.

Note: Analysis uses FNS-44 administrative data from March 2019. NSECE data were collected between January and July 2019. Guam, Puerto Rico, and the U.S. Virgin Islands were excluded because these areas were not included in the NSECE. NSECE estimates are based on responses from approximately 2,560 homes. Data are drawn from Appendix Exhibit B.2. All NSECE estimates apply sampling weights to produce nationally representative totals. Differences are considered statistically significant when the FNS-44 total falls outside the 95 percent confidence interval for the NSECE estimate. Ratios of CACFP participation levels from the NSECE and FNS-44 data. In accordance with NSECE restricted-use data reporting requirements, all estimates are reported out to three significant digits, unweighted sample sizes are rounded to the nearest 20, and cells that come from fewer than 20 homes are suppressed.

* Differences between NSECE and FNS-44 participation totals are statistically significant at the 0.05 level (two-tailed).

Among the 31 States with sufficient sample size to report State-level estimates from the NSECE, 6 have ratios within ± 10 percent of the FNS-44 total. Five additional States fall within ± 10 –25 percent of the FNS-44 total, and four fall within ± 25 –50 percent, all with NSECE counts below those from the FNS-44. The remaining 16 States—about half of those included in the State-level analysis—have ratios suggesting larger differences of 50 percent or greater. In 14 of those 16 States, the NSECE estimate is more than 50 percent lower than the FNS-44 total. The other two States—New York and California—have NSECE totals that are more than 50 percent higher than their corresponding FNS-44 counts. These two States have the largest number of participating homes in the nation (according to both data sources), which may help explain why the national totals are more closely aligned despite a larger number of States with smaller ratios.

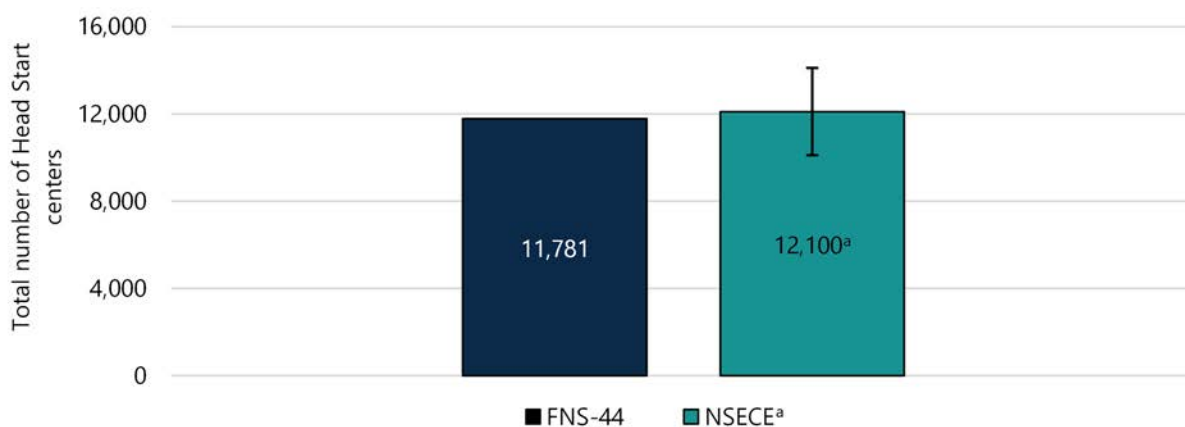
As expected, the most extreme ratios are often statistically significant. Of the 10 States with ratios of 0.60 or lower, seven show statistically significant differences between the NSECE and FNS-44 totals. However, large confidence intervals—particularly in States with smaller samples or higher sampling variability—mean that not all extreme ratios represent statistically significant differences. Appendix Exhibit B.2 provides the full set of State-level estimates for homes.

B. Secondary research questions: Do CACFP participation counts from the 2019 NSECE align with those from the FNS-44 among Head Start centers?

To address our secondary research questions, we conducted a parallel set of comparisons between Head Start centers in the NSECE and FNS-44 data. As with the primary analysis, we begin by comparing participation levels nationally, then by FNA region. Appendix Exhibit B.3 presents the full set of estimates from this secondary analysis of Head Start centers.

Exhibit III.6 displays national CACFP participation levels for Head Start centers by data source. The NSECE estimates about 12,100 participating Head Start centers, while the FNS-44 reports a total of 11,781 Head Start centers. The FNS-44 total falls well within the 95 percent confidence interval around the NSECE estimate, which ranges from approximately 10,100 to 14,100, and is relatively precise, with a relative standard error of 9 percent (Appendix Exhibit B.3). These findings support the validity of the NSECE estimates among Head Start centers at the national level.

Exhibit III.6. National CACFP participation levels in the FNS-44 and 2019 NSECE among Head Start centers



Source: Data from the 2019 National Survey of Early Education (NSECE) Center-Based Provider Survey and the FNS-44 Report of the Child and Adult Care Food Program.

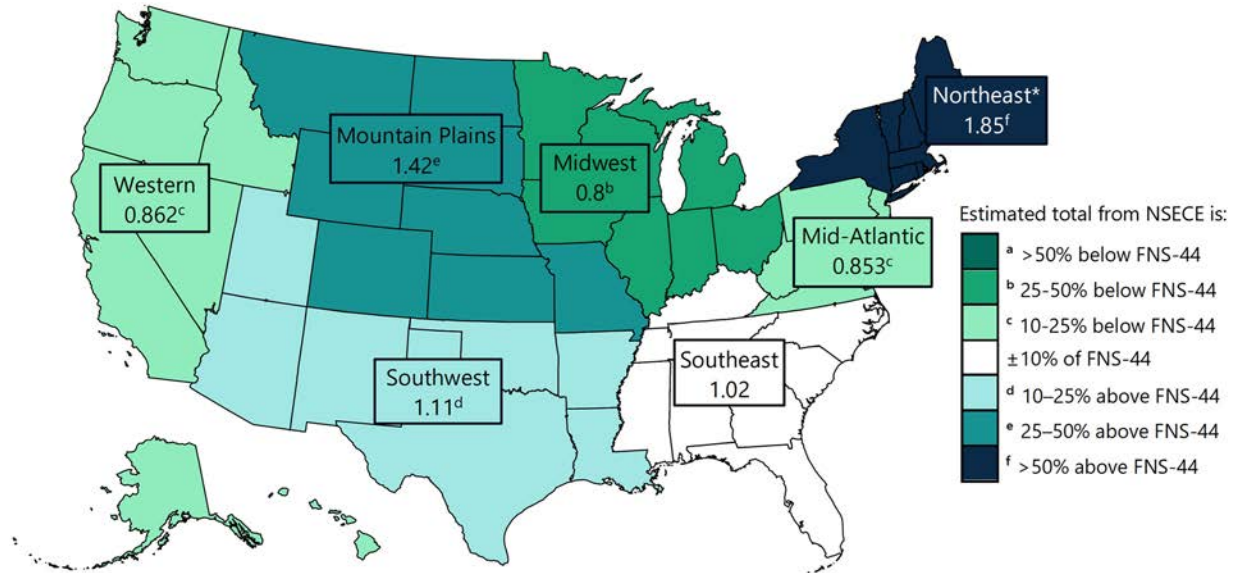
Note: Analysis uses FNS-44 administrative data from March 2019. NSECE data were collected between January and July 2019. Guam, Puerto Rico, and the U.S. Virgin Islands were excluded because these areas were not included in the NSECE. NSECE estimates are based on responses from approximately 700 Head Start centers. Data are drawn from Appendix Exhibit B.3. All NSECE estimates apply sampling weights to produce nationally representative totals. Confidence intervals reflect a 95 percent range around the weighted NSECE estimate. Differences are considered statistically significant when the FNS-44 total falls outside the 95 percent confidence interval for the NSECE estimate. In accordance with NSECE restricted-use data reporting requirements, all estimates are reported out to three significant digits, and unweighted sample sizes are rounded to the nearest 20.

Differences between NSECE and FNS-44 participation totals are not statistically significant at the 0.05 level (two-tailed).

Exhibit III.7 presents Head Start center participation ratios for each of the seven FNA regions. These regional comparisons often suggest alignment between the two data sources that is consistent with the national finding, although also highlight some variability across regions. Four regions had a ratio within ± 25 percent of the FNS-44 total, suggesting participation levels from the NSECE and FNS-44 are broadly consistent across most regions. Of the remaining three regions, two had ratios within ± 50 percent of the FNS-44 total, neither of which were statistically significant. One region—the Northeast Region—had a

ratio of 1.85, indicating the NSECE total was 85 percent higher than the FNS-44 count; this difference was statistically significant.

Exhibit III.7. Ratio of CACFP participation levels from the 2019 NSECE and FNS-44 among Head Start centers, by region



Source: Data from the 2019 National Survey of Early Education (NSECE) Center-Based Provider Survey and the FNS-44 Report of the Child and Adult Care Food Program.

Note: Analysis uses FNS-44 administrative data from March 2019. NSECE data were collected between January and July 2019. Guam, Puerto Rico, and the U.S. Virgin Islands were excluded because these areas were not included in the NSECE. NSECE estimates are based on responses from approximately 3,280 centers. Data are drawn from Appendix Exhibit B.1. All NSECE estimates apply sampling weights to produce nationally representative totals. Differences are considered statistically significant when the FNS-44 total falls outside the 95 percent confidence interval for the NSECE estimate. Ratios of CACFP participation levels from the NSECE and FNS-44 data. In accordance with NSECE restricted-use data reporting requirements, all estimates are reported out to three significant digits and unweighted sample sizes are rounded to the nearest 20.

* Differences between NSECE and FNS-44 participation totals are statistically significant at the 0.05 level (two-tailed).

Because the secondary analysis was restricted CACFP Head Start centers, most States did not meet NSECE disclosure thresholds. As shown in Appendix Exhibit B.3, we were only able to report State-level estimates of CACFP participation in the NSECE for three States—Illinois, California, and New York. For each of these States, the FNS-44 total fell within the 95 percent confidence interval of the NSECE estimate, though this range was particularly wide in Illinois, where the relative standard error was over 40 percent.

IV. Discussion and implications

This validation study compared child care providers' self-reported CACFP participation in the 2019 NSECE with participation counts from FNS-44 data to assess the accuracy of the NSECE as a source for analyzing CACFP participation. The findings suggest that participation levels between the two data sources are broadly aligned, particularly at the national level and for centers, while highlighting that the degree of alignment varies across provider types and finer geographic levels.

The results indicate alignment between the NSECE estimates and FNS-44 counts of CACFP participation at the national level, although findings are more mixed at regional and State levels. National CACFP participation totals from the NSECE and FNS-44 are similar, with no statistically significant differences in the total number of centers, homes, and Head Start centers participating in the program between data sources. Participation levels from the NSECE were also precisely estimated at the national level, lending confidence in our ability to detect differences with the FNS-44, had they existed. These findings suggest that the NSECE data can serve as a credible source for producing nationally representative estimates of CACFP participation among child care centers, homes, and Head Start centers.

For centers, the NSECE estimates and FNS-44 counts are also aligned at the regional and State levels, with no statistically significant differences observed in any of the seven regions or 21 States in the analysis. Although precision varies across geographic areas, these results indicate that for centers, the NSECE not only yields valid national estimates but also reflects levels of program participation within individual geographic regions and States. For homes, however, regional and State-level comparisons are more mixed. We find statistically significant differences in two regions and estimate differences of 50 percent or more in more than half of the 31 States in the analysis. In most of these States, the NSECE estimates are lower than the corresponding FNS-44 totals, with notable exceptions in the two States with the largest number of homes in the program—California and New York—where NSECE totals exceed FNS-44 counts.

Differences in how the NSECE sampled centers versus homes may explain differences in alignment with FNS-44 counts of CACFP participation. The NSECE is designed to produce nationally representative estimates using sophisticated sampling and weighting techniques to approximate the full population of child care providers nationwide, including subpopulations participating in CACFP. The absence of statistically significant differences for centers, paired with the precision of estimates—particularly at the national level, but also within regions—suggests the NSECE's sampling frame effectively represents centers across geographic areas. The NSECE samples centers from a comprehensive list of addresses of child care providers compiled using licensing or regulatory lists from child care agencies in all 50 States and the District of Columbia and nationally. This approach may minimize error due to having an incomplete or inaccurate sampling frame and relative to the true population of centers participating in CACFP in the FNS-44, both nationally and at finer geographic levels.

Although many homes also appear on licensing or regulatory lists, the criteria for inclusion vary considerably across States. Moreover, many States exempt smaller homes or those caring only for relatives from licensing requirements and may or may not list license-exempt homes. Sampling unlisted homes is even more challenging, as the NSECE must identify them through household surveys rather than comprehensive administrative lists. This approach introduces uncertainty because unlisted homes—

particularly those participating in CACFP—may be difficult to identify and survey in ways that are fully representative of this population. In California and New York, where license-exempt homes are eligible to participate in CACFP, relatively few unlisted homes sampled by the NSECE are given disproportionate influence on the weighted totals. If these providers are not representative of the broader population, this could lead the NSECE to overstate CACFP participation relative to the FNS-44 counts in these States.

Provider reporting accuracy may also contribute to differences in alignment between the NSECE and FNS-44 by provider type. The close alignment observed for centers, including Head Start centers required to participate in a USDA child nutrition program like CACFP, suggests that center respondents tend to accurately report their participation status. In contrast, NSECE estimates for homes were lower than FNS-44 counts in several States, particularly in the Southeast and Southwest regions. Although we cannot definitively measure individual-level misreporting, prior research indicates that respondents may underreport participation in public programs, especially when eligibility or participation requirements are complex (Meyer and Mittag 2019). Homes—particularly smaller, unlicensed, or rural providers—may face greater uncertainty about their CACFP eligibility or participation status (Adams et al. 2023), potentially increasing the likelihood of underreporting.

Box IV.1. This analysis provides valuable insights but is not without limitations

- The NSECE was designed to support representative estimates at the national and regional levels, but not necessarily within each individual State. Estimates for some States may come from samples that do not fully represent the range of communities in those States.
- Sample sizes for State-level subgroups—particularly those with smaller populations in CACFP or fewer sampled providers—may be too small to precisely estimate CACFP participation levels. In these cases, even large apparent differences between the NSECE and FNS-44 may not be detected due to wide confidence intervals around the NSECE estimates.
- This study was not designed to assess the accuracy of individual-level reports, such that instances of overreporting and underreporting could offset each other in the total number of CACFP participants estimated using the NSECE data.
- A small share of emergency shelters excluded from the analysis may offer child care services, whereas a small share of outside school hour care centers included in the analysis may not. These cases are rare (projected as under one percent of participating centers) and unlikely to affect results.
- In the NSECE, providers who reported serving snacks but not meals were not asked about CACFP participation. While some providers that serve snacks only could theoretically participate, expert input from FNA staff suggests this is very uncommon. ▲

Taken together, the findings broadly support the use of NSECE data for conducting nationally representative analysis of CACFP participation among child care providers. The national alignment for both centers and homes indicates the NSECE provides valid estimates of overall program participation. For centers, regional estimates were generally well-aligned with the FNS-44 and reasonably precise, though some State-level estimates may be limited by smaller or less representative samples. For homes, greater variability observed at finer geographic levels further points to complexities related to sampling and measuring CACFP participation within a population that varies across States with different licensing regulations, CACFP eligibility criteria, and administrative data systems. Researchers needing precise local or State-level estimates may consider supplementing NSECE data with additional data sources or targeted data collections. Nevertheless, given the strengths of the NSECE, the data remain uniquely suited for

studying patterns of CACFP participation and understanding the factors associated with and outcomes of program engagement.

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Appendix A

Supplemental methods exhibits

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Exhibit A.1. FNS-44 data elements used in the validation study

Data element	Description	Use in the analysis
Line 9 data from December 2018, March 2019, and June 2019		
Total number of child care centers and homes (outlets) overall		
9-A	The total number of child care centers participating in CACFP. These outlets include public and nonprofit private child care centers, for-profit child care centers including eligible proprietary Title XX centers (as defined in CACFP regulations), outside-school-hours care centers, Head Start programs, 'at-risk' afterschool care centers, and emergency shelters.	Analysis of participation levels overall and by location for centers.
9-B	Total number of participating Tier I and Tier II (High, Low, and Mixed) day care homes.	Analysis of participation levels overall and by location for homes.
Line 12 data from March 2019		
Total number of child care centers (outlets) by CACFP classification		
12-C	Head Start centers: Head Start child care centers.	Additional analysis of participation levels for Head Start centers.
12-D	At-risk afterschool care centers: Child care centers providing meals in afterschool child care programs located in eligible areas. An eligible area is one where 50% or more of the children enrolled in the school serving the area are certified eligible for free or reduced-price meals. Afterschool child care centers receive reimbursement for snacks or meals served free to participating children, age 18 or under at the start of the school year. These afterschool programs operate only during the regular school year, and must provide organized, regularly scheduled activities, including educational or enrichment activities, for the children.	Subtracting at-risk afterschool care centers from the total count of child care centers (9-A) to align with population targeted by NSECE.
12-E	Emergency shelters: Emergency facilities which provide temporary shelter and regularly scheduled meal service to homeless children.	Subtracting emergency shelters from the total count of child care centers (9-A) to align with population targeted by NSECE.

Exhibit A.2. Sample characteristics used to impute CACFP participation status in the NSECE

Domain	Construct (type)
Provider characteristics	
Provider funding, governance, and location	
Majority funding source	Majority HS/EHS, majority State public preschool, majority childcare subsidy, majority private tuition, mixed public or mixed public/private (categorical)
Type of governance, sponsorship	For-profit, nonprofit, run by government agency (categorical) ^a Program independent or sponsored by another organization (binary) ^a
Program location	Religious building; public or private school; university, college, or employer; other shared structure; other independent structure; somewhere else (categorical) ^a
Children served and program size	
Enrollment and capacity	Total number of children enrolled and total capacity (continuous)
Ages of children served	Percentage of currently enrolled children by age group (infants [0 to 1], toddlers [1 to 3], preschoolers [3 to 5], school age) (continuous)
Demographics of children served	Percentage of currently enrolled children by race/ethnicity (Hispanic/Latino/a; Black, non-Hispanic; White, non-Hispanic; other, non-Hispanic) whose primary language was not English (continuous)
Economic well-being of children served	Serves one or more children experiencing food insecurity at home (binary)
Operational details and staffing	
Operating hours	Weekly hours of operation during standard operating hours; weekly hours of operation during nontraditional hours (including evenings, overnight, and weekends) (continuous)
Staffing and group sizes	Total number of paid staff who work with children, number of paid staff who do not work with children; ^a staff:child ratios (continuous)
Staff qualifications and experience	Percentage of staff by highest level of education (no college degree; two-year degree; four-year degree or higher) (continuous) Staff average years of experience in caring for children (continuous) Percentage of staff with a Child Development Associate (CDA) credential (continuous)
Curriculum use and learning activities	
Curriculum	Used curriculum or prepared set of learning activities (binary)
Learning activities	Across age groups, time in typical day spent on each of whole-group learning activities, small-group learning activities, one-on-one learning activities, child-selected learning activities, preplanned singing/rhyming, book reading or sharing (continuous)
Meal services, routine care, physical activity, and screen time	
Meal services	Provided children with both meals and snacks (relative to meals only) (binary) Frequency of 100 percent fruit juice consumption during typical week (four or more times a day, two to three times a day, once a day, almost every day, one to three times, never provided) (categorical) ^a
Routine care	Across age groups, time in typical day spent on routine care activities such as feeding, diapering, and bathroom breaks, not including lunch or nap breaks (continuous)
Children's physical activity	Location in which children participated in vigorous physical activity (indoor space for regular care, outdoor space reserved for children, nearby public outdoor space) (binaries) Across age groups, time in typical day spent in vigorous physical activity indoors or outdoors (continuous)

Domain	Construct (type)
Electronic screen time	Across age groups, time in typical day spent in front of screens (no time, 30 minutes or fewer, about one hour, about two hours, three hours or more) (categorical)
Additional services for children and families	
Supplementary services to address child well-being and development	Types of additional services offered to families in past year, either directly or through referrals (health screening, developmental assessments, therapeutic services, counseling services) (binaries) Offered any additional services on site (binary) Paid for any additional services for children (binary)
Social services to support families	Helped connect parents with social services such as housing or food assistance or access to medical care or help getting assistance from government or private programs (binary)
Compliance, training, and quality supports	
Health and safety compliance activities and resources	In past year, inspected to ensure compliance with health, safety, or other requirements or to monitor quality of services other than meeting health and safety requirements (binaries) In past year, participated in health or safety training (binary) Had access to a health consultant or nurse to help with nutrition, allergies, or other health-related issues (binary)
Quality improvement	Participated in a State quality rating and improvement system (QRIS; binary)
Professional development training and supports	Provided staff funding or paid time off to participate in college courses or off-site training and access to professional mentors, coaches, or consultants (binaries) ^a Had relationships with other schools or programs to share access to resources or professional development (binary) In the past year, (percentage of center staff [continuous]; home-based provider [binaries]) recently receiving help from home visitor or coach, attending a professional workshop, or taking a college course Percentage of center staff (continuous); home-based provider (binaries) with membership in a professional organization focused on caring for children
Community characteristics	
Community demographics and economic well-being	
Community demographic characteristics (ACS)	Percentage of total population living in an urban area; considered recent immigrants; identifying as members of racial or ethnic minority groups (each of Hispanic/Latino/a; Black, non-Hispanic; non-Hispanic; non-Black) (continuous) Percentage of total households speaking a language other than English (continuous)
Community economic characteristics (ACS)	Percentage of individuals in households with incomes at or below 185 percent of the Federal poverty level (continuous) Average community median annual income, all workers (continuous) Percentage of females in the labor force who were employed (continuous)

Source: Data from the 2019 National Survey of Early Education Home-Based and Center-Based Provider Surveys and the 2013–2017 American Community Survey five-year estimates and Schochet et al. (2024).

^a Data element collected from centers only.

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Appendix B

Full results from the primary and secondary analyses

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Exhibit B.1. CACFP participation totals in the FNS-44 and estimates in the NSECE among centers, by geographic location

	FNS-44	NSECE				Difference	Ratio
	Total	Sample size	Weighted total	Standard error	Confidence interval		
National	45,293	3,280	49,900	2,660	[44,600–55,100]	-4,570	1.1
Mid-Atlantic Region	6,128	340	5,220	856	[3,520–6,920]	911	0.852
Delaware	238	—	—	—	—	—	—
District of Columbia	119	—	—	—	—	—	—
Maryland	787	60	754	388	[-73–1,580]	33	0.959
New Jersey	1,024	80	880	335	[161–1,600]	144	0.859
Pennsylvania	2,720	120	2,100	521	[987–3,200]	640	0.783
Virginia	926	60	834	334	[129–1,540]	92	0.901
West Virginia	314	—	—	—	—	—	—
Mountain Plains Region	3,302	200	4,350	961	[2,440–6,260]	-1,050	1.32
Colorado	645	60	690	385	[-182–1,561]	-45	1.06
Kansas	458	—	—	—	—	—	—
Missouri	970	60	1,420	588	[129–2,720]	-500	1.47
Montana	219	—	—	—	—	—	—
Nebraska	447	—	—	—	—	—	—
North Dakota	192	—	—	—	—	—	—
South Dakota	235	—	—	—	—	—	—
Wyoming	136	—	—	—	—	—	—
Midwest Region	7,188	560	8,460	1,250	[5,980–10,900]	-1,280	1.18
Illinois	1,573	260	2,080	1,000	[23–4,140]	-500	1.32
Indiana	803	—	—	—	—	—	—
Iowa	575	—	—	—	—	—	—
Michigan	1,187	60	1,020	330	[337–1,700]	200	0.91
Minnesota	595	—	—	—	—	—	—
Ohio	1,679	100	2,120	463	[1,150–3,090]	-400	1.26
Wisconsin	776	60	1,080	474	[36–2,120]	-300	1.38
Northeast Region	3,436	520	4,590	884	[2,850–6,330]	-1,150	1.33
Connecticut	211	—	—	—	—	—	—
Maine	150	—	—	—	—	—	—
Massachusetts	547	80	576	264	[32–1,120]	-29	1.05
New Hampshire	153	—	—	—	—	—	—
New York	2,121	400	3,400	777	[1,820–4,980]	-1,300	1.6
Rhode Island	112	—	—	—	—	—	—
Vermont	142	—	—	—	—	—	—
Southeast Region	10,921	480	10,700	1,390	[7,950–13,400]	200	0.979
Alabama	747	60	849	505	[-242–1,940]	-102	1.14

	FNS-44	NSECE				Difference	Ratio
	Total	Sample size	Weighted total	Standard error	Confidence interval		
Florida	3,365	200	3,770	790	[2,120–5,420]	-400	1.12
Georgia	1,722	100	1,360	311	[704–2,020]	400	0.795
Kentucky	940	—	—	—	—	—	—
Mississippi	758	—	—	—	—	—	—
North Carolina	1,952	80	1,850	581	[589–3,100]	100	0.945
South Carolina	413	—	—	—	—	—	—
Tennessee	1,024	—	—	—	—	—	—
Southwest Region	7,961	540	10,400	1,600	[7,200–13,600]	-2,420	1.3
Arizona	597	80	785	377	[-1–1,570]	-188	1.31
Arkansas	925	—	—	—	—	—	—
Louisiana	592	—	—	—	—	—	—
New Mexico	512	—	—	—	—	—	—
Oklahoma	878	60	1,000	381	[245–1,780]	-100	1.13
Texas	4,176	320	4,570	759	[3,030–6,100]	-400	1.09
Utah	281	—	—	—	—	—	—
Western Region	6,357	640	6,160	946	[4,290–8,040]	200	0.97
Alaska	181	—	—	—	—	—	—
California	4,229	480	3,680	738	[2,190–5,180]	500	0.871
Hawaii	218	—	—	—	—	—	—
Idaho	208	—	—	—	—	—	—
Nevada	112	—	—	—	—	—	—
Oregon	438	60	558	189	[164–952]	-120	1.27
Washington	971	80	1,210	393	[347–2,080]	-200	1.25

Source: Data from the 2019 National Survey of Early Education (NSECE) Center-Based Provider Survey and the FNS-44 Report of the Child and Adult Care Food Program.

Note: Analysis uses FNS-44 administrative data from March 2019. NSECE data were collected between January and July 2019. Guam, Puerto Rico, and the U.S. Virgin Islands were excluded because these areas were not included in the NSECE. All NSECE estimates apply sampling weights to produce nationally representative totals. Confidence intervals reflect a 95 percent range around the weighted NSECE estimate. Differences subtract the FNS-44 total from the NSECE weighted total. Differences are considered statistically significant when the FNS-44 total falls outside the 95 percent confidence interval for the NSECE estimate. Ratios of CACFP participation levels relate the NSECE and FNS-44 data. In accordance with NSECE restricted-use data reporting requirements, all estimates are reported out to three significant digits, unweighted sample sizes are rounded to the nearest 20, and cells that come from fewer than 50 centers are suppressed (marked with "—"). Differences of less than 1,000 based on an NSECE weighted total of 1,000 or greater are rounded to the nearest 100.

Differences between NSECE and FNS-44 participation totals are not statistically significant at the 0.05 level (two-tailed).

Exhibit B.2. CACFP participation totals in the FNS-44 and estimates in the NSECE among homes, by geographic location

	FNS-44	NSECE				Difference	Ratio
	Total	Sample size	Weighted total	Standard error	Confidence interval		
National	92,560	2,560	83,100	9,950	[63,500–103,000]	9,480	0.898
Mid-Atlantic Region	6,568	240	4,420	1,160	[2,130–6,720]	2,140	0.674
Delaware	462	40	491	207	[23–959]	-29	1.06
District of Columbia	42	—	—	—	—	—	—
Maryland	2,147	60	940	627	[-351–2,230]	1,207	0.438
New Jersey	358	—	—	—	—	—	—
Pennsylvania	1,199	40	1,090	327	[428–1,760]	100	0.912
Virginia	1,768	40	984	776	[-617–2,590]	784	0.557
West Virginia	592	—	—	—	—	—	—
Mountain Plains Region	7,929	260	5,280	1,390	[2,520–8,040]	2,650	0.666
Colorado	938	40	586	354	[-173–1,340]	352	0.624
Kansas	2,514	60	1,560	927	[-378–3,490]	1,000	0.619
Missouri	894	20	762	383	[-36–1,560]	132	0.852
Montana	510	—	—	—	—	—	—
Nebraska	1,704	40	544	306	[-114–1,200]	1,160*	0.319
North Dakota	795	40	812	688	[-586–2,210]	-17	1.02
South Dakota	372	20	248	135	[-37–534]	124	0.668
Wyoming	202	—	—	—	—	—	—
Midwest Region	20,881	580	16,300	2,720	[10,900–21,700]	4,590	0.78
Illinois	5,454	220	3,130	1,110	[906–5,360]	2,320*	0.574
Indiana	1,823	40	2,200	876	[379–4,010]	-400	1.2
Iowa	1,525	20	1,200	816	[-482–2,890]	300	0.79
Michigan	3,348	80	1,990	746	[489–3,500]	1,400	0.595
Minnesota	5,598	120	5,270	2,180	[636–9,900]	300	0.941
Ohio	1,588	80	953	302	[339–1,570]	635*	0.6
Wisconsin	1,545	40	1,550	735	[1–3,090]	-1	1
Northeast Region	13,911	360	16,800	5,430	[6,090–27,500]	-2,880	1.21
Connecticut	779	—	—	—	—	—	—
Maine	717	20	839	463	[-114–1,790]	-122	1.17
Massachusetts	3,558	80	1,850	757	[334–3,380]	1,700*	0.521
New Hampshire	64	—	—	—	—	—	—
New York	8,269	220	13,100	5,350	[2,370–23,800]	-4,810	1.58
Rhode Island	190	—	—	—	—	—	—
Vermont	334	—	—	—	—	—	—
Southeast Region	7,397	220	4,240	816	[2,640–5,850]	3,150*	0.574
Alabama	610	20	639	377	[-156–1,430]	-29	1.05

	FNS-44	NSECE				Difference	Ratio
	Total	Sample size	Weighted total	Standard error	Confidence interval		
Florida	1,704	100	1,320	377	[552–2,090]	400	0.777
Georgia	1,168	60	560	153	[245–874]	608*	0.479
Kentucky	229	—	—	—	—	—	—
Mississippi	867	—	—	—	—	—	—
North Carolina	1,353	40	907	359	[163–1,650]	446	0.67
South Carolina	410	—	—	—	—	—	—
Tennessee	1,056	—	—	—	—	—	—
Southwest Region	19,140	340	10,100	4,020	[2,150–18,000]	9,070*	0.526
Arizona	1,854	40	388	77	[231–546]	1,466*	0.209
Arkansas	275	—	—	—	—	—	—
Louisiana	8,643	—	—	—	—	—	—
New Mexico	1,724	—	—	—	—	—	—
Oklahoma	1,349	40	875	708	[-564–2,310]	474	0.648
Texas	4,001	240	2,350	614	[1,130–3,580]	1,650*	0.588
Utah	1,294	20	799	404	[-35–1,630]	495	0.618
Western Region	16,734	520	26,000	6,670	[12,800–39,100]	-9,240	1.55
Alaska	200	20	104	50	[-2–209]	96	0.52
California	13,047	400	23,200	6,620	[10,000–36,400]	-10,200	1.78
Hawaii	202	—	—	—	—	—	—
Idaho	148	—	—	—	—	—	—
Nevada	99	—	—	—	—	—	—
Oregon	1,623	—	—	—	—	—	—
Washington	1,415	40	1,590	655	[221–2,950]	-172	1.12

Source: Data from the 2019 National Survey of Early Education (NSECE) Home-Based Provider Survey and the FNS-44 Report of the Child and Adult Care Food Program.

Note: Analysis uses FNS-44 administrative data from March 2019. NSECE data were collected between January and July 2019. Guam, Puerto Rico, and the U.S. Virgin Islands were excluded because these areas were not included in the NSECE. All NSECE estimates apply sampling weights to produce nationally representative totals. Confidence intervals reflect a 95 percent range around the weighted NSECE estimate. Differences subtract the FNS-44 total from the NSECE weighted total. Differences are considered statistically significant when the FNS-44 total falls outside the 95 percent confidence interval for the NSECE estimate. Ratios of CACFP participation levels relate the NSECE and FNS-44 data. In accordance with NSECE restricted-use data reporting requirements, all estimates are reported out to three significant digits, unweighted sample sizes are rounded to the nearest 20, and cells that come from fewer than 20 homes are suppressed (marked with "—"). Differences of less than 1,000 based on an NSECE weighted total of 1,000 or greater are rounded to the nearest 100.

* Differences between NSECE and FNS-44 participation totals are statistically significant at the 0.05 level (two-tailed).

Exhibit B.3. CACFP participation totals in the FNS-44 and estimates in the NSECE among Head Start centers, by geographic location

	FNS-44	NSECE				Difference	Ratio
	Total	Sample size	Weighted total	Standard error	Confidence interval		
National	11,781	700	12,100	1,040	[10,000–14,100]	-300	1.02
Mid-Atlantic Region	1,428	60	1,220	338	[544–1,890]	200	0.853
Delaware	31	—	—	—	—	—	—
District of Columbia	15	—	—	—	—	—	—
Maryland	131	—	—	—	—	—	—
New Jersey	172	—	—	—	—	—	—
Pennsylvania	692	—	—	—	—	—	—
Virginia	286	—	—	—	—	—	—
West Virginia	101	—	—	—	—	—	—
Mountain Plains Region	899	60	1,280	474	[334–2,220]	-400	1.42
Colorado	172	—	—	—	—	—	—
Kansas	114	—	—	—	—	—	—
Missouri	232	—	—	—	—	—	—
Montana	97	—	—	—	—	—	—
Nebraska	81	—	—	—	—	—	—
North Dakota	57	—	—	—	—	—	—
South Dakota	107	—	—	—	—	—	—
Wyoming	39	—	—	—	—	—	—
Midwest Region	2,378	100	1,900	447	[1,010–2,790]	500	0.8
Illinois	581	60	351	165	[13–690]	230	0.604
Indiana	251	—	—	—	—	—	—
Iowa	142	—	—	—	—	—	—
Michigan	582	—	—	—	—	—	—
Minnesota	200	—	—	—	—	—	—
Ohio	461	—	—	—	—	—	—
Wisconsin	161	—	—	—	—	—	—
Northeast Region	852	120	1,580	338	[910–2,250]	-700*	1.85
Connecticut	34	—	—	—	—	—	—
Maine	62	—	—	—	—	—	—
Massachusetts	125	—	—	—	—	—	—
New Hampshire	42	—	—	—	—	—	—
New York	515	80	919	243	[425–1,410]	-404	1.78
Rhode Island	42	—	—	—	—	—	—
Vermont	32	—	—	—	—	—	—
Southeast Region	2,098	60	2,130	459	[1,220–3,030]	<100	1.02
Alabama	212	—	—	—	—	—	—

	FNS-44	NSECE				Difference	Ratio
	Total	Sample size	Weighted total	Standard error	Confidence interval		
Florida	486	—	—	—	—	—	—
Georgia	174	—	—	—	—	—	—
Kentucky	243	—	—	—	—	—	—
Mississippi	224	—	—	—	—	—	—
North Carolina	282	—	—	—	—	—	—
South Carolina	139	—	—	—	—	—	—
Tennessee	338	—	—	—	—	—	—
Southwest Region	1,960	60	2,120	522	[1,090–3,150]	-200	1.11
Arizona	222	—	—	—	—	—	—
Arkansas	216	—	—	—	—	—	—
Louisiana	209	—	—	—	—	—	—
New Mexico	164	—	—	—	—	—	—
Oklahoma	325	—	—	—	—	—	—
Texas	722	—	—	—	—	—	—
Utah	102	—	—	—	—	—	—
Western Region	2,166	200	1,870	301	[1,280–2,470]	300	0.862
Alaska	95	—	—	—	—	—	—
California	1,319	140	1,160	232	[693–1,630]	200	0.88
Hawaii	98	—	—	—	—	—	—
Idaho	68	—	—	—	—	—	—
Nevada	58	—	—	—	—	—	—
Oregon	275	—	—	—	—	—	—
Washington	253	—	—	—	—	—	—

Source: Data from the 2019 National Survey of Early Education (NSECE) Center-Based Provider Survey and the FNS-44 Report of the Child and Adult Care Food Program.

Note: Analysis uses FNS-44 administrative data from March 2019. NSECE data were collected between January and July 2019. Guam, Puerto Rico, and the U.S. Virgin Islands were excluded because these areas were not included in the NSECE. All NSECE estimates apply sampling weights to produce nationally representative totals. Confidence intervals reflect a 95 percent range around the weighted NSECE estimate. Differences subtract the FNS-44 total from the NSECE weighted total. Differences are considered statistically significant when the FNS-44 total falls outside the 95 percent confidence interval for the NSECE estimate. Ratios of CACFP participation levels relate the NSECE and FNS-44 data. In accordance with NSECE restricted-use data reporting requirements, all estimates are reported out to three significant digits, unweighted sample sizes are rounded to the nearest 20, and cells that come from fewer than 50 centers are suppressed (marked with "—"). Differences of less than 1,000 based on an NSECE weighted total of 1,000 or greater are rounded to the nearest 100.

* Differences between NSECE and FNS-44 participation totals are statistically significant at the 0.05 level (two-tailed).

Appendix C

Exploratory research questions: Are the primary and secondary findings robust to potential sources of variability in the data?

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To assess the stability of CACFP participation counts in the FNS-44 data over time relative to the NSECE data collection period (January to July 2019), we conducted an exploratory analysis comparing participation levels in March 2019 (the focal month for our primary and secondary analysis) with two adjacent months: December 2018 and June 2019. We calculated the percentage change from March 2019 to each comparison month, highlighting differences of 5 percent or greater. This analysis helps evaluate whether March 2019 provides a suitable reference point for our main findings.

In Exhibits C.1 and C.2 we present findings from this analysis for centers and homes, respectively. Participation counts for centers remained relatively stable between December 2018 and March 2019, with changes of less than 5 percent at the national level (about 2 percent), and for most regions (six of seven) and States (48 of 50 States and DC). However, between March and June 2019, participation counts dropped substantially across most areas, with a 32 percent decrease nationally, and declines of 5 percent or more in all regions and all but one State. In contrast, participation counts for homes varied little across months (Exhibit C.2). National and regional changes between March and June 2019 were generally less than 2 percent, and only three States exhibited a decline greater than 5 percent over this period (none of which exceeded 6 percent).

These findings suggest that March 2019 was an appropriate choice for our primary analysis. March aligns with the peak of the school year when CACFP participation is likely to be highest, particularly for centers that operate on an academic-year calendar. The substantial drop in center participation observed between March and June 2019 is consistent with the expected seasonal decline among CACFP classifications like the at-risk afterschool program, which typically do not operate during the summer months. (These classifications could not be excluded from the exploratory analysis due to FNS-44 Part C reporting periods, as previously discussed.) Participation counts also remained stable over time among homes which typically operate year-round.

Exhibit C.1. CACFP participation levels in the FNS-44 among centers, by reporting period

	FNS-44 totals			Percentage change	
	December 2018	March 2019	June 2019	December to March	March to June
National	71,572	73,263	50,147	2%	-32%
Mid-Atlantic Region	9,657	9,925	7,658	3%	-23%
Delaware	413	431	346	4%	-20%
District of Columbia	290	300	279	3%	-7%
Maryland	1,500	1,546	1,189	3%	-23%
New Jersey	1,331	1,364	1,286	2%	-6%
Pennsylvania	3,759	3,828	2,991	2%	-22%
Virginia	1,696	1,765	1,245	4%	-29%
West Virginia	668	691	322	3%	-53%
Mountain Plains Region	4,736	4,702	2,471	-1%	-47%
Colorado	962	983	398	2%	-60%
Kansas	762	772	297	1%	-62%
Missouri	1,485	1,520	864	2%	-43%
Montana	358	266	204	-26%	-23%
Nebraska	528	530	346	0%	-35%
North Dakota	217	216	133	0%	-38%
South Dakota	280	269	146	-4%	-46%
Wyoming	144	146	83	1%	-43%
Midwest Region	10,526	10,746	7,322	2%	-32%
Illinois	2,575	2,619	2,110	2%	-19%
Indiana	1,141	1,181	632	4%	-46%
Iowa	629	639	491	2%	-23%
Michigan	1,821	1,895	1,314	4%	-31%
Minnesota	985	1,010	609	3%	-40%
Ohio	2,387	2,434	1,306	2%	-46%
Wisconsin	988	968	860	-2%	-11%
Northeast Region	6,092	6,494	5,986	7%	-8%
Connecticut	362	371	327	2%	-12%
Maine	205	204	197	0%	-3%
Massachusetts	668	939	889	41%	-5%
New Hampshire	195	199	189	2%	-5%
New York	4,217	4,328	3,994	3%	-8%
Rhode Island	213	219	190	3%	-13%
Vermont	232	234	200	1%	-15%
Southeast Region	15,660	15,992	10,455	2%	-35%
Alabama	1,217	1,248	546	3%	-56%
Florida	4,964	5,048	3,696	2%	-27%

	FNS-44 totals			Percentage change	
	December 2018	March 2019	June 2019	December to March	March to June
Georgia	2,328	2,369	1,517	2%	-36%
Kentucky	1,404	1,431	804	2%	-44%
Mississippi	892	900	611	1%	-32%
North Carolina	2,335	2,389	2,113	2%	-12%
South Carolina	727	789	453	9%	-43%
Tennessee	1,793	1,818	715	1%	-61%
Southwest Region	13,200	13,524	6,767	2%	-50%
Arizona	946	992	450	5%	-55%
Arkansas	1,213	1,192	621	-2%	-48%
Louisiana	980	1,001	532	2%	-47%
New Mexico	717	718	374	0%	-48%
Oklahoma	1,125	1,169	687	4%	-41%
Texas	7,805	8,022	3,869	3%	-52%
Utah	414	430	234	4%	-46%
Western Region	11,701	11,880	9,488	2%	-20%
Alaska	269	268	69	0%	-74%
California	8,234	8,357	7,083	1%	-15%
Hawaii	228	232	145	2%	-38%
Idaho	276	276	172	0%	-38%
Nevada	450	456	134	1%	-71%
Oregon	852	879	591	3%	-33%
Washington	1,392	1,412	1,294	1%	-8%

Source: Data from the FNS-44 Report of the Child and Adult Care Food Program.

Note: Exhibit presents CACFP participation counts from three reporting months in fiscal year 2019—December 2018, March 2019, and June 2019—drawn from FNS-44, Part B. March 2019 serves as the reference month for the primary analysis. Percentage change columns show how participation counts in December and June compare with those from March. The exploratory analysis does not exclude centers based on CACFP classification (at-risk afterschool or emergency shelters) because Part C data are not available for December or June.

Exhibit C.2. CACFP participation levels in the FNS-44 among homes, by reporting period

	FNS-44 totals			Percentage change	
	December 2018	March 2019	June 2019	December to March	March to June
National	93,178	92,560	91,156	-1%	-2%
Mid-Atlantic Region	6,696	6,568	6,441	-2%	-2%
Delaware	465	462	454	-1%	-2%
District of Columbia	41	42	44	2%	5%
Maryland	2,241	2,147	2,132	-4%	-1%
New Jersey	351	358	362	2%	1%
Pennsylvania	1,219	1,199	1,163	-2%	-3%
Virginia	1,758	1,768	1,715	1%	-3%
West Virginia	621	592	571	-5%	-4%
Mountain Plains Region	7,988	7,929	7,572	-1%	-5%
Colorado	935	938	889	0%	-5%
Kansas	2,547	2,514	2,395	-1%	-5%
Missouri	910	894	876	-2%	-2%
Montana	486	510	481	5%	-6%
Nebraska	1,726	1,704	1,629	-1%	-4%
North Dakota	799	795	754	-1%	-5%
South Dakota	379	372	355	-2%	-5%
Wyoming	206	202	193	-2%	-4%
Midwest Region	21,053	20,881	20,534	-1%	-2%
Illinois	5,484	5,454	5,358	-1%	-2%
Indiana	1,844	1,823	1,797	-1%	-1%
Iowa	1,520	1,525	1,513	0%	-1%
Michigan	3,384	3,348	3,344	-1%	0%
Minnesota	5,649	5,598	5,429	-1%	-3%
Ohio	1,635	1,588	1,578	-3%	-1%
Wisconsin	1,537	1,545	1,515	1%	-2%
Northeast Region	13,965	13,911	13,795	0%	-1%
Connecticut	771	779	783	1%	1%
Maine	713	717	707	1%	-1%
Massachusetts	3,565	3,558	3,499	0%	-2%
New Hampshire	65	64	63	-2%	-2%
New York	8,319	8,269	8,235	-1%	0%
Rhode Island	198	190	185	-4%	-3%
Vermont	334	334	323	0%	-3%
Southeast Region	7,521	7,397	7,222	-2%	-2%
Alabama	610	610	584	0%	-4%
Florida	1,724	1,704	1,691	-1%	-1%

	FNS-44 totals			Percentage change	
	December 2018	March 2019	June 2019	December to March	March to June
Georgia	1,178	1,168	1,123	-1%	-4%
Kentucky	233	229	219	-2%	-4%
Mississippi	888	867	833	-2%	-4%
North Carolina	1,375	1,353	1,331	-2%	-2%
South Carolina	423	410	410	-3%	0%
Tennessee	1,090	1,056	1,031	-3%	-2%
Southwest Region	19,357	19,140	18,895	-1%	-1%
Arizona	1,890	1,854	1,831	-2%	-1%
Arkansas	278	275	260	-1%	-5%
Louisiana	8,743	8,643	8,679	-1%	0%
New Mexico	1,756	1,724	1,702	-2%	-1%
Oklahoma	1,355	1,349	1,310	0%	-3%
Texas	4,035	4,001	3,842	-1%	-4%
Utah	1,300	1,294	1,271	0%	-2%
Western Region	16,598	16,734	16,697	1%	0%
Alaska	200	200	197	0%	-2%
California	12,899	13,047	13,031	1%	0%
Hawaii	200	202	205	1%	1%
Idaho	148	148	144	0%	-3%
Nevada	105	99	94	-6%	-5%
Oregon	1,655	1,623	1,605	-2%	-1%
Washington	1,391	1,415	1,421	2%	0%

Source: Data from the FNS-44 Report of the Child and Adult Care Food Program.

Note: Exhibit presents CACFP participation counts from three reporting months in fiscal year 2019—December 2018, March 2019, and June 2019—drawn from FNS-44, Part B. March 2019 serves as the reference month for the primary analysis. Percentage change columns show how participation counts in December and June compare with those from March.

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