USDA Food and Nutrition Administration
U.S. DEPARTMENT OF AGRICULTURE

CACFP Participation Among Child Care Providers: Data Analysis II

Multivariate Study Report

July 9, 2026

Owen Schochet, Liana Washburn, Maria Boyle, Adam Korte, and CACFP PAC Team

Submitted to:

U.S. Department of Agriculture
Food and Nutrition Administration
1320 Braddock Place
Alexandria, VA 22314
Project Officer: Darcy Gungor
Contract Number: 47QRAA18D00BQ
Contract Start Date: 9/19/2024

Submitted by:

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

Mathematica®
Progress Together

The findings and conclusions in this report are those of the author(s) and should not be construed to represent any official USDA or U.S. Government determination or policy.

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at How to File a Program Discrimination Complaint and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.

Contents

Exhibits

This page has been left blank for double-sided copying.

I. Introduction

A. Background and study objectives

The Child and Adult Care Food Program (CACFP), administered by the U.S. Department of Agriculture's (USDA)'s Food and Nutrition Administration (FNA), provides reimbursement for nutritious meals and snacks served to eligible children and adults in participating care programs. CACFP is a critical component of the federal food safety net, serving 4.5 million meals to children each day (USDA FNS 2025) and playing an important role in their health and well-being. Some studies have found that child care provider participation in CACFP is associated with serving healthier, more nutritious foods and beverages to children (Andreyeva et al. 2022; Gurzo et al. 2020; Kenney et al. 2023; Ritchie et al. 2012; Zaltz et al. 2020) and reduced risk of child household food insecurity (Heflin et al. 2015).

Yet many eligible child care centers and day care homes across the nation do not participate in CACFP. Although several recent studies have explored the extent to which CACFP is underused and the potential barriers to participation (Adams et al. 2023; Andreyeva et al. 2022; Erinosho et al. 2022; Francis et al. 2022; Heinz et al. 2022; Jana et al. 2023; Lee et al. 2022), few studies include comparison groups of eligible child care providers that are not in the program (Eiffes et al. 2025; Kenney et al. 2023). Research including comparison groups is the only way to (1) understand the extent to which providers that do participate represent the entire population that CACFP targets and (2) implement stronger study designs, such as quasi-experimental designs that allow researchers to examine the impacts of the program.

This study used data from the National Survey of Early Care and Education (NSECE) to pursue these objectives. The NSECE is a nationally representative survey of the child care landscape and an unparalleled source of information on providers that do and do not participate in CACFP. Building on an earlier descriptive study (Schochet et al. 2024), we used cross-sectional data from the 2019 NSECE, administered between January and July 2019 (NSECE Project Team 2022), to deepen understanding of the factors that predict selection into CACFP among eligible providers. We then used data from the NSECE COVID-19 Longitudinal Follow-up, administered over two periods from late 2020 through early 2022 in response to the onset of the pandemic (Zaslow et al. 2024), to explore the factors influenced by provider CACFP participation over time.

B. Study design and research questions

Estimating the impact of provider CACFP participation required understanding what outcomes for participating providers would have been in the absence of the program. We approximated this counterfactual using a quasi-experimental design and longitudinal data from the NSECE (Exhibit I.1). We used propensity score weighting methods to reduce selection bias in estimated associations between provider CACFP participation status in 2019 and provider experiences and outcomes measured about one and two years later, during the COVID-19 pandemic. We refer to these associations as impacts and interpret them as evidence to suggest the influence of the program.

Exhibit I.1. Impact study design model

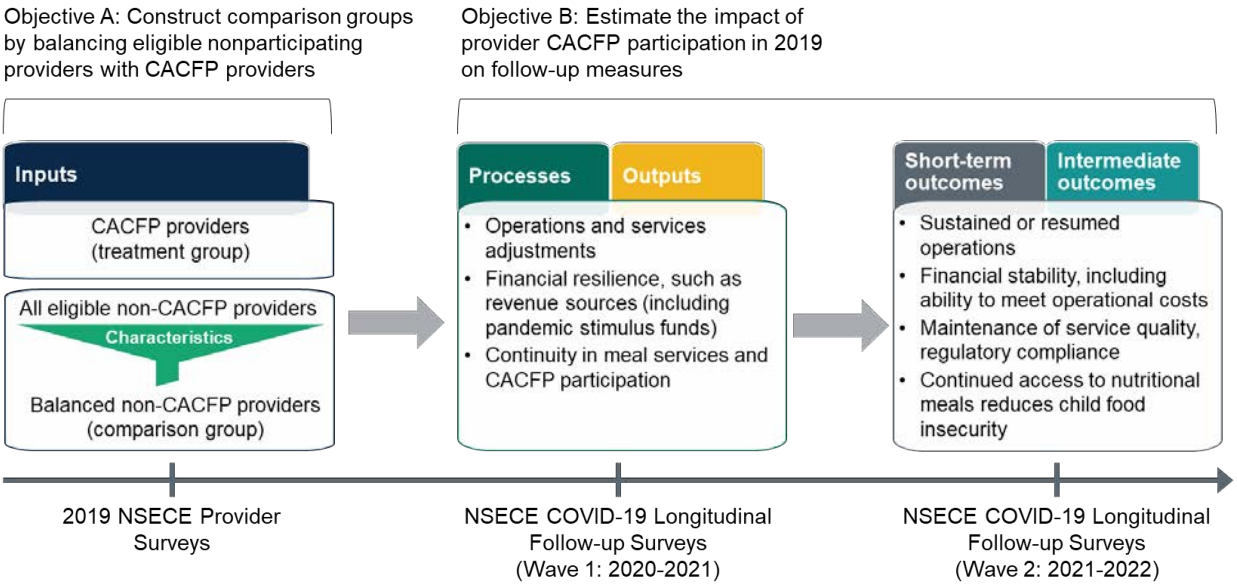


Exhibit I.2 presents the study objectives and research questions. We first examined provider and community characteristics associated with provider CACFP participation in 2019 (A1) and used this information to construct balanced comparison groups of eligible nonparticipating providers that closely resembled participating providers (A2). We then estimated impacts on processes and outputs from the first year of the pandemic (B1) and outcomes from the second year of the pandemic (B2), defined as differences between participating CACFP providers and the weighted comparison group of eligible nonparticipating providers. To preserve the NSECE's nationally representative design, we conducted all analyses separately within provider types (NSECE Project Team 2022), comparing results descriptively between centers and homes (A3 and B3).

Exhibit I.2. Impact study objectives and research questions

A.	**Construct comparison groups by balancing eligible nonparticipating providers with CACFP providers**
A1	• Which provider and community characteristics were most associated with provider CACFP participation in 2019?
A2	• How can these characteristics best be used to construct balanced comparison groups of eligible nonparticipating providers that closely resemble participating providers?
A3	• Are the characteristics most associated with provider CACFP participation and used to construct balanced comparison groups of eligible nonparticipating providers similar for centers and homes, or do they differ by provider type?
B.	**Estimate the impact of provider CACFP participation in 2019 on follow-up measures collected in 2020 and 2021**
B1	• Did provider CACFP participation in 2019 influence processes or outputs such as operations and service adjustments and financial resilience measured about one year later, during the first year of COVID-19?
B2	• Did provider CACFP participation in 2019 influence outcomes such as service maintenance and quality, financial stability, and child health and well-being measured about two years later, during the second year of COVID-19?
B3	• How do the impacts of provider CACFP participation compare across child care centers and homes?

C. Expected study findings

We knew CACFP and eligible non-CACFP providers differed systematically across a range of sample characteristics in 2019 (Schochet et al. 2024), necessitating careful adjustment when constructing comparison groups of nonparticipating centers and homes. For instance, CACFP participating providers were more likely than nonparticipating providers to serve families with lower incomes whose care was publicly funded, serve children experiencing food insecurity, operate in areas with higher poverty and greater racial and ethnic diversity, offer structured learning activities and use curricula, provide or refer families to additional health and social services, comply with health and safety regulations and requirements, and interact with child care quality systems and professional activities (Schochet et al. 2024).

For the second research objective, we estimated the impacts of provider CACFP participation on a range of measures collected from two follow-up surveys. We selected these follow-up measures based on existing theory and empirical evidence and classified them according to the study design framework (Exhibit I.1). Processes and outputs—including measures of provider operations and service adjustments and financial resilience—were collected during the first year of the pandemic, whereas short-term and intermediate outcomes measuring service maintenance and quality, financial stability, and child health and well-being were collected about one year later. Exhibit I.3 summarizes follow-up measures by role in analysis, NSECE data source, and domain.

Exhibit I.3. Follow-up measures by role in analysis, data source, and domain

Data source	Domain	Follow-up measures
Processes and output measures		
NSECE COVID-19 Longitudinal Follow-up Survey: Wave 1	Operations and service adjustments	Operating status, meal service continuity, location of care, operating hours, enrollment changes, safety protocols
	Financial resilience	Stimulus funding, public revenue, staffing changes
Short-term and intermediate outcomes		
NSECE COVID-19 Longitudinal Follow-up Survey: Wave 2	Operations and service maintenance	Sustained or resumed operations, meal service continuity, enrollment continuity
	Financial stability	Cost management, staff retention and recruitment, staff compensation
	Service quality	Staff qualifications, class size, and professional development
	Child health and well-being	Health and nutrition services, child food insecurity

Source: Data from the COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based and Home-Based Provider Surveys.

Note: Appendix Exhibit A.7 provides full operational definitions for each follow-up measure.

Although, as previously noted, most studies comparing participating and nonparticipating providers focused on providers' meal services (such as the quality of foods and beverages served and overall nutrition environment) and children's health and well-being (such as levels of food insecurity; Kenney et al. 2023; Eiffes et al. 2025), program participation could also shape how providers operate and finance their services, particularly over sustained periods of engagement with the program (Schochet et al. 2024). For instance, CACFP's meal reimbursement may enhance providers' revenue stability by covering a nontrivial share of their food costs (Schochet 2025; Litkowski et al. 2024), potentially freeing up other

funds that can be directed toward maintaining staff, resources, or quality improvements. Prior descriptive work has shown that CACFP-participating providers report offering more structured meal practices (for example, limiting fruit juice) and, at times, broader health and safety measures—possibly linked to CACFP's standards, training, and monitoring requirements (Ritchie et al. 2012; Schochet et al. 2024). In addition, CACFP participation could also connect providers to professional networks and capacity-building supports, both directly (for example, nutrition education) and through broader integration with public child care agencies.

Because the follow-up surveys occurred during the COVID-19 pandemic, we also considered the extent to which this context influenced the anticipated effects of provider participation in CACFP. In principle, participating in the program could help offset some of the financial pressures providers faced due to reduced enrollments and higher operating costs that required many to suspend operations after the pandemic began (Schochet et al. 2024). For example, in addition to revenue from meal reimbursements, regular contact with program agencies could help some providers identify sources of pandemic relief funding. Further, temporary changes to CACFP policies—including increased reimbursement rates for some home-based providers, flexible administrative requirements, and expanded access to free meals (FRAC n.d.; Severn et al. 2023; Washburn et al. 2025)—may have supported providers and families during the pandemic. Although grounded in an unusual period, these analyses provide insight into how CACFP may support provider resilience during times of crisis—lessons that remain relevant for policy planning beyond the pandemic.

D. Road map to the report

The next chapter presents the estimated impacts of provider CACFP participation in 2019 on follow-up measures among eligible centers and homes. We discuss findings in the sequence in which program impacts would be expected to emerge, which corresponds to the study research questions shown in Exhibit I.2. We start by presenting the estimated impacts of CACFP participation on process and output measures after about one year in the program (B1) and then discuss impacts on outcome measures after about two years in the program (B2). We conducted all analyses separately within centers and homes, though we summarize and discuss patterns in the findings between provider types (B3).

The report concludes with a summary of the findings and their implications. Appendix A describes the study methodology, including the study data sources, analytic sample, measures, and analytic strategy, and presents supplemental methods exhibits. We incorporate a summary of results from analyses of key characteristics that predict take-up of CACFP among eligible providers (A1) and diagnostics from the construction of balanced comparison groups of eligible non-CACFP providers (A2) into the analytic strategy; Appendix B provides the full data tables for these analyses. Appendix C provides the full data tables with estimates from the impact analyses presented in the next chapter.

II. Impacts of provider CACFP participation

We estimated the impacts of provider CACFP participation on follow-up measures by comparing CACFP providers with balanced comparison groups of eligible non-CACFP providers (hereafter referred to as nonparticipating providers for ease of presentation). We first present results from analysis of program impacts on study processes and outputs measured after approximately one year, when most CACFP providers continued to participate in the program (B1). Next, we present estimated impacts on short- and intermediate-term outcomes measured approximately two years after study baseline (B2). Appendix A provides additional details on data sources (Section I), samples (Section II), and measures (Section III).

In this chapter, we present impacts estimated with propensity score weights generated from our preferred analytic approach, nonparametric generalized boosted modeling (GBM). Propensity score weights were constructed so that estimated impacts represent the average treatment effect on the treated (ATT), or how follow-up measures might have differed for CACFP providers had they not participated in the program. Appendix A (Section IV) describes how we estimated propensity scores, constructed propensity score weights, and determined the preferred analytic approach; and how we estimated impacts, including specifying impact models, testing for statistical significance, and addressing multiple comparisons.

We graphically present estimated impacts that are statistically significant at the "conventional" (5 percent) level and are robust to multiple comparisons adjustment. We use asterisks to indicate statistically significant differences in impact estimates between CACFP participating providers and eligible non-CACFP providers and 95 percent confidence interval bars to convey the estimated precision level of the regression-adjusted group means. We summarize other "trend" (10 percent) level and nonsignificant findings in the text, only presenting associated point estimates when they add to our understanding of a significant impact. Appendix C provides full data tables with estimates from impact models for all process and output (Section I) and outcome (Section II) measures, along with supplemental impact findings based on an alternative approach for estimating propensity scores. For each set of measures, we first present results for centers, followed by results for homes.

A. Research question B1: Did CACFP participation in 2019 influence processes or outputs measured about one year later, during the first year of COVID-19?

We examined whether CACFP participation in 2019 influenced provider operations, services, and financial resilience during the first year of the COVID-19 pandemic. We found that most CACFP centers and homes remained in the program one year later, while most eligible nonparticipating providers continued not to participate. CACFP participation in 2019 did not significantly affect whether centers or homes remained open, continued serving meals, or implemented new safety protocols. CACFP providers of both types were more likely to access pandemic stimulus funding, and they relied on distinct channels to learn about these opportunities. Finally, CACFP centers served a higher number of children with subsidies than eligible non-CACFP centers, whereas CACFP and eligible non-CACFP homes received more similar levels of public funding. We discuss possible explanations for these findings in Chapter III.

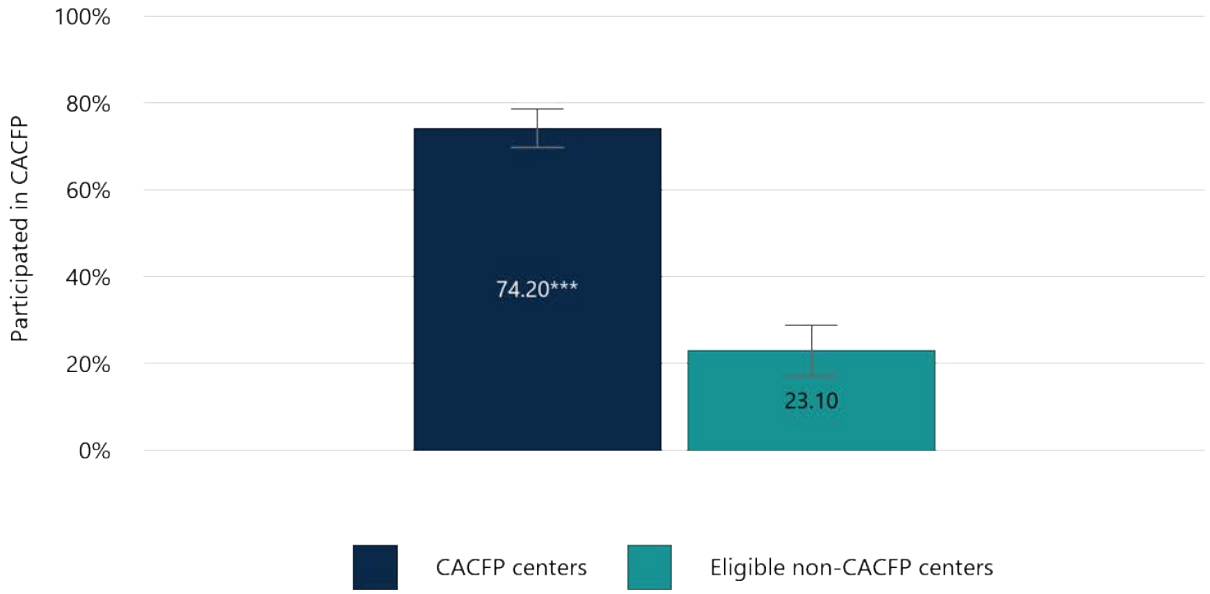
1. Impacts on processes and outputs among centers

At the one-year follow-up, 91 percent of both CACFP and eligible non-CACFP centers were still operating, and 82 percent of centers in both groups were still providing meals (including about 90 percent of those still operating); neither of these differences were statistically significant (Appendix Exhibit C.1). Average enrollment also declined sharply and by similar amounts in both groups, from roughly 75 children in 2019 (Appendix Table B.4) to about 48 children in late 2020—or about 53 children among centers that remained open (Appendix Exhibit C.1). There were no statistically significant impacts of provider CACFP participation on measures of operating hours and location, enrollment vacancies, and safety protocols at conventional levels of significance (Appendix Exhibit C.1).

Most—but not all—centers retained their CACFP participation status after one year. Specifically, 74 percent of CACFP centers were still participating (including 82 percent of those that stayed open) a year later. In comparison, 23 percent of eligible providers that did not participate in CACFP in 2019 entered the program a year later, a statistically significant difference (Exhibit II.1). Of the roughly one in four CACFP centers that left the program, about 35 percent stopped or suspended operations altogether, and another 35 percent continued operating but stopped serving meals to children. Only 30 percent (or 8 percent of all CACFP centers) exited the program despite both continuing to operate and serve meals.

Exhibit II.2 shows the impact of provider participation in CACFP on receiving pandemic-related stimulus funding from federal, State, and other public and private sources described in Box II.1. Participation in CACFP significantly increased centers' likelihood of receiving stimulus funding from the three federal sources the providers were asked to report on: the Paycheck Protection Program (PPP), Small Business Administration (SBA) loans, and Employee Retention Credits (ERCs). Relative to eligible non-CACFP centers, CACFP centers were 11 percentage points more likely to receive stimulus funding from the PPP (46 versus 34 percent), 3 percentage points more likely to receive an SBA loan (12 versus 8 percent), and 11 percentage points more likely to receive an ERC (25 versus 14 percent). At the trend level, CACFP centers were also more likely than eligible non-CACFP centers to receive funding from other public sources (35 versus 30 percent). CACFP participation did not influence receipt of stimulus funding from other State or private sources.

Exhibit II.1. Impact of provider CACFP participation in 2019 on provider CACFP participation during the first year of the COVID-19 pandemic among centers

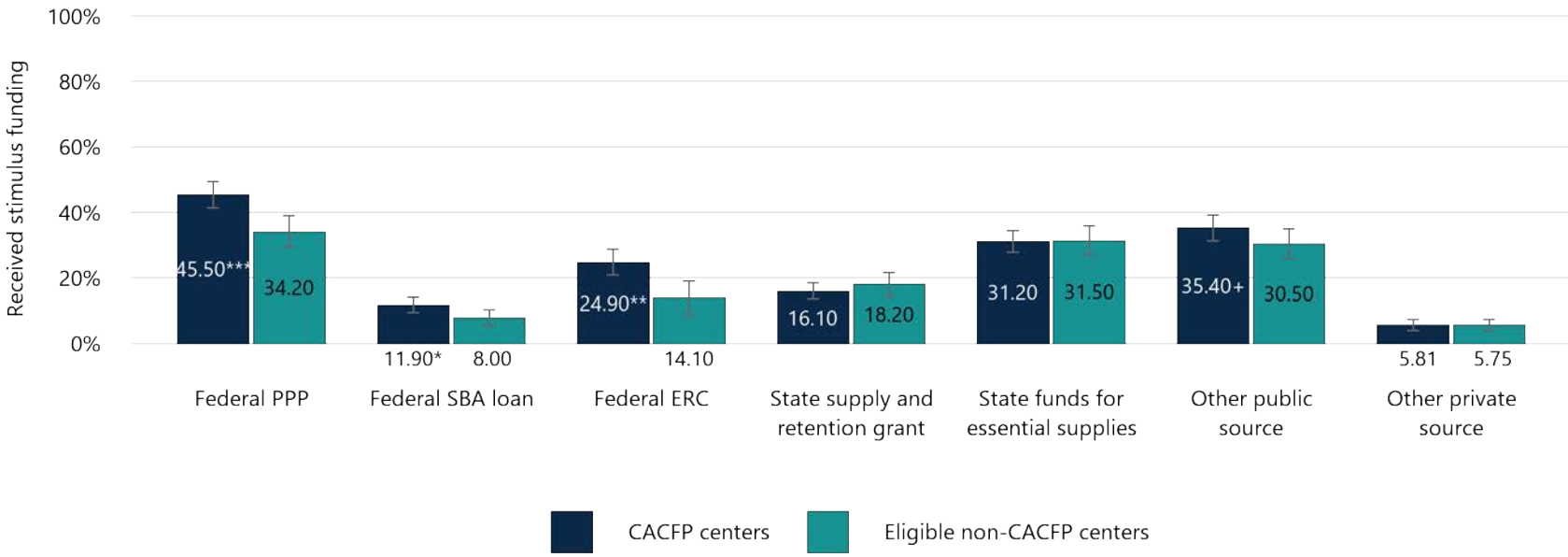


Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Exhibit presents regression-adjusted percentages by research group and their 95 percent confidence intervals. Estimates are based on responses from about 1,860 CACFP centers and 900 eligible non-CACFP centers, weighted to represent approximately 42,200 and 24,200 centers across the nation, respectively. Data are drawn from Appendix Exhibit C.1. Follow-up weights provided by the NSECE Project Team were first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. Measure references the focal week for the first follow-up survey (last week of October 2020). 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.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

Exhibit II.2. Impact of provider CACFP participation in 2019 on receipt of stimulus funding by source during the first year of COVID-19 among centers



Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Exhibit presents regression-adjusted percentages by research group and their 95 percent confidence intervals. Estimates are based on responses from about 1,900 CACFP centers and 940 eligible non-CACFP centers, weighted to represent approximately 42,600 and 24,700 centers across the nation, respectively. Data are drawn from Appendix Exhibit C.2. Follow-up weights provided by the NSECE Project Team were first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. Providers reported on experiences with pandemic assistance programs between the start of the pandemic and the time of the survey (administered November 2020 to March 2021). 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.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

ERC = Employee Retention Credit; PPP = Paycheck Protection Program; SBA = Small Business Administration.

Box II.1. Federal and State sources of stimulus funding in 2020

Stimulus funding enabled providers to continue operating safely during COVID-19 despite unanticipated closures, staffing shortages, supply chain disruptions, and other challenges. The NSECE COVID-19 Longitudinal Follow-up included questions about whether providers received funds from the following federal and State stimulus funding sources:

Federal

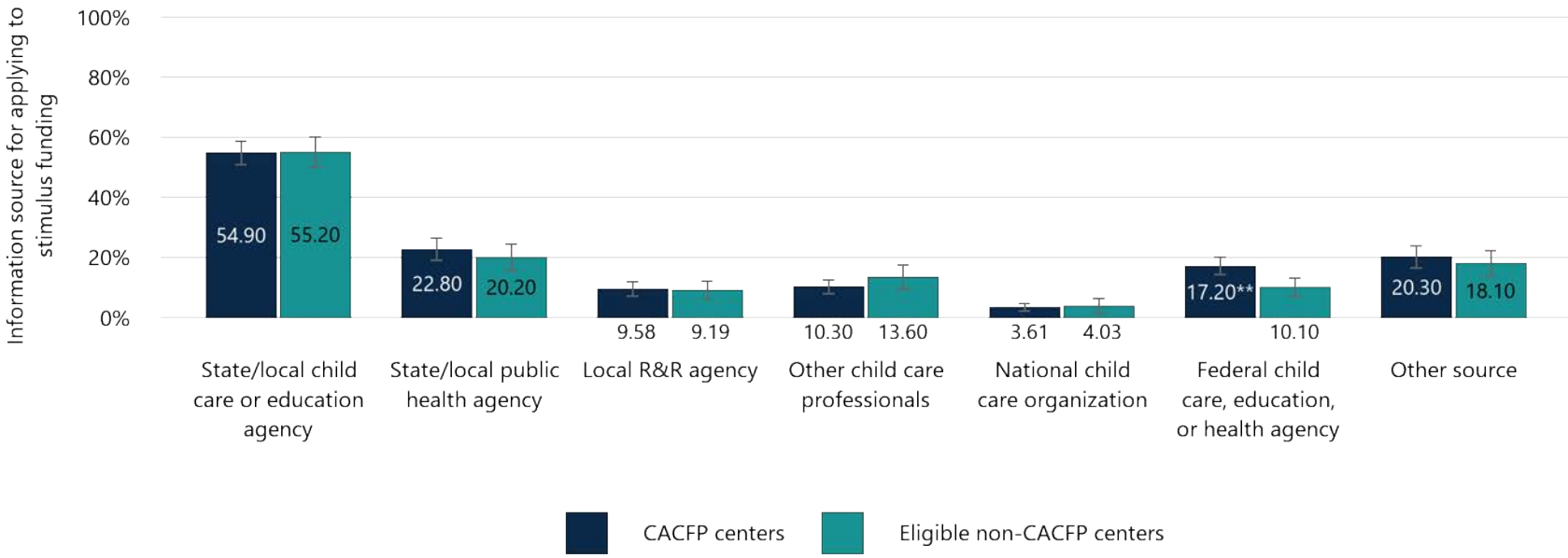
- The **Paycheck Protection Program** provided forgivable loans to small businesses (including providers) to maintain payroll and cover rent and utilities.
- During COVID-19, the U.S. **Small Business Administration** temporarily expanded its traditional disaster assistance and small business loan programs to provide financial resources designed to support providers in continuing to operate (2020).
- The **Employee Retention Credit** was a refundable payroll tax credit created as part of the Coronavirus Aid, Relief, and Economic Security (CARES) Act. Qualifying employers could receive this credit, which helped employers offset the cost of keeping staff on payroll when their operations were affected by COVID 19-related disruptions (U.S. Department of the Treasury, Internal Revenue Service 2021; U.S. Congress 2020).

State

- In 2020 and throughout COVID-19, States created targeted grant programs or provided enhanced payments to providers. These additional funds served different purposes including enabling providers to purchase necessary supplies such as cleaning supplies or personal protective equipment, weather price increases resulting from supply chain issues, and retaining staff (U.S. Department of Health and Human Services, Administration for Children and Families, Office of Child Care [DHHS ACF OCC] n.d.; U.S. Government Accountability Office [GAO] 2023). ◢

Exhibit II.3 displays the impacts of provider participation in CACFP on the likelihood centers received information about the availability of stimulus funding from various sources during the first year of COVID-19. CACFP centers were 7 percentage points more likely than eligible nonparticipating centers to report learning about opportunities to apply for stimulus funding from a federal child care, education, or health agency (17 versus 10 percent). Similar percentages of CACFP and eligible non-CACFP centers reported receiving information from other sources, including State and local child care, education, and public health agencies, local Resource and Referral agencies, national child care organizations, and other child care professionals.

Exhibit II.3. Impact of provider CACFP participation in 2019 on how centers learned about stimulus funding during the first year of COVID-19



Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Exhibit presents regression-adjusted percentages by research group and their 95 percent confidence intervals. Estimates are based on responses from about 1,900 CACFP centers and 940 eligible non-CACFP centers, weighted to represent approximately 42,600 and 24,700 centers across the nation, respectively. Data are drawn from Appendix Exhibit C.2. Follow-up weights provided by the NSECE Project Team were first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. Measures reference the focal week for the first follow-up survey (last week of October 2020). 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.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

R&R = Resource and Referral.

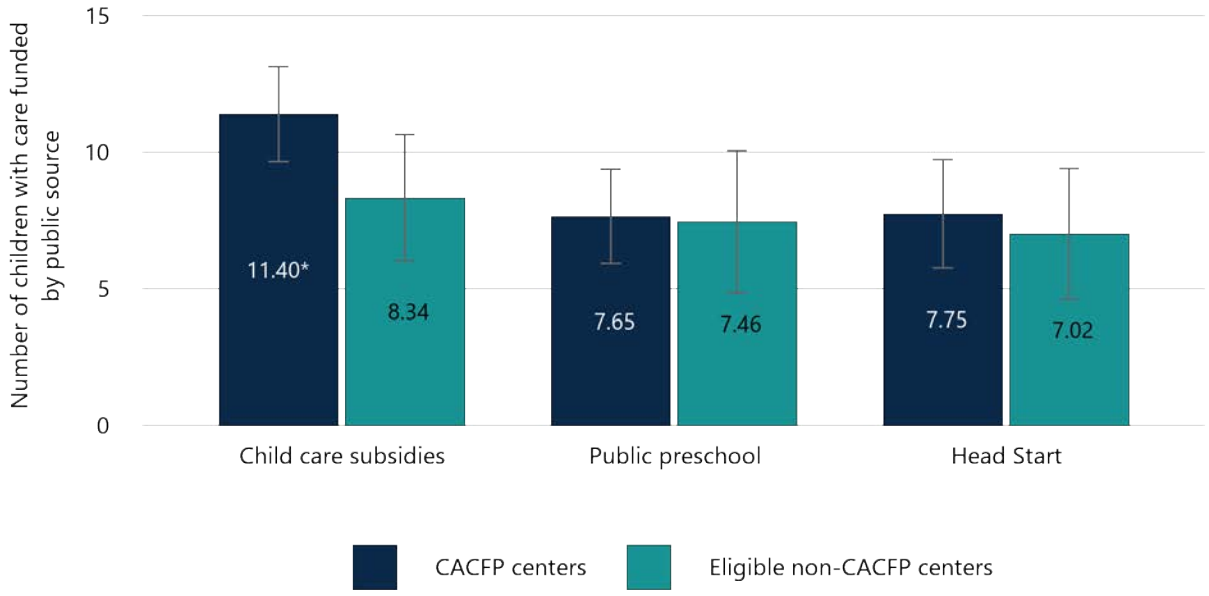
We analyzed impacts of CACFP participation on providers' receipt of public revenue from the three predominant public funding streams for child care in the nation:

- The Child Care and Development Fund (CCDF) is a federal program operated by the Office of Child Care that provides **child care subsidies** to help income-eligible families pay for child care while parents work or participate in approved education or job training activities. In 2019, CCDF was funded at approximately $10.3 billion and served about 1.4 million children per month (U.S. DHHS ACF OCC 2021, 2022). Within federal parameters, State CCDF agencies set eligibility rules, subsidy rates, and policies governing how providers are reimbursed on behalf of families. Once approved to accept subsidies, providers decide how many children receiving subsidy funding to serve.
- States and localities fund **public preschool** slots (most commonly for 4-year-olds, sometimes for 3-year olds) delivered in public schools and community-based settings. In the 2018–19 school year, public preschool enrolled roughly 34 percent of 4-year-olds and 6 percent of 3-year-olds nationwide (Friedman-Krauss et al. 2019). Public preschool programs vary widely across States and localities in terms of eligibility (for example, whether universal or targeted by income, geography, or child risk factors), intensity (for example, whether full-day or part-day), and quality standards.
- The federal **Office of Head Start** administers federal grants directly to local grantees such as community organizations, school systems, and nonprofits to provide comprehensive child care and early education as well as health, nutrition, and family support services to preschoolers (Head Start) and infants and toddlers (Early Head Start). In 2019, the program was funded to enroll about 875,000 participants at approximately $9.7 billion (U.S. DHHS ACF Office of Head Start 2020). Eligibility prioritizes children in poverty, in foster care, experiencing homelessness, and with disabilities.

Exhibit II.4 presents the impact of CACFP participation among centers on the number of children served whose care is funded by each of these public sources. On average, CACFP centers served 11.4 children receiving funding from child care subsidies (or about 24 percent of total enrollment), whereas eligible non-CACFP centers served 8.3 children with subsidy funding (or about 17 percent of total enrollment). This impact reflects disproportionate reductions in subsidized versus nonsubsidized enrollment among eligible non-CACFP centers, who, alongside CACFP centers, served about one in four children receiving subsidy funding in 2019 (Appendix Table B.4). CACFP participation had no impact on enrollment through public preschool or Head Start.

There were no statistically significant impacts of provider participation in CACFP on measures of staffing changes during the first year of the pandemic (Appendix Exhibit C.2). On average, centers in both groups employed about 12 staff at follow-up, or about 14 staff among centers that remained open) which represents a modest decrease from roughly 15 paid staff in 2019 (Appendix Exhibit B.4). Both CACFP and eligible non-CACFP centers also reported that about four to five staff employed in 2019 were no longer employed at follow-up. Taken together, these patterns imply substantial turnover—on the order of roughly one-third of the 2019 workforce—in both CACFP and eligible non-CACFP centers.

Exhibit II.4. Impact of provider CACFP participation in 2019 on publicly funded enrollment by revenue source during the first year of COVID-19 among centers



Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Exhibit presents regression-adjusted means by research group and their 95 percent confidence intervals. Estimates are based on responses from about 1,420–1,440 CACFP centers and 740–800 eligible non-CACFP centers, weighted to represent approximately 32,600–34,100 and 18,900–20,100 centers across the nation, respectively. Data are drawn from Appendix Exhibit C.2. Follow-up weights provided by the NSECE Project Team were first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. Measures reference the focal week for the first follow-up survey (last week of October 2020). 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.

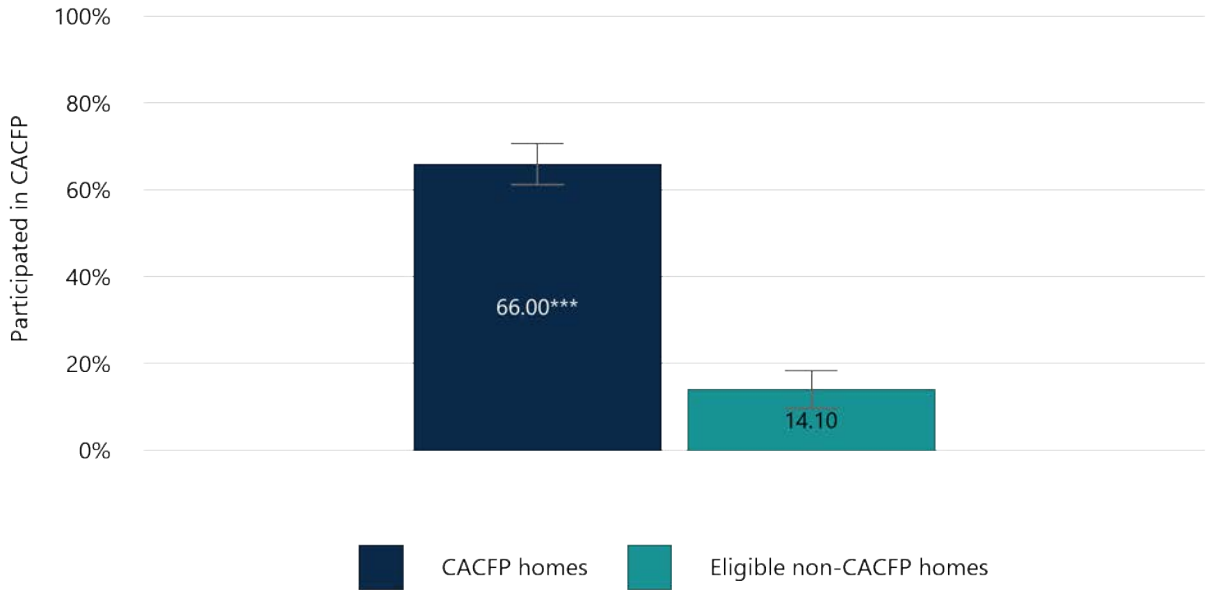
+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

2. Impacts on processes and outputs among homes

During the first year of COVID-19, 73 percent of CACFP homes and 74 percent of eligible non-CACFP homes were still operating, and nearly all operating homes (about 95 percent) continued to provide meals; neither difference was significant (Appendix Exhibit C.4). Both CACFP and eligible non-CACFP homes enrolled about six children on average, or about eight children among homes that remained open, which reflects only a modest decline from the roughly nine children enrolled in 2019 across groups (Appendix Exhibit B.4). CACFP participation did not have a statistically significant impact on follow-up measures of operating hours and location, enrollment changes, or safety protocols (Appendix Exhibit C.4).

Relative to eligible nonparticipants, homes participating in CACFP in 2019 were also more likely to be participating about one year later (Exhibit II.5). At follow-up, 66 percent of CACFP homes were still participating, and 14 percent of eligible non-CACFP homes had begun participating. Most CACFP homes that exited the program had closed (about 80 percent). Among homes that remained open, about 90 percent of CACFP participants were retained, and about 19 percent of eligible nonparticipants joined the program. Together, these patterns suggest steady overall CACFP participation rates among homes that reflect offsetting exits and new entrants.

Exhibit II.5. Impact of provider CACFP participation in 2019 on provider CACFP participation during the first year of the COVID-19 pandemic among homes



Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Home-Based Provider Surveys.

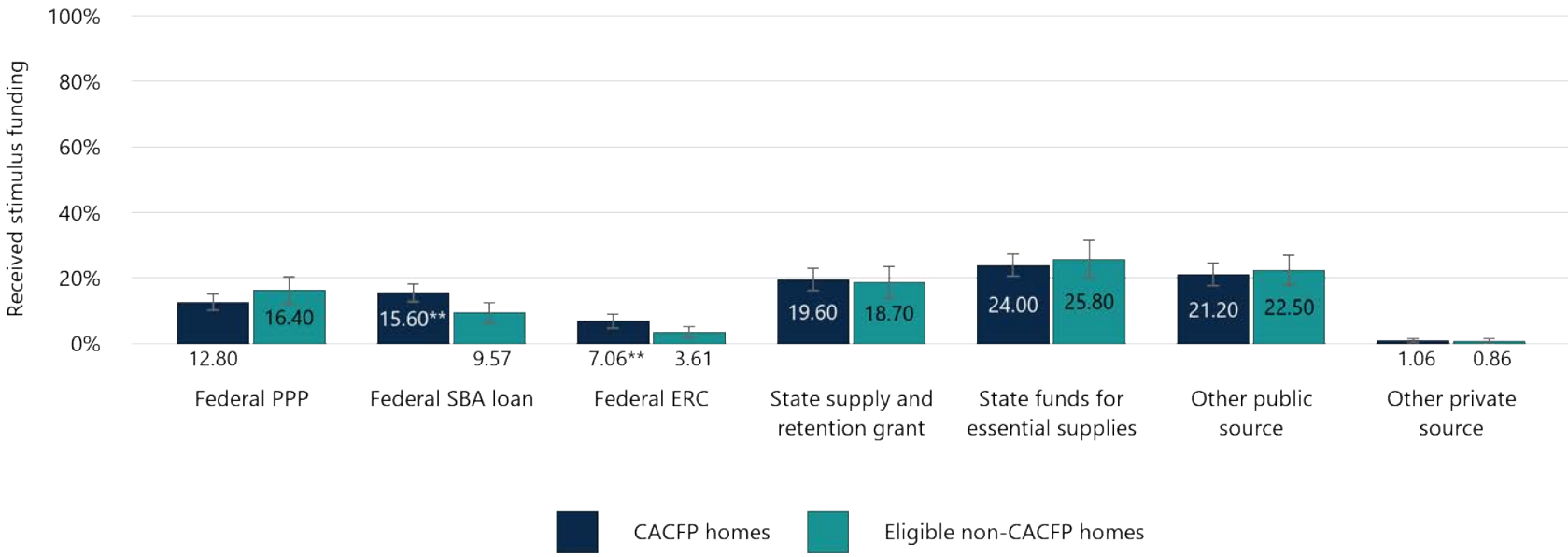
Note: Exhibit presents regression-adjusted percentages by research group and their 95 percent confidence intervals. Estimates are based on responses from about 1,480 CACFP homes and 560 eligible non-CACFP homes, weighted to represent approximately 35,400 and 22,200 homes across the nation, respectively. Data are drawn from Appendix Exhibit C.4. Follow-up weights provided by the NSECE Project Team were first multiplied by the propensity score weight generated using the GBM approach and then applied. This measure references the focal week for the first follow-up survey (last week of October 2020). Relationship-based providers (homes serving three or fewer children with which they all had a prior relationship; N≈180 in analysis sample) were not asked survey questions referencing the focal week period at the first follow-up. This measure excludes providers in the analysis sample that reported offering care as a paid employee in a home owned by someone else during the focal week (N≈160) that were not asked subsequent survey questions referencing the focal week period at the first follow-up. 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.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

Exhibit II.6 shows the impact of provider participation in CACFP on receiving stimulus funding from federal, State, and other sources among homes. CACFP homes were significantly more likely to receive stimulus funding from two of the three federal sources shown: SBA loans (16 versus 10 percent) and ERCs (7 versus 4 percent). There was no significant difference between CACFP homes and eligible non-CACFP homes in receipt of funding from other federal, State, or private sources.

Most CACFP and eligible non-CACFP homes learned about stimulus funding from similar sources. As shown in Exhibit II.7, about half of homes in both groups reported learning about stimulus funding from a State or local child care or education agency. CACFP homes were more likely, however, to report learning about available stimulus funding from State or local public health agencies (19 versus 12 percent) and, at the trend level, from other child care providers or professionals (16 percent versus 12 percent). CACFP and eligible non-CACFP homes were similarly likely to report receiving information about stimulus funding opportunities from national child care organizations, local Resource and Referral agencies, federal agencies, and other channels.

Exhibit II.6. Impact of provider CACFP participation in 2019 on receipt of stimulus funding by source during the first year of COVID-19 among homes



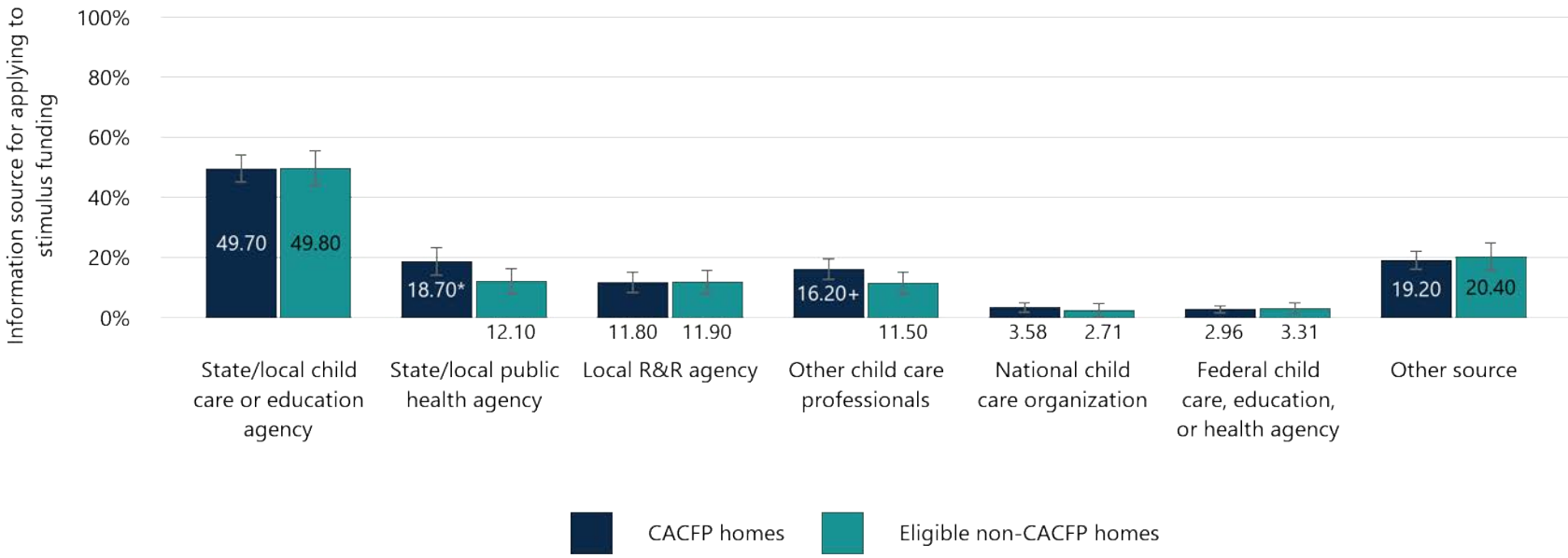
Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Home-Based Provider Surveys.

Note: Exhibit presents regression-adjusted percentages by research group and their 95 percent confidence intervals. Estimates are based on responses from about 1,740 CACFP homes and 680 eligible non-CACFP homes, weighted to represent approximately 41,800 and 25,900 homes across the nation, respectively. Data are drawn from Appendix Exhibit C.5. Follow-up weights provided by the NSECE Project Team were first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. Providers reported on experiences with pandemic assistance programs between the start of the pandemic and the time of the survey (administered December 2020 to March 2021). 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.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

ERC = Employee Retention Credit; PPP = Paycheck Protection program; SBA = Small Business Administration.

Exhibit II.7. Impact of provider CACFP participation in 2019 on how homes learned about stimulus funding during the first year of COVID-19



Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Home-Based Provider Surveys.

Note: Exhibit presents regression-adjusted percentages by research group and their 95 percent confidence intervals. Estimates are based on responses from about 1,740 CACFP homes and 680 eligible non-CACFP homes, weighted to represent approximately 41,800 and 25,900 homes across the nation, respectively. Data are drawn from Appendix Exhibit C.5. Follow-up weights provided by the NSECE Project Team were first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. Providers reported on experiences with pandemic assistance programs between the start of the pandemic and the time of the survey (administered December 2020 to March 2021). 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.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

R&R = Resource and Referral.

B. Research question B2: Did provider CACFP participation in 2019 influence outcomes measured about two years later, during the second year of COVID-19?

We examined whether CACFP participation in 2019 influenced providers' ability to sustain or resume operations, maintain services, and support financial stability, service quality, and child health and well-being during the second year of the COVID-19 pandemic. There were no significant impacts on operations, enrollment, or measures of service maintenance or quality. Participating in CACFP increased the likelihood that center staff earned higher wages than before the pandemic, with some indication that these wage increases were attributed to higher program funding or public mandates, including contractual or grant conditions—such as stimulus funding requirements—directing resources to staff compensation. CACFP participation also increased the likelihood that centers were still providing meals for children and decreased the likelihood that homes enrolled one or more children experiencing food insecurity. We discuss possible explanations for these findings in Chapter III.

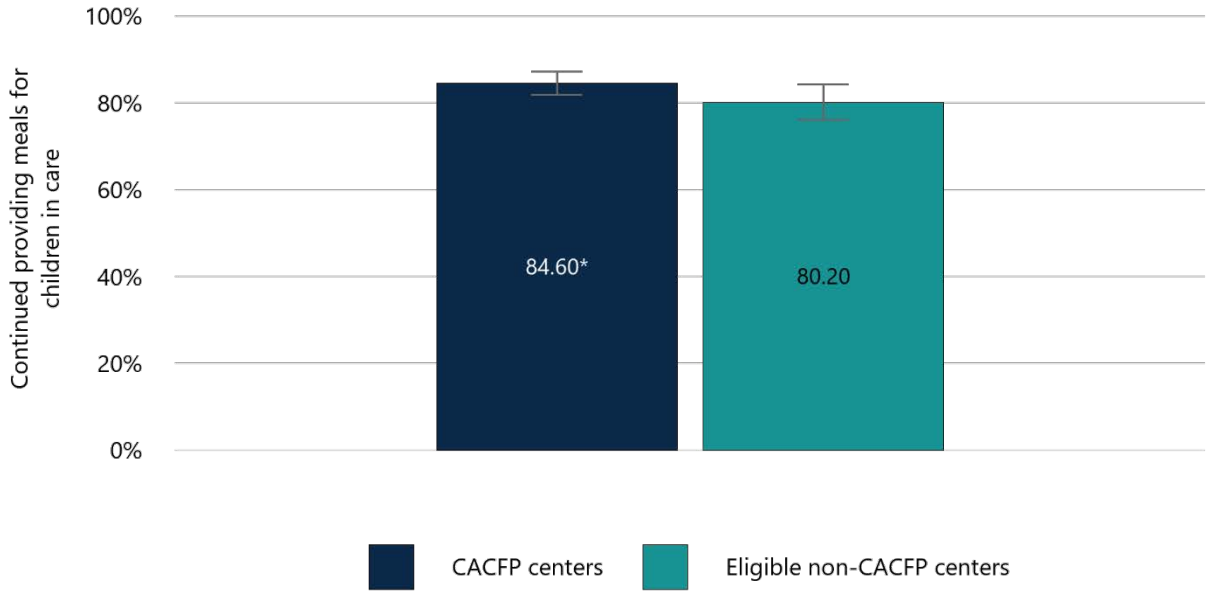
1. Impacts on short-term and intermediate outcomes among centers

Two years after the start of COVID-19, 86 percent of CACFP centers and 85 percent of eligible non-CACFP centers were still operating, but most reported at least one unplanned closure since the pandemic began (about two in three for both groups; Appendix Exhibit C.7). As shown in Exhibit II.8, however, CACFP centers were 4 percentage points more likely than nonparticipating centers to continue providing meals (85 versus 80 percent), and this difference was statistically significant. Among centers that remained open, nearly all that participated in CACFP were providing meals (99 percent), compared with roughly 94 percent of eligible non-CACFP centers. This pattern suggests a recovery in meal services—though more complete for CACFP centers than eligible nonparticipants—relative to the first follow-up, when about 90 percent of operating centers in both groups continued serving meals.

Similar proportions of CACFP and eligible non-CACFP centers agreed that it remained harder to stay open and cover costs relative to before the pandemic, though only about one in five reported raising tuition. There was also no significant difference in average enrollment between CACFP and eligible non-CACFP centers (57 versus 51 children; Appendix Exhibit C.7). Among centers that remained open, CACFP and eligible non-CACFP centers enrolled about 66 and 60 children, respectively—levels that were lower than before COVID-19 but higher than the prior year, suggesting a partial recovery of lost enrollment during the first year of the pandemic.

CACFP participation also did not significantly impact staffing retention or recruitment during the second year of the pandemic among centers. Centers in both groups were equally likely to report that the number of paid staff had changed since the start of the pandemic, and both reported that roughly four to five staff employed in 2019 were no longer employed about two years later (Appendix Exhibit C.7). Notably, these counts mirror findings from the first follow-up, suggesting that staffing losses were concentrated in the first year of the pandemic, with less turnover in the second year.

Exhibit II.8. Impact of provider CACFP participation in 2019 on meal service delivery during the second year of COVID-19 among centers



Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

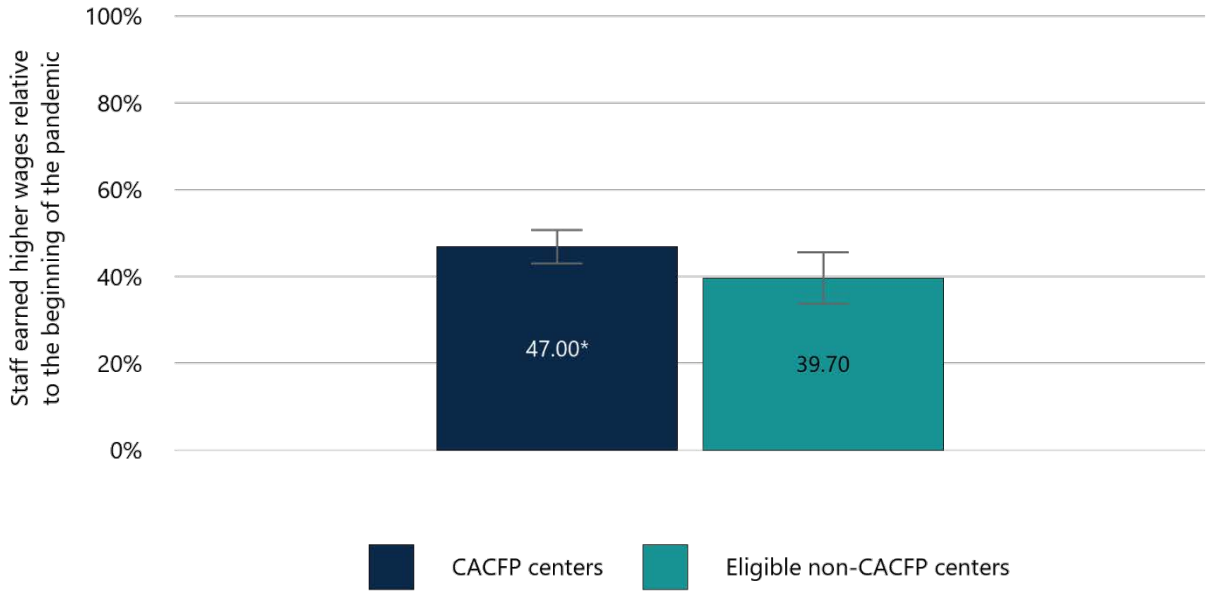
Note: Exhibit presents regression-adjusted percentages by research group and their 95 percent confidence intervals. Estimates are based on responses from about 1,880 CACFP centers and 940 eligible non-CACFP centers, weighted to represent approximately 41,900 and 24,600 centers across the nation, respectively. Data are drawn from Appendix Exhibit C.7. Follow-up weights provided by the NSECE Project Team were first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. Measure references the focal week for the second follow-up survey, defined as the last week of September 2021 for respondents to the fall partial wave (64 percent of analysis sample) and March 2021 otherwise. 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.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

Exhibit II.9 shows the impact of provider CACFP participation on wages paid to center staff. Provider CACFP participation increased the likelihood that center staff earned higher hourly wages than they did at the beginning of the pandemic by 7 percentage points (47 versus 40 percent). Centers also reported the main reason for wage increases. At the trend level, CACFP centers were more likely to attribute higher wages to changes in program funding or public mandates—such as grant conditions requiring centers to use funds to increase staff wages or increased wage-floor requirements for public revenue streams (8 versus 4 percent; Appendix Exhibit C.7). CACFP and eligible non-CACFP centers selected other reasons—contract-based pay raises and pandemic-related changes in labor demand (for example, hazard pay, higher hourly rates due to reduced operating hours, or increased wages to recruit staff during the recovery)—at similar rates.

There were no significant impacts of provider CACFP participation on whether centers offered staff benefits (Appendix Exhibit C.7), provided staff access to professional supports, or on other measures of service quality, such as staff qualifications and staff–child ratios (Appendix Exhibit C.8). Though CACFP centers were more likely to continue providing meal services, they were no more likely than non-CACFP centers to provide access to other child health services (Appendix Exhibit C.8).

Exhibit II.9. Impact of provider CACFP participation in 2019 on staff wages during the second year of COVID-19 among centers



Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Exhibit presents regression-adjusted percentages by research group and their 95 percent confidence intervals. Estimates are based on responses from about 1,880 CACFP centers and 920 eligible non-CACFP centers, weighted to represent approximately 41,400 and 24,100 centers across the nation, respectively. Data are drawn from Appendix Exhibit C.7. Follow-up weights provided by the NSECE Project Team were first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. Measure references the focal week for the second follow-up survey, defined as the last week of September 2021 for respondents to the fall partial wave (64 percent of analysis sample) and March 2021 otherwise. 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.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

2. Impacts on short-term and intermediate outcomes among homes

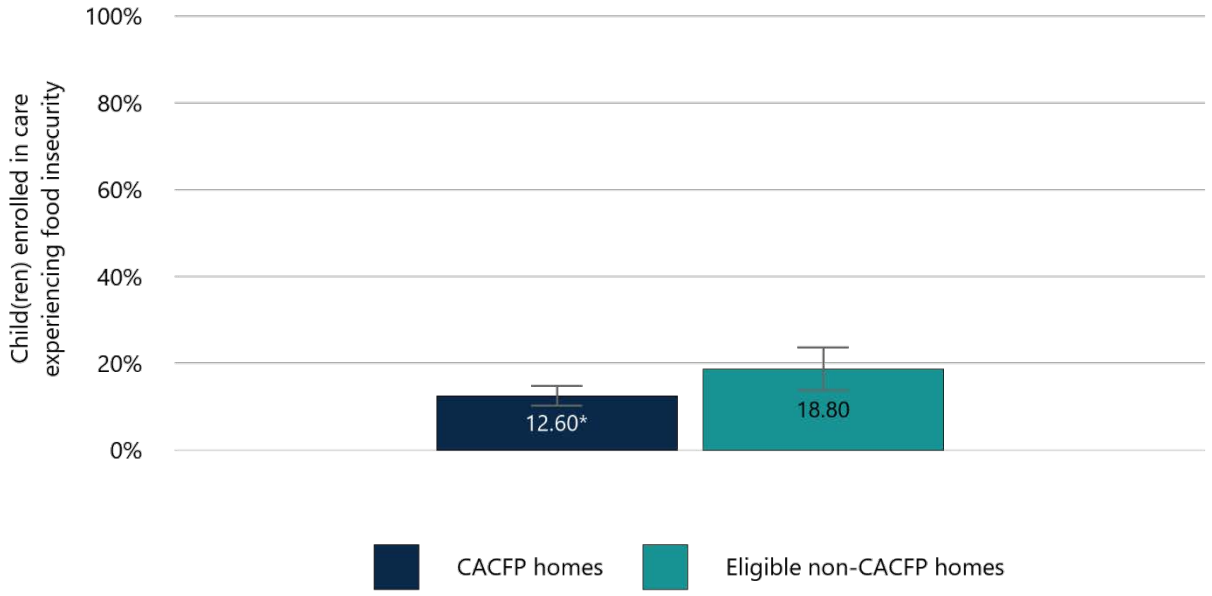
Among homes, there were no significant impacts of provider CACFP participation on operations, services maintenance, and financial stability outcomes during the second year of the pandemic (Appendix Exhibit C.10). At the second follow-up, 77 percent of CACFP homes and 78 percent of eligible non-CACFP homes were still operating, suggesting a modest increase in operating rates reported one year earlier. Similar shares of CACFP and eligible non-CACFP homes also continued to provide meals at the second follow-up. Whereas most operating centers reported at least one unplanned closure due to the pandemic, fewer than half of operating homes in both groups reported closures. Nevertheless, about three in four CACFP and non-CACFP homes agreed that the pandemic had made it harder to cover costs to stay open. Both CACFP and eligible non-CACFP homes enrolled about six children on average (or about eight children among homes that continued to operate); these enrollment levels were similar to the first year of the pandemic.

We also did not find significant differences in service quality outcomes among homes by provider CACFP participation status at the second follow-up (Appendix Exhibit C.11). CACFP and eligible non-CACFP

homes had similar average staff–child ratios across age group(s) and were similarly likely to have participated in a health and safety training and to have received professional coaching or attended a professional workshop since the start of the pandemic.

Homes were asked to report the number of children enrolled experiencing food insecurity. Providers could also indicate that they did not know the exact number of children experiencing food insecurity, but it was at least one. Although there was no significant difference in the average number of children experiencing food insecurity between CACFP and eligible non-CACFP homes (0.25 versus 0.34 children; Appendix Exhibit C.11), CACFP homes were 6 percentage points less likely to report that any child(ren) enrolled experienced food insecurity (13 versus 19 percent; Exhibit II.10). This impact, which reflects both reported counts and reporting patterns among providers that did not know exact counts, was statistically significant.

Exhibit II.10. Impact of provider CACFP participation in 2019 on child food insecurity during the second year of COVID-19 among homes



Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Home-Based Provider Surveys.

Note: Exhibit presents regression-adjusted percentages by research group and their 95 percent confidence intervals. Estimates are based on responses from about 1,560 CACFP homes and 600 eligible non-CACFP homes, weighted to represent approximately 37,200 and 23,600 homes across the nation, respectively. Data are drawn from Appendix Exhibit C.11. Follow-up weights provided by the NSECE Project Team were first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. Measure references the focal week for the second follow-up survey, defined as the last week of September 2021. Relationship-based providers were asked survey questions referencing the focal week period at the second follow-up. 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.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

This page has been left blank for double-sided copying.

III. Discussion and implications

The study findings provide insights into the provider and community characteristics associated with provider CACFP participation in 2019 and the impacts of participating in CACFP on follow-up measures from the first two years of the COVID-19 pandemic. We used a quasi-experimental design and longitudinal data from the NSECE to estimate how participating in CACFP influenced key provider practices and outcomes. The analysis adjusted for differences between providers that participated in CACFP and those that were eligible but did not participate using a wide range of information corresponding to when we first observed providers in the program, allowing for meaningful comparisons between providers that were otherwise similar but differed by initial CACFP participation status. This discussion summarizes and integrates key findings and considers their potential implications for future research and CACFP policy.

A. What were the predictors of provider CACFP participation and possible pathways to impact?

Before the pandemic, across both analytic approaches and provider types, provider CACFP participation was associated with a common set of factors. These included operating in communities with higher levels of poverty and serving families with lower incomes; receiving public funding (such as from child care subsidies); participating in other public programs (such as Head Start, which requires providers to participate in a USDA child nutrition program such as CACFP, and State quality rating and improvement systems [QRISs]); offering indicators of higher service quality; and engaging with licensing, monitoring, and professional development activities. Together, these characteristics predicted whether centers and homes were willing and able to participate in CACFP and were used to address concerns that differential selection of eligible providers into CACFP confounds the estimated benefits of the program.

These benefits—defined in this study as differences in follow-up measures between participating providers and their constructed counterfactual—may arise from several potential pathways. First, CACFP provides direct financial reimbursements tied to meal service and provider eligibility. Recent cost studies suggest that food costs account for roughly 10 percent of total expenditures for child care centers and that CACFP reimbursement offsets about 8 percent of total costs among participating providers (Schochet 2025; Litkowski et al. 2024). Although CACFP payments cover only a modest portion of total operating expenses (for example, U.S. DHHS ACF OCC 2025), they represent a stable source of revenue that supports the consistent provision of meals and snacks and may reduce pressure on other funds providers need to maintain staffing or invest in quality improvement.

Second, CACFP participation requires providers to meet federal meal pattern standards and involves regular oversight and support from sponsors and State agencies. These entities provide menu planning tools, nutrition education, and technical assistance, and they conduct routine monitoring visits that often exceed minimum health and safety requirements for licensing (USDA FNS 2014). Consistent with this structure, we found that recent health and safety inspections, visits to monitor the quality of child care services, health and nutrition consultations, and participation in health and safety trainings predicted which eligible providers participated in CACFP across analytic approaches and provider types. Prior research also finds that participating providers tend to adopt more structured meal practices and broader

health and safety routines linked to CACFP standards, training, and oversight (Ritchie et al. 2012; Schochet et al. 2024).

Finally, CACFP participation may influence providers through ongoing engagement with sponsors or State agencies that extends beyond program-specific standards and related monitoring and training. These interactions may facilitate access to information about other public programs, funding streams, and professional resources. Although we found that provider CACFP participation was correlated with greater engagement in other child care systems, many participating providers were not embedded in those systems. For example, roughly one-third of CACFP centers and about one-half of CACFP homes did not participate in their State QRIS, and only about one-quarter of CACFP providers reported belonging to a professional child care organization (such as national or State child care associations). CACFP represents a consistent point of contact for participating providers beyond basic licensing requirements and may help connect providers to additional information, referrals, and capacity-building supports.

The findings from this study are grounded in an unusual time—the COVID-19 pandemic, which is the period when the follow-up data were collected. In our analysis, both CACFP and eligible non-CACFP providers experienced operational strain, including closures, reduced enrollment, and higher operating costs. The program also introduced temporary policy changes to support providers, including increased reimbursement rates for homes, flexible administrative requirements, and expanded access to free meals for centers providing afterschool care. Yet even against this backdrop, CACFP continued to function as a regular and reliable source of support. Most participating providers continued participating about one year later, and among providers that remained open during the first year of the pandemic, overall CACFP participation rates were similar to those at baseline (we found that about 5 percent of homes and 10 percent of centers exited, while similar shares entered the program between periods). The benefits of consistent funding, predictable reimbursement, and structured administrative relationships, discussed next, offer lessons that also remain relevant for policy planning beyond the pandemic.

B. What did we learn about the impacts of provider CACFP participation?

Provider CACFP participation was associated with a focused set of impacts on key process, output, and outcome measures. Specifically, findings suggested benefits of provider participation for select measures of financial resilience and stability, continuity of meal services, and child food security. By contrast, we did not find impacts on providers' broader structural features or operations—such as operating status, location, and schedules, and measures of staffing, enrollment, and service quality—or on most indicators of general financial condition. This pattern is consistent with CACFP meal reimbursements offsetting a modest share of total operating costs, program nutrition standards, and ongoing engagement with providers.

1. After about one year, provider CACFP participation was associated with increased access to pandemic relief funding and with centers maintaining child care subsidy enrollment

We found that after approximately one year, provider CACFP participation was associated with greater access to pandemic-related stimulus funding and, among centers, larger shares of enrolled children whose care was funded by child care subsidies. These impacts on processes and outputs were measured during the first year of the COVID-19 pandemic, when both CACFP and eligible non-CACFP providers

faced reduced enrollment, suspended operations and intermittent closures, higher operating costs, and rapidly evolving policy guidance.

Provider CACFP participation was associated with a higher likelihood of receiving federal stimulus funding and shaped where providers learned about these opportunities. CACFP centers were more likely than eligible nonparticipating centers to receive PPP loans and employee retention credits and were significantly more likely to report learning about at least one source of stimulus funding directly from a federal child care, education, or health agency or, at the trend level, from another federal source. Homes participating in CACFP also showed higher rates of receiving employee retention credits and SBA loans and were more likely to report learning how to apply for relief funding from State or local government agencies and, at the trend level, from other child care providers or professionals. These patterns are consistent with CACFP's role as a regular point of contact between providers and public agencies and suggest that participating providers may have been referred to funding streams for which they were eligible (for example, homes are more likely to qualify for SBA loans as small businesses or independent contractors). Differences in how providers learned about these opportunities may also reflect the varied ways centers and homes typically interacted with CACFP. Homes must participate through sponsors and were more likely to identify State or local health agencies as information sources, whereas some centers operate independently and were more likely to identify federal child care or education agencies—or another federal agency—as sources of guidance. Future research could examine how providers perceive CACFP and how these perceptions shape the pathways through which providers receive information from program staff or agencies.

Among centers, provider CACFP participation had a positive impact on the number of children funded by child care subsidies and may have enabled centers to maintain subsidy enrollment during the pandemic. CACFP centers maintained their average share of enrolled children receiving subsidy funding (subsidy density) between 2019 and the first follow-up, whereas eligible non-CACFP centers experienced a notable decline in this share. Supplemental analyses also suggest that differences in subsidy enrollment by provider CACFP participation were concentrated among centers already accepting subsidies. One possible explanation is that some CACFP centers, notably for-profit providers representing more than one in three centers in the study sample, must maintain a minimum share of low-income children to remain eligible for CACFP reimbursement. Another possibility is that provider CACFP participation reflects more durable differences in organizational orientation or mission toward serving families with lower incomes, which may have shaped enrollment decisions amidst the disruption caused by the pandemic. Although the analysis balances on a rich set of baseline characteristics, including provider subsidy participation and density, unobserved differences in provider preferences or constraints may also have contributed to these patterns (also see Box III.1). Future research could help distinguish between these possible explanations.

2. After about two years, provider CACFP participation was associated with positive impacts on staff compensation and continuity of meal services among centers and child food security among homes

Provider CACFP participation increased the likelihood that center staff earned higher wages than before the pandemic because of higher program funding or public mandates directing resources to staff compensation, such as requirements to receive sources of stimulus funding. Provider CACFP participation

also increased the likelihood that centers continued providing meals for children and decreased the likelihood that homes reported enrolling one or more children experiencing food insecurity. These outcomes were measured after about two years in the program, during the recovery period of the pandemic, when many providers had resumed operations but continued to face staffing shortages and uneven enrollment.

CACFP centers were more likely than eligible non-CACFP centers to report that staff earned higher wages than before the pandemic. At the trend level, CACFP centers were also more likely to cite higher program funding and mandates or incentives such as those tied to pandemic relief funding streams as reasons for those wage increases. Homes were not asked questions related to staff compensation on the follow-up survey. These findings align with earlier results showing that provider CACFP participation was associated with increased access to federal stimulus funding and with learning about these opportunities directly through federal agencies. States administering major federal pandemic relief programs, including the CARES Act and the American Rescue Plan Act, often required or encouraged the use of child care relief funds for personnel costs, including staff compensation, to support workforce retention during the pandemic (for example, see U.S. GAO 2024). Taken together, the findings are consistent with a pathway in which provider CACFP participation facilitated access to relief funding, which in turn may have supported increases in staff compensation during the pandemic.

Provider CACFP participation was associated with positive impacts on centers' continuity of meal services about two years after study baseline. Although most centers that remained operational continued to provide meals, the difference between CACFP centers and eligible non-CACFP centers after two years is meaningful because this measure had limited variation (all eligible providers initially served meals) and because it reflects differential recovery of meal services over time. Among centers that had stopped serving meals after one year (about 10 percent of operating centers in both groups), participating centers were more than twice as likely as eligible nonparticipating centers to have resumed meal services by the second follow-up (98 percent versus 93 percent of centers still operating, respectively). This finding—the first to link provider CACFP participation with positive impacts on continued meal service provisions over time—is consistent with prior descriptive research relating provider CACFP participation with a higher likelihood of offering meals and snacks and, in some cases, more structured nutrition practices (for example, Kenney et al. 2023; Eiffes et al. 2025).

Among homes, provider CACFP participation was also associated with lower reported rates of enrolling one or more children experiencing household food insecurity. This finding aligns with earlier evidence linking provider CACFP participation to healthier foods served and, in some studies, improved dietary intake among children in participating settings (see Eiffes et al. 2025 for a review). Because nearly all homes that remained operational at follow-up continued to offer meals regardless of CACFP participation status, this finding may reflect supports that help providers maintain food quality or consistency over time, including during periods of financial strain, such as the pandemic. The finding may also reflect differences in how CACFP homes assess or track the nutritional well-being of children they serve. As noted earlier, the impact emerged only after including responses from providers that indicated that at least one child experienced food insecurity but were unsure of the exact number. CACFP homes were less likely than eligible non-CACFP homes to select this response, suggesting that participating providers may either have encountered fewer cases of food insecurity or were more attuned to household

food security status and more confident in their assessments. As discussed in Box III.1, these interpretations should be considered alongside limitations related to provider-reported measures of food insecurity.

Box III.1. Limitations to consider when interpreting the study findings

- The analysis assumes **conditional independence** (that is, that we observed all relevant differences between CACFP and non-CACFP providers). This cannot be formally tested, though we adjusted for a wide range of sample characteristics and used innovative propensity score approaches to reduce risk of omitted variable bias. Nevertheless, differential selection into provider CACFP participation on unobserved factors remains a concern.
- Findings are based on **self-reported survey data**, which may be subject to measurement error or reporting bias. The NSECE was developed with expert input (NSECE Project Team 2022) and is widely used, though few studies have reported on its validity or reliability (however, NSECE-based estimates of CACFP participation were found to align with national counts from FNA administrative data in a recent study; Schochet et al. 2025).
- Program **eligibility was modelled**, not observed. Because the NSECE did not collect information used to determine CACFP eligibility among for-profit centers—Title XX funding and household income of families served—prior eligibility simulations suggest that about 5 percent of centers in the analysis sample were misclassified (Schochet et al. 2024).
- The timing of data collection, beginning in 2019 and spanning two follow-ups conducted between fall 2020 and early 2022, provided a distinctive view of CACFP participation directly before and during the COVID-19 pandemic, but we do not know whether **findings generalize** beyond the pandemic.
- Estimated impacts may be **attenuated by design**. Balancing providers on their 2019 characteristics may have controlled away some program effects from before study baseline, while follow-up noncompliance (participants exiting and eligible nonparticipants entering) may have further reduced differences in program exposure. These factors likely yield conservative estimates of CACFP's impacts. ◢

C. Conclusions

Although food costs reimbursed by CACFP represented a modest share of providers' operating budgets, this study finds that provider participation was associated with increased access to key public funding streams, greater continuity in meal service operations, and differences in an indicator of child food security. These findings suggest that CACFP can provide consistent guidance for providers by offering routine meal reimbursements and opportunities for regular interaction with program staff and sponsors. During the period covered by the follow-up surveys—which coincided with significant disruption and frequent policy changes—the program also appeared to support providers by connecting providers with information and resources, including funding opportunities beyond CACFP's immediate service environment. More broadly, the results highlight the potential value of programs that combine regular and reliable sources of funding with structured points of contact for providers, including during periods of significant disruption such as the pandemic. Future research can build on these insights by examining how CACFP's infrastructure contributes to access to resources, continuity of services, and coordination with other child care systems during both stable periods and times of crisis.

This page has been left blank for double-sided copying.

References

Adams, G., C. Kuhns, and F. Hernandez-Lepe. "Untapped Potential: License-Exempt Home-Based Child Care Providers and the Child and Adult Care Food Program." Urban Institute, October 2023. https://www.urban.org/sites/default/files/2023-10/Untapped%20Potential.pdf.

Andreyeva, T., X. Sun, M. Cannon, and E.L. Kenney. "The Child and Adult Care Food Program: Barriers to Participation and Financial Implications of Underuse." *Journal of Nutrition Education and Behavior,* vol. 54, no. 4, 2022, pp. 327–334.

Eiffes, B.A., S.A. White, S.M. Navarro, M.H. Boyle, and R.L. Franckle. "Childcare and Meal Provision: A Systematic Literature Review." *Nutrition Reviews,* vol. 83, no. 7, 2025, pp. 1358–1373.

Erinosho, T., B. Jana, K. Loefstedt, M. Vu, and D. Ward. "Facilitators and Barriers to Family Child Care Home Participation in the U.S. Child and Adult Care Food Program (CACFP)." *Preventive Medicine Reports*, vol. 30, 2022, article 102022.

Food Research and Action Center (FRAC). "The Child and Adult Care Food Program (CACFP) Fact Sheet," 2025. https://frac.org/wp-content/uploads/cacfp-fact-sheet.pdf. Accessed February 9, 2026.

FRAC. "Child and Adult Care Food Program: USDA Waivers," n.d. https://frac.org/wp-content/uploads/CACFP-New-USDA-Waivers-for-COVID-19.pdf. Accessed December 11, 2025.

Francis, L., N. Perrin, M.M. Black, and J.K. Allen. "Mealtime Environment and Feeding Practices in Urban Family Child Care Homes in the United States." *Childhood Obesity*, vol. 18, no. 2, 2022, pp. 102–111.

Friedman-Krauss, A.H., W.S. Barnett, K.A. Garver, K.S. Hodges, G.G. Weisenfeld, and B.A. Gardiner. "The State of Preschool 2019: State Preschool Yearbook." National Institute for Early Education Research, 2020. https://nieer.org/sites/default/files/2023-09/YB2019_Full_Report.pdf.

Gurzo, K., D.L. Lee, K. Ritchie, S. Yoshida, E. Homel Vitale, K. Hecht, and L.D. Ritchie. "Child Care Sites Participating in the Federal Child and Adult Care Food Program Provide More Nutritious Foods and Beverages." *Journal of Nutrition Education and Behavior*, vol. 52, no. 7, 2020, pp. 697–704.

Heflin, C., A. Irma, and S. Gable. "Child and Adult Care Food Program Participation Benefits, Barriers and Facilitators for Independent Child Care Centers in California." *Nutrients*, vol. 14, no. 21, 2022, pp. 4449.

Heinz, H., D. Bell, J. Martinez, M. Cunningham, B. Maunders, and E.Y. Jimenez. "New Mexico Sponsors Identify Time and Money as Factors Affecting Home-Based Provider Child and Adult Care Food Program Engagement." *Journal of Nutrition Education and Behavior*, vol. 54, no. 10, 2022, pp. 947–956.

Jana, B., K. Loefstedt, M. Vu, D. Ward, and T. Erinosho. "'It Has a Lot to do with the Cumbersome Paperwork': Barriers and Facilitators of Center-Based Early Care and Education (ECE) Program Participation in the Child and Adult Care Food Program (CACFP)." *Journal of the Academy of Nutrition and Dietetics*, vol. 123, no. 8, 2023, pp.1173–1186.

Kenney, E.L., K. Tucker, R.S. Plummer, C. Mita, and T. Andreyeva. "The Child and Adult Care Food Program and Young Children's Health: A Systematic Review." *Nutrition Reviews*, vol. 81, no. 11, 2023, pp. 1402–1413.

Lee, D.L., E. Homel Vitale, S.K.D. Marshall, C. Hecht, L.T. Beck, and L.D. Ritchie. "Child and Adult Care Food Program Participation Benefits, Barriers and Facilitators for Independent Child Care Centers in California." *Nutrients*, vol. 14, no. 21, 2022, article 4449.

Litkowski, E., T. Neelan, K. Gonzalez, C. Baxter, D. Straske, P. Caronongan, and G. Kirby. "Assessing the Implementation and Costs of High-Quality Early Care and Education (ICHQ): Data User Manual." OPRE Report #2024-016. Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, January 2024.

NSECE Project Team. "2019 National Survey of Early Care and Education Data Collection and Sampling Methodology Report." OPRE Report #2022-118. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, June 2022.

Ritchie, L.D., M. Boyle, K. Chandran, P. Spector, S. E. Whaley, P. James, S. Samuels, K. Hecht, and P. Crawford. "Participation in the Child and Adult Care Food Program Is Associated with More Nutritious Foods and Beverages in Child Care." *Childhood Obesity*, vol. 8, no. 3, 2012, pp. 224–229.

Severn, V., L. Washburn, R. Frisk, and K. Conway. "Child Nutrition Program Operations During the COVID-19 Pandemic, March through September 2020." Office of Policy Support, Food and Nutrition Service, U.S. Department of Agriculture, May 2023.

Schochet, O. "Using Cost Survey Data to Inform Child Care and Early Education Cost Models." OPRE Report #2025-021. Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, April 2025.

Schochet, O., R. Franckle, M. Boyle, S. Navarro, and the Childcare and Meal Provision Data Analysis Team. "Childcare and Meal Provision: Data Analysis Report." Food and Nutrition Service, U.S. Department of Agriculture, June 2024.

Schochet, O., L. Washburn, M. Boyle, K. Allison-Clark, S. Navarro, J. Kindler, and J. Sohlberg. "CACFP Participation Among Child Care Providers: Data Analysis, Validation Study Report." Food and Nutrition Service, U.S. Department of Agriculture, April 2025

U.S. Congress. "Coronavirus Aid, Relief, and Economic Security (CARES) Act, Public Law 116–136," 2020. https://www.congress.gov/116/bills/hr748/BILLS-116hr748enr.pdf

USDA FNS. "Health and Safety Inspection Requirements." 2014. https://www.fna.usda.gov/cn/health-and-safety-inspection-requirements

USDA FNS. "Summary of Annual Data, Fiscal Year 2021–2025." 2025. https://www.fna.usda.gov/pd/overview/keydata-oct25

U.S. Department of Health and Human Services, Administration for Children and Families, Office of Child Care (DHHS ACF OCC). "Child Care and Development Fund (CCDF) Resource Guide," n.d. https://www.acf.gov/occ/guide-ccdf-resources. Accessed December 11, 2025.

U.S. DHHS ACF OCC. "Characteristics of Families Served by the Child Care and Development Fund (CCDF) Based on Preliminary FY2019 Data." 2022. https://acf.gov/occ/fact-sheet/characteristics-families-served-child-care-and-development-fund-ccdf-based

U.S. DHHS ACF OCC. "CCDF Expenditures Overview for FY 2019 (All Appropriation Years)." 2021. https://www.acf.hhs.gov/occ/data/ccdf-expenditures-overview-fy-2019-all-appropriation-years

U.S. DHHS ACF OCC. "Provider Cost of Quality Calculator (PCQC) User Guide." 2025. https://pcqc.acf.hhs.gov/sites/default/files/PCQC%20User%20Guide.pdf

U.S. DHHS ACF, Office of Head Start. "Office of Head Start 2019 Biennial Report to Congress," 2020. https://acf.gov/sites/default/files/documents/ohs/ohs-2019-biennial-report-to-congress.pdf Accessed March 5, 2026.

U.S. Department of the Treasury, Internal Revenue Service. "Notice 2021-20: Guidance on the Employee Retention Credit under Section 2301 of the CARES Act." 2021. https://www.irs.gov/pub/irs-drop/n-21-20.pdf

U.S. Government Accountability Office (GAO). "Child Care: Observations on States' Use of COVID-19 Pandemic-Related Funding (GAO-23-106833)," 2023. https://www.gao.gov/assets/gao-23-106833.pdf

U.S. GAO. "Child Care: Selected States Are Taking Steps to Sustain Program Changes Implemented with COVID-19 Funding (GAO-24-106258)." 2024. https://www.gao.gov/assets/d24106258.pdf

U.S. Small Business Administration. "COVID-19 Relief Options." 2020. https://www.sba.gov/funding-programs/loans/covid-19-relief-options

Washburn, L., V. Severn, B. Eiffes, M. Scott, S. Navarro, and K. Conway. "Child Nutrition Program Operations During the COVID-19 Pandemic, July 2021 through September 2022." Office of Policy Support, Food and Nutrition Service, U.S. Department of Agriculture, March 2025.

Zaltz, D.A., A.A. Hecht, R.R. Pate, B. Neelon, J.R. O'Neil, and S.E. Benjamin-Neelon. "Participation in the Child and Adult Care Food Program Is Associated with Fewer Barriers to Serving Healthier Foods in Early Care and Education." *BMC Public Health*, vol. 20, no. 856, 2020, pp. 1–9.

Zaslow, M., T. Halle, R. Madill, and N. Forry. "History of the National Survey of Early Care and Education, Part II: The Development of the 2019 NSECE and the NSECE COVID-19 Longitudinal Follow-up." OPRE Report #2024-010. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, March 2024.

This page has been left blank for double-sided copying.

Appendix A

Methodology

This page has been left blank for double-sided copying.

In this appendix, we describe the study data sources, analytic sample, measures, and analytic strategy. The analytic framework, including the study methods, was in an interim study analysis plan approved by FNA before implementing the analysis. We present supplemental methods exhibits at the end of this section.

A. Data sources

This study relied on data from the 2019 NSECE and the NSECE COVID-19 Longitudinal Follow-up. The NSECE is a nationally representative cross-sectional study of the child care and early education landscape sponsored by the Office of Planning, Research and Evaluation (OPRE) within the Administration for Children and Families and conducted by NORC at the University of Chicago (NSECE Project Team 2020). The first data analysis report provides additional information on the NSECE design, sample, and data collection (see Schochet et al. 2024, Appendix A).

Data for the 2019 NSECE were collected between January and July 2019 (NSECE Project Team 2022). The NSECE Project Team collected provider surveys from centers (center directors) and homes (home-based providers), capturing detailed information on providers' characteristics, service delivery, enrollment, staffing, funding, and daily operations. Providers were asked to refer to the last week of October 2019 as the focal week for the survey. For centers, the 2019 Center-Based Workforce Survey provided additional workforce characteristics that we aggregated to the provider level and linked to the provider file. The NSECE Project Team also linked community characteristics from the American Community Survey to providers to describe the demographic and economic contexts in which centers and homes operated.

Following the onset of the COVID-19 pandemic, OPRE sponsored the NSECE COVID-19 Longitudinal Follow-up to learn how the pandemic was influencing the providers that responded in 2019. The NSECE COVID-19 Longitudinal Follow-up was administered over two periods (called waves), from late 2020 through early 2022 (Zaslow et al. 2024). For this study, data from the first follow-up were used to measure processes and outputs during the first year of the pandemic, and data from the second follow-up were used to measure short-term and intermediate outcomes during the second year of the pandemic. Appendix Exhibit A.1 summarizes the NSECE COVID-19 Longitudinal Follow-up data collection periods and focal weeks. Appendix Exhibit A.7 further details the data source and reference period for each constructed follow-up measure.

With support from the NSECE Project Team, we accessed restricted-use versions of the 2019 Center-Based and Home-Based Provider Surveys (with linked American Community Survey community characteristics), the 2019 Center-Based Workforce Survey, the COVID-19 Longitudinal Follow-up Wave 1 Center-Based and Home-Based Provider Surveys, and the COVID-19 Longitudinal Follow-up Wave 2 Center-Based and Home-Based Provider Surveys. Access to the restricted-use NSECE data was approved by the HML Institutional Review Board, which determined that the study met the criteria for exempt research (IRB #2352). We received remote access to the NSECE datafiles on a secure server hosted by NORC, where, using Stata (version 18), we conducted the analysis. We report all study findings in accordance with NSECE restricted-use data reporting requirements that we describe in relevant exhibit notes.

Exhibit A.1. NSECE data collection periods and focal weeks by wave and provider type

Provider type	Data collection period	Focal week
2019 NSECE Provider Survey		
Centers and homes	• January 2019 – July 2019	• Last week of October 2019
NSECE COVID-19 Longitudinal Follow-up Survey: Wave 1		
Centers	• November 2020 – March 2021	• Last week of October 2020
Homes	• December 2020 – March 2021	• Last week of October 2020
NSECE COVID-19 Longitudinal Follow-up Survey: Wave 2		
Centers	Two partial waves: • April 2021 – June 2021 (Spring) • October 2021 – February 2022 (Fall)	Two partial waves: • Last week of March 2021 (Spring) • Last week of September 2021 (Fall)
Homes	• December 2020 – March 2021	• Last week of September 2021

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based and Home-Based Provider Surveys.

Note: The second follow-up survey was administered to centers in two partial waves. Centers participating in the spring partial wave were recontacted in the fall (NSECE Project Team 2023a). To maximize comparability of referenced time frames with homes, we prioritized the fall partial value whenever available to construct follow-up measures; spring partial values were used only when the fall value was missing.

B. Analytic sample

In 2019, the NSECE Project Team collected data from 6,917 centers and 5,901 homes. The NSECE Project Team then re-interviewed 4,800 centers and 3,504 homes during the first year of the pandemic and 4,143 centers and 2,896 homes during the second year of the pandemic (NSECE Project Team 2023a, 2023b). Building on these initial samples, this section describes which centers and homes were included in the study, whether sample sizes were large enough to detect meaningful differences by provider CACFP participation, analysis of sample attrition, and how we accounted for missing data.

1. Study eligibility and sample size

First, we excluded providers simulated to be ineligible to participate in CACFP based on the 2019 data analyzed by Schochet et al. (2024). As described in the prior study, we excluded providers according to four criteria:

1. Homes classified as "unlisted" by the NSECE (neither licensed; certified; registered; nor, in most States, legally exempt)
2. Providers that did not report serving at least one child age birth to five
3. Providers that did not report serving meals to children and therefore were not asked about CACFP participation
4. Providers that were asked about CACFP participation and either reported being ineligible for the program or did not respond

We were unable to exclude some for-profit centers likely ineligible to participate in CACFP (estimated in the prior study as roughly 5 percent of all centers) because the NSECE did not collect criteria used to determine eligibility among this population (also see Box III.1). Approximately 4,680 centers and 3,700

homes—weighted to represent about 79,600 centers and 80,800 homes across the nation—were included in the prior study.

Second, we further restricted the analytic sample for the prior study to exclude providers that did not respond to the COVID-19 follow-up surveys. Centers were included if they completed the first follow-up survey and at least one of the two partial waves of the second follow-up, whereas homes were included if they completed both follow-up surveys. We also excluded a small subgroup of centers that were ineligible for the follow-up surveys because their 2019 information was derived from administrative data rather than a provider survey. In total, about 2,840 centers and 2,440 homes—weighted to represent about 69,500 and 66,200 providers across the nation, respectively—met the requirements for inclusion in the present study (also see Appendix Exhibit A.5).

To assess whether these longitudinal samples were large enough to detect differences by provider CACFP participation status in 2019, we drew on power analyses from the interim study analysis plan (available upon request). Incorporating the actual analytic sample sizes into the prior assumptions (a two-tailed test with $\alpha = 0.05$, 80 percent power, and modest explanatory power from sample characteristics), the minimum detectable effect sizes were approximately 0.10 standard deviations for centers and 0.11 standard deviations for homes. These values suggest the analytic samples provide sufficient statistical power to reliably detect policy-relevant impacts of provider CACFP participation, even if they are quite small in magnitude (Bloom 1995; Bloom et al. 2007).

2. Attrition analysis

Attrition between the prior study samples of CACFP-eligible centers and homes in 2019 and the longitudinal analysis samples included in this study can lead to biased impact estimates if attrition rates are very different for participating and eligible nonparticipating providers or if they are large overall. The reason is that the types of 2019 providers for which follow-up data are available might differ by provider CACFP participation status.

We conducted attrition analysis to determine whether study impact findings were at risk of bias. We used the cautious attrition standards developed by the What Works Clearinghouse (WWC), which are rigorous standards that are widely used to assess research quality (for example, Rotz et al. 2020). These standards consider both overall attrition (the percentage of CACFP-eligible providers in 2019 excluded from the longitudinal analysis sample) and differential attrition (how the percentage differs between CACFP and eligible non-CACFP providers). Whether a given sample meets the standard for low risk of attrition bias is based on whether the differential attrition rate is at or below the highest allowable value that corresponds to the overall attrition rate in that sample. When the overall attrition rate is relatively low, differential attrition rates are generally allowed to be higher, and vice versa, to maintain low risk of attrition bias.

Appendix Exhibit A.5 presents findings from the attrition analysis. Overall attrition rates were high for centers (39 percent) and homes (34 percent). Among centers, differential attrition by provider CACFP participation status was less than 1 percentage point, meeting WWC standards for low risk of attrition bias. Among homes, differential attrition was approximately 9.5 percentage points, exceeding the WWC threshold. The NSECE Project Team designed follow-up survey weights, however, to maintain the national representativeness of the 2019 provider samples by adjusting for nonresponse (also see Box A.1). Once

applied, weighted overall attrition rates dropped considerably—to approximately 13 percent among centers and approximately 18 percent among homes—and weighted differential attrition remained low (about 4 percentage points for both provider types). These combinations of overall and differential attrition met standards for low risk of attrition bias for both centers and homes.

Box A.1. Accounting for missing data

Data can be missing because of survey nonresponse or item nonresponse when a provider is missing data for a specific follow-up measure but not others. Here, we describe the methods we used for addressing each of these types of missing data.

Accounting for survey nonresponse

- The NSECE Project Team developed separate weights for each COVID-19 follow-up wave by adjusting the 2019 survey weights using sample characteristics predictive of nonresponse, such as geography, closure status, and public funding (NSECE Project Team 2023a, 2023b). We used the Wave 1 follow-up survey weight to ensure comparability between study results for centers and homes. Because some centers responded to both partial waves at the second follow-up, a cumulative Wave 2 weight was not developed.

Accounting for item nonresponse

- For missing data on sample characteristics measured in 2019, we used indicator variable adjustment. We set missing cells to a constant value and included indicator variables that flagged cases with missing data as additional predictors in analysis models. This approach allows us to retain the full analysis sample without influencing model coefficients for provider samples without missing characteristics. Including missing indicators can also account for bias if data are not missing at random. Missingness rates for sample characteristics were low among CACFP-eligible providers (see Schochet et al. 2024, Appendix A).
- For follow-up process, output, and outcome measures, we used the case deletion method for item nonresponse among providers in the longitudinal analysis sample. ◢

C. Study measures

1. Sample characteristics

In the prior study, we constructed measures of several sample characteristics using the 2019 data, including those related to provider funding and governance, children served and program size, operational details and staffing, curriculum use and learning activities, meal services and physical and sedentary activity, ancillary child and family services, provider compliance, professional development and quality supports, and community demographics and economic well-being (see Appendix Exhibit A.6 for operational definitions of all sample characteristics used in the analysis). In this study, we primarily used sample characteristics to address the first study objective—to balance eligible nonparticipating providers with CACFP providers in 2019. Sample characteristics were also included as additional covariates to address the second study objective: to estimate the impact of provider CACFP participation in 2019 on follow-up measures. We detail how sample characteristics helped address both study objectives in the next section.

2. Follow-up measures

We constructed several follow-up data elements to measure study processes, outputs, and outcomes. Follow-up measures were used to address the second study objective—to estimate the impact of CACFP participation among eligible providers in 2019 approximately one and two years later, during the first and

second years of the COVID-19 pandemic, respectively. Appendix Exhibit A.7 provides full operational definitions for each follow-up measure.

D. Analytic strategy

Estimating the impacts of CACFP participation among eligible child care providers required constructing a credible counterfactual—what outcomes for participating providers would have been in the absence of the program. As documented in the prior study, in 2019, CACFP and eligible non-CACFP providers differed systematically across many provider and community characteristics (Schochet et al. 2024). Without further adjustment, comparisons of follow-up measures between these groups therefore reflect both program effects and pre-existing differences associated with selection into CACFP. For example, we found that CACFP providers were substantially more likely than eligible nonparticipating providers to serve children experiencing food insecurity. Unadjusted estimates of the impact of provider CACFP participation on food insecurity at follow-up could therefore be biased upward, potentially obscuring favorable program impacts (reduced levels of child food insecurity).

To address this challenge, we used propensity score methods to approximate experimental conditions using a quasi-experimental design (also see Exhibit I.1). Here, a propensity score measures the likelihood of a provider participating in CACFP based on their sample characteristics and can be used to match CACFP providers with otherwise-similar eligible non-CACFP providers before comparing these balanced groups at follow-up. The analysis relies on a conditional independence assumption, which states that when holding observed sample characteristics constant, differences in follow-up measures between providers that did and did not participate in CACFP should be driven only by provider participation in the program. Although this assumption is ultimately untestable, it is more likely to hold when research groups can be balanced across a larger number of observed variables, such as the extensive set of sample characteristics available in the 2019 NSECE. Nevertheless, differential selection on unobserved factors remains a limitation of propensity score methods (also see Box III.1) .

1. Propensity score estimation

We estimated propensity scores to summarize each provider's likelihood of participating in CACFP in 2019, conditional on observed sample characteristics. Consistent with the study analysis plan, we implemented two complementary approaches—a nonparametric GBM approach and a traditional multivariate logistic regression—and conducted all analyses separately for centers and homes.

Across both analytic approaches and provider types, community poverty and demographics, quality indicators, and child age mix were strongly associated with provider CACFP participation. For centers, predictors reflected reliance on public and private funding streams, whereas for homes, a greater number of characteristics indicating service quality were prioritized. Appendix Exhibit A.2 summarizes the most influential characteristics selected by the GBM approach. Appendix Exhibit B.1 presents GBM variable importance metrics for all sample characteristics, whereas Appendix Exhibit B.2 displays coefficient estimates and model summary statistics from the multivariate logistic regressions.

a. Generalized boosted models

We used GBM machine learning techniques to identify the optimal specification of the propensity score. GBMs are classified as nonparametric, which means that these models will flexibly adapt to the shape of the data, unlike a conventional (parametric) regression model, in which the researcher must explicitly specify every term. A key advantage of GBMs for this study is that they not only capture main effects (the direct, linear relationships between sample characteristics and provider CACFP participation) but may also select interaction or non-linear terms if they further help to predict which providers participate in CACFP (Lee et al. 2010; Westreich et al. 2011; see Box A.2). Another advantage of GBMs is that they help prevent overfitting by developing the model on one portion of the sample, testing it on another, and then applying the final solution to the full sample to generate propensity scores. Partitioning ensures that the model does not become too tailored to specific patterns in the data, which can lead to less reliable and generalizable solutions.

Box A.2. Interactions and non-linear terms

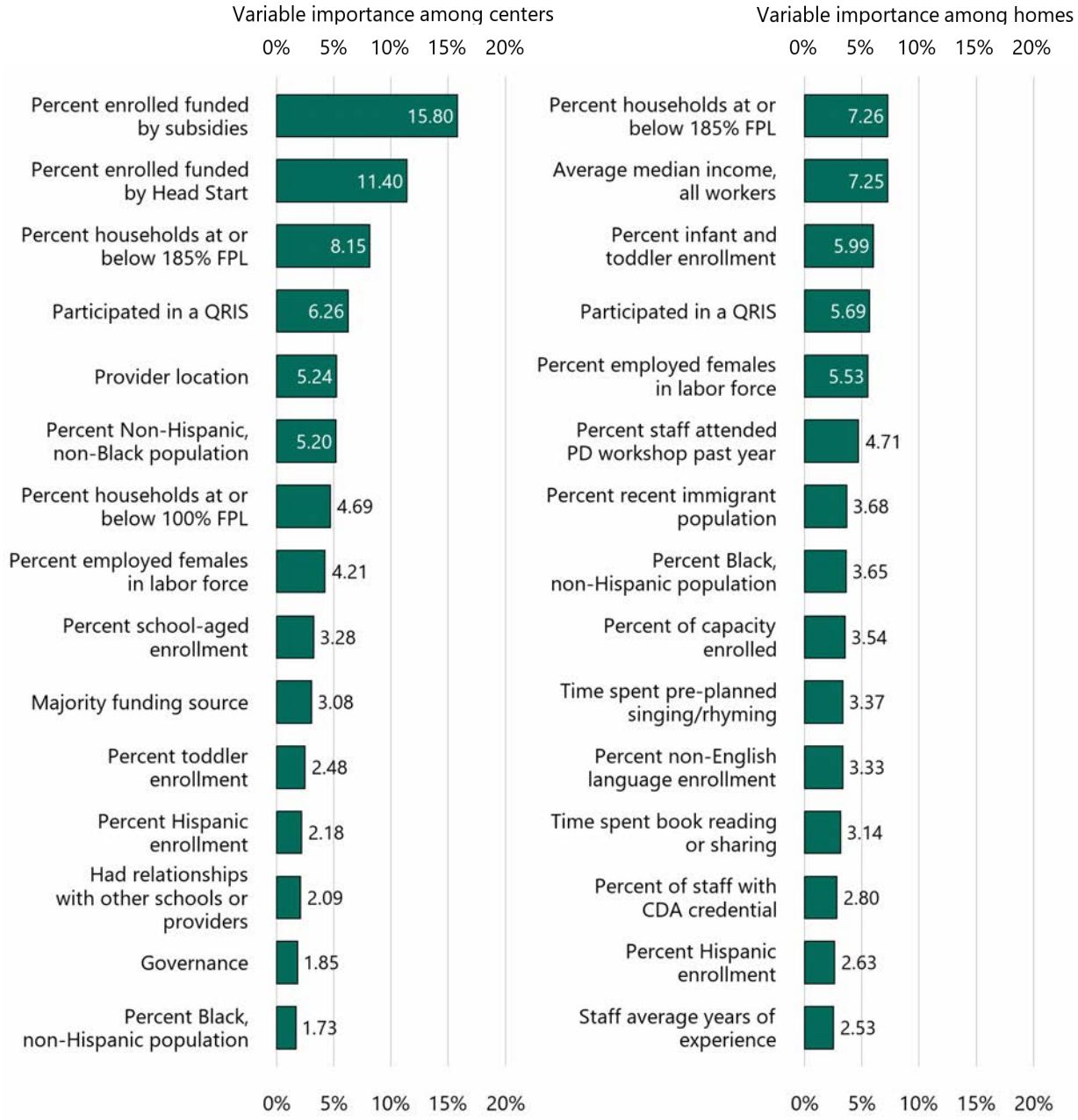
The flexibility afforded by GBM techniques can help deepen our understanding of the factors most associated with provider CACFP participation by accounting for interaction and non-linear terms.

- An **interaction** occurs when the effect of one characteristic depends on another. For instance, in the prior study, we found that homes operating in higher-income areas were less likely to participate as they do not tend to qualify for higher CACFP reimbursement rates. Even so, homes in more affluent neighborhoods can still receive higher reimbursement from the program if providers have low personal household incomes. Consequently, the influence of neighborhood poverty on provider CACFP participation may further vary according to providers' household incomes.
- A **non-linear relationship** occurs when the effect of one characteristic further depends on the level of that same characteristic. Consider the share of a provider's enrollment funded by child care subsidies, which positively correlated with provider CACFP participation in the prior study. It might be the case, for instance, that moving from no subsidized children to a moderate share has a more positive relationship with program participation than going from a moderate share to a very high share, if probabilities plateau at higher subsidy densities.

By accounting for potentially subtle interactions and non-linearities across more than 50 characteristics included in the study, GBM techniques help provide a richer understanding of the relative importance of sample characteristics for provider CACFP participation. ◢

There are several existing programming packages for implementing iterative machine-learning methods to estimate propensity scores. We used the Toolkit for Weighting and Analysis of Nonequivalent Groups (called TWANG), a package of functions in the R environment (Ridgeway et al. 2013) that can be called in Stata (Cefalu et al. 2015). We reported variable importance metrics to identify which variables most strongly associated with provider CACFP participation in the GBM-based propensity score model. The importance metric reflects the relative contribution of each sample characteristic to distinguishing CACFP from eligible non-CACFP providers. Values are expressed as percentages and sum to 100 across characteristics, with higher values indicating greater relative influence. All contributions of a variable (including those from splits because of missing values and from interactions and non-linear terms) are incorporated into a single importance score.

Exhibit A.2. Sample characteristics with greatest influence on GBM propensity score estimates among centers and homes in 2019



Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based and Home-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Exhibit presents variable importance values for approximately 2,760 centers and 2,420 homes, representing 65,000 and 62,200 providers across the nation, respectively. The importance metric reflects the relative contribution of each sample characteristic to distinguishing CACFP from eligible non-CACFP providers when estimating propensity scores using GBMs. Values are expressed as percentages. Follow-up weights provided by the NSECE Project Team are applied. These weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Appendix Table B.1 presents the full set of estimates and includes additional details on variable definitions and the importance metric.

CDA = Child Development Associate; FPL = federal poverty level; PD = professional development.

Among the 76 characteristics included in the analysis of centers, GBM placed the greatest weight on those capturing funding streams. The proportion of enrolled children funded by subsidies (16 percent) and Head Start (11 percent) were the two most important predictors. The majority funding source (public [and if so, what type], private, or mixed) and location (public or private school or other community setting) and governance (public or private [and if so, profit status]) all ranked among the most important predictors (Appendix Exhibit A.2). Community poverty was also influential: the percentage of households at or below 185 percent of the federal poverty level (8 percent) was the third most important predictor, and the percentage of households at or below 100 percent of the federal poverty level and the percentage of the female labor force employed emerged as key characteristics. Center characteristics capturing engagement with quality and professional systems (including QRIS participation, which ranked fourth [6 percent]), the demographic composition of their communities and children served, and the age(s) of children served were also each influential.

For home-based providers, the most influential predictors of provider CACFP participation reflected community economic conditions and child age mix. Among the 66 characteristics included in the analysis for homes, the percentage of households in the community at or below 185 percent of the federal poverty level (7 percent) and the average median income of workers (7 percent) were the two most important predictors, followed by the share of enrolled children who were infants and toddlers (6 percent) (Exhibit III.1). Several predictors indicating provider quality and professional engagement also distinguished CACFP and eligible non-CACFP homes—including participation in QRIS (which, as for centers, ranked fourth [6 percent]), staff qualifications and work experience, capacity utilization, and instructional practices—as did the demographic characteristics of their communities and families served.

b. Multivariate logistic regression

We paired the nonparametric GBM approach to estimating a propensity score with conventional multivariate logistic regression modelling. Here, this approach entails regressing CACFP on the sample characteristics that best predict providers' choices to participate in the program, which users must determine. Including too many weak or redundant predictors can reduce the stability of the estimated propensity scores, whereas including too few predictors risks failing to adjust for important differences between participating and eligible nonparticipating providers. We used a structured variable-selection approach based on least absolute shrinkage and selection operator (LASSO) methods to select model predictors. LASSO helps identify a parsimonious set of characteristics that are most strongly associated with provider CACFP participation by systematically down-weighting—and ultimately excluding—predictors that contribute less to the model. In addition, LASSO helps to avoid overfitting by partitioning the data as described above.

This approach provided a transparent and replicable way to select the strongest observed predictors of provider CACFP participation from the large set of candidate characteristics. Once specified, the estimated coefficients from the logistic regression models describe the association between each selected characteristic and the likelihood of provider CACFP participation, conditional on the other characteristics also included in the model. We expressed the logistic regression model coefficients as odds ratios (rather than standard log units) because they are more interpretable. We generated propensity scores as the predicted values from the estimated logistic regression models.

As shown in Appendix Exhibit B.2, the logistic regression results broadly aligned with the sample characteristics selected as most influential by the GBM approach. Higher percentages of children funded by subsidies and Head Start were significantly associated with provider CACFP participation among centers, whereas centers relying on private tuition and operating as for-profit businesses had lower estimated odds of participating. Community characteristics prioritized by the GBM approach also showed statistically significant associations with provider CACFP participation (including poverty density and median income), as did measures of quality and professional engagement (such as QRIS participation and membership in a professional child care organization).

Logistic regression estimates for homes were also aligned for most salient characteristics or categories of characteristics. Both measures of community population poverty density and average median income were included as predictors in the propensity score equation, and community poverty density was positively and significantly associated with provider CACFP participation. Providers participating in QRIS, that attended professional workshops, and with more work experience were more likely to participate in CACFP, as were homes serving higher proportions of Hispanic/Latino children. Measures of child age mix and enrollment capacity were not included in the multivariate regression equation.

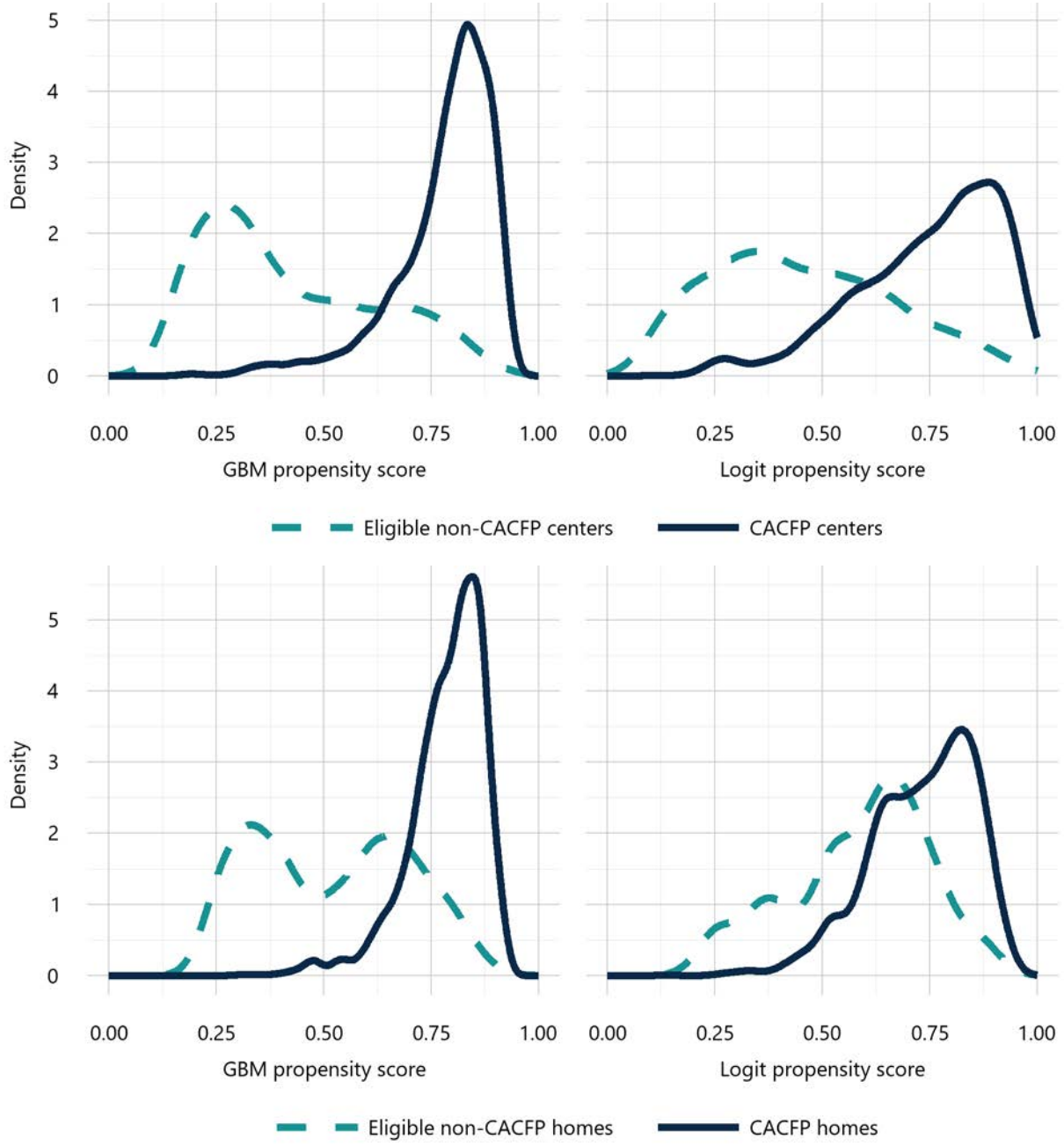
c. Common support restrictions

For each analytic approach and provider type, we implemented a common support restriction to ensure that providers participating in CACFP were only compared with eligible nonparticipating providers that had similar predicted probabilities of participation. In this context, common support refers to the range of propensity scores over which both CACFP and eligible non-CACFP providers are represented. We excluded providers that fell outside the region of common support based on the concern that their observed characteristics could be considered too different from the other group to enable a meaningful comparison. Ultimately, common support violations were very uncommon. We excluded only 3 percent of centers and 1 percent of homes in the longitudinal analysis sample from the GBM analysis, and just 1 percent of centers and less than 1 percent of homes using logistic regression. These rates were similar across CACFP and eligible non-CACFP groups.

d. Propensity score distributions

Although the GBM and logistic regression approaches highlighted similar categories of predictors, their results were not identical. Indeed, differences are expected given that the GBM approach can capture nonlinear associations and interactions across variables, while the logistic regression results are estimated based on equations with parameters that users need to specify. These distinctions underscore the value of comparing the efficacy of traditional parametric and nonparametric approaches to constructing balanced comparison groups (A2). We compared the two approaches by examining the distributions of estimated propensity scores and by assessing balance in sample characteristics before and after propensity score weighting, as described in the next section. We find value in both approaches but conclude that GBM approximates the counterfactual better than logistic regression.

Exhibit A.3. Density plots of propensity score distributions across CACFP participants and eligible nonparticipants by analytic approach among centers and homes in 2019



Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based and Home-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Figure shows a comparison of the estimated propensity scores estimated by GBM and traditional logistic regression approaches for CACFP and eligible non-CACFP centers (top panel) and homes (bottom panel). Providers of each type outside the range of support of the propensity scores common to treatment and comparison groups under each method are excluded. Of the approximately 2,840 centers and 2,440 homes included in the longitudinal analysis sample, about 2,760 centers and 2,420 homes were assigned a GBM propensity score, whereas about 2,820 centers and 2,440 homes were assigned a propensity score using logistic regression. Follow-up weights provided by the NSECE Project Team are applied. These weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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.

Appendix Exhibit A.3 presents the distribution of the estimated propensity scores by provider CACFP participation status, analytic approach, and provider type. Distributions are based on providers with propensity scores inside each area of common support. Comparing propensity score distributions by research group and analytic approach depicts how effectively each method was able to distinguish providers by CACFP participation status. The propensity scores generated by the GBM approach show a greater density of CACFP providers at higher scores and eligible nonparticipating providers at lower scores compared with the scores estimated with logistic regression. This contrast was especially pronounced for homes, consistent with lower explanatory power in the regression (pseudo-R^2 = 0.19 compared with 0.35 for centers; Appendix Exhibit B.2). Overall, these results suggest that the GBM approach estimated propensity scores that better estimated providers' actual CACFP participation statuses.

2. Propensity score weighting

We used the propensity scores estimated under both analytic approaches to construct ATT weights. CACFP-participating providers were assigned an ATT weight of 1, and eligible nonparticipating providers were assigned an ATT weight equal to the odds of the estimated propensity score:

$$w_i^{ATT} = \frac{p_i}{1 - p_i}$$

where p_i is the estimated propensity score—the probability that provider *i* would participate in CACFP given observed sample characteristics. By assigning a weight of 1 to participating providers and a weight of $p_i / (1 - p_i)$ to eligible nonparticipating providers, we re-weight non-CACFP providers to resemble those in the program. In practice, eligible nonparticipating providers with propensity scores closer to 1 (interpreted as a 100 percent predicted probability of participating based on sample characteristics), receive higher weights, whereas providers with lower propensity scores receive lower weights and contribute less to study estimates. As a result, the ATT weights approximate how follow-up measures might differ for CACFP providers had they not participated.

a. Balance diagnostics

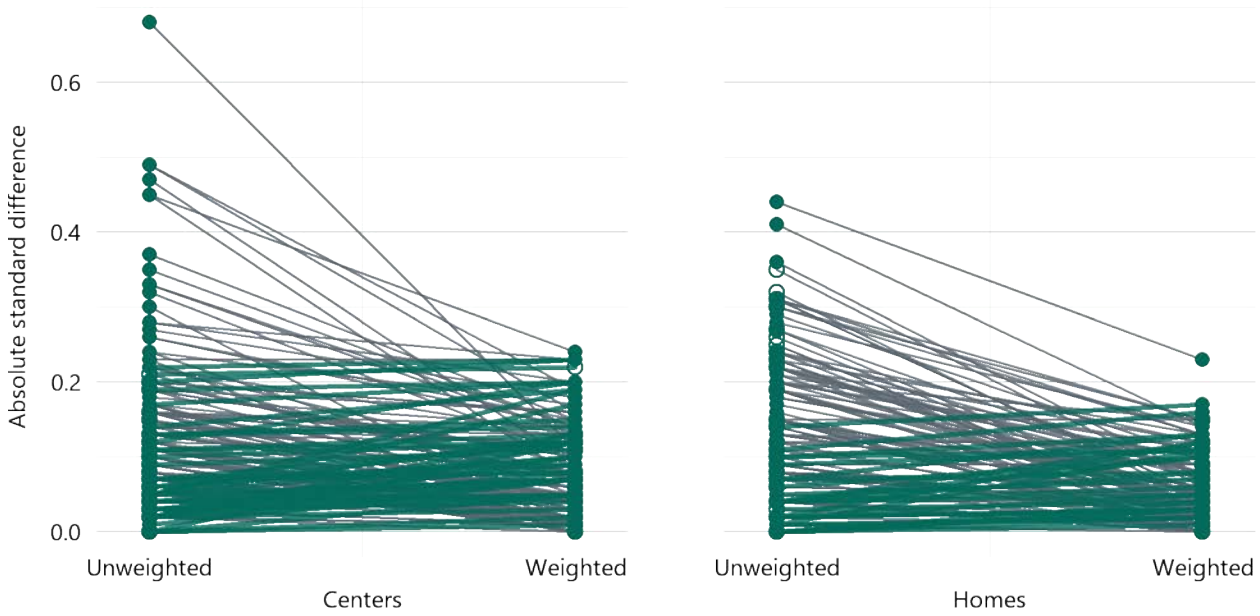
We assessed how well each analytic approach constructed balanced comparison groups of eligible nonparticipating providers by comparing sample characteristics between CACFP and eligible non-CACFP centers and homes before and after applying the relevant ATT weights (that is, the weights generated using either GBM or logistic regression methods). We evaluated balance before and after weighting using standardized effect sizes and Kolmogorov-Smirnov (KS) statistics. We computed balance diagnostics separately for each sample characteristic and summarized diagnostics across characteristics (for example, the average effect size or maximum KS statistic).

Standardized effect sizes compare the difference in means between CACFP and eligible non-CACFP providers for each sample characteristic, scaled by its standard deviation pooled across groups. Values are expressed in standard-deviation units, and larger values indicate greater imbalance between groups. We also present absolute standardized differences (ASDs), or the absolute value of the effect size, when comparing or summarizing across sample characteristics that have both positive and negative differences

between CACFP and eligible non-CACFP providers. The KS statistic compares the full distributions of each sample characteristic between groups and is defined as the maximum absolute difference between the two cumulative distribution functions. Values range from 0 (indicating identical distributions) to 1 (indicating completely non-overlapping distributions). Whereas effect sizes summarize differences at the mean of a characteristic, KS statistics capture differences across the entire distribution, making them sensitive to imbalances that occur anywhere in the distribution rather than only at the average value.

Appendix Exhibit B.3 summarizes the extent to which balance across sample characteristics for centers and homes improved after applying the weights under both GBM and logistic regression. Although balance improved after applying both sets of weights, the GBM approach was particularly effective, especially in reducing the largest discrepancies. For centers, the maximum ASD fell from 0.68 to 0.24 under GBM compared with from 0.84 to 0.51 under logistic regression. For homes, these values were 0.44 to 0.23 and 0.57 to 0.39, respectively. Lower maximum ASDs before weighting under GBM reflected more effective screening because of common support violations. Under both approaches, mean ASDs declined by similar amounts after weighting (0.08 versus 0.13 for centers; 0.06 versus 0.14 for homes), suggesting that although GBM more effectively addressed the largest differences, both methods improved balance on average across the large number of study characteristics. KS statistics, which, as previously described, assess uniformity in distributions (rather than mean differences), showed similar patterns.

Exhibit A.4. Effect of propensity score weighting using GBM on magnitude of absolute standardized differences by provider CACFP participation status and type



Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based and Home-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Exhibit presents absolute standardized differences (ASDs) for 2019 sample characteristics before and after propensity score weighting using GBM. Standardized effect sizes compare the difference in means between CACFP and eligible non-CACFP providers for each sample characteristic, scaled by its pooled standard deviation, and ASDs reflect the absolute value of this difference. Values are expressed in standard-deviation units and larger values indicate greater imbalance between groups. Thin connecting lines indicate reductions in ASDs after weighting. Follow-up weights provided by the NSECE Project Team are applied. These weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up

wave. 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.

Appendix Exhibit A.4 displays ASDs for each characteristic (including missingness rates) before and after weighting using the GBM approach. Substantial reductions in ASDs are observed for most characteristics, with fewer variables showing small increases. After weighting, all ASDs fall below a conservative balance threshold of 0.25 (see, for instance, Stuart et al. 2013). Appendix Exhibits B.4 and B.6 provide the full results underlying this plot for centers and homes, respectively, as well as descriptive statistics by provider CACFP participation status before and after GBM weighting. Appendix Exhibits B.5 (centers) and B.7 (homes) compare covariate balance metrics before and after weighting by analytic approach.

b. Estimating impacts

We pursued the second study objective—to estimate the impacts of provider CACFP participation in 2019 on follow-up measures—by comparing processes, outputs, and outcomes for participating providers with those for eligible nonparticipating providers after applying propensity score weights. As previously described, these weights aim to capture the ATT, or the difference between average follow-up measures for participating providers and these same providers had they not participated. Because we cannot observe this counterfactual, we approximate it using the weighted comparison group of eligible providers that did not participate in the program.

We estimated impacts by comparing follow-up measures for CACFP and eligible non-CACFP providers after applying propensity score weights. In practice, we estimated weighted regression models in which follow-up measures were regressed on the indicator of provider CACFP participation in 2019 and selected the baseline covariates described below. We estimated separate models for each follow-up measure, using linear regression for continuous measures and logistic regression for binary measures. Models were weighted by the product of the follow-up survey weights constructed by the NSECE Project Team—which preserve the nationally representative design of the NSECE—and the ATT propensity score weights. The coefficient on the indicator of provider CACFP participation represents the estimated impact (that is, the adjusted difference in the mean follow-up measure between participating providers and the weighted comparison group). Impacts are evaluated against their sampling variability to assess statistical significance (that is, whether estimated impacts can be distinguished from zero using a two-tailed test). To generate standard errors consistent with the NSECE survey design, all models further specified the primary sampling stratum and cluster.

All models used doubly robust specifications to adjust estimates both through propensity score weighting and the inclusion of selected baseline sample characteristics as covariates. Doubly robust approaches are recommended to increase precision in impact estimates and may further reduce bias (for example, Huppler-Hullsiek and Louis 2002). Including covariates that are strongly related to follow-up measures reduces residual variation unexplained by the model, thereby lowering standard errors and increasing the precision of estimated impacts. To the extent these characteristics also continue to vary by provider CACFP participation status after propensity score adjustment, including them may also help reduce persistent bias. For each follow-up measure, we used LASSO to select a model-specific set of covariates from the full set of baseline sample characteristics and missingness indicators and conditioned covariate selection on the inclusion of the provider CACFP participation indicator.

Box A.3. Addressing multiple comparisons

Provider CACFP participation might affect a range of follow-up measures related to the study framework, but the risk of finding a statistically significant result by chance, rather than one representing a true effect of the program, increases with the number of measures tested (Schochet 2009).

Therefore, we must balance the need to examine the range of measures provider CACFP participation may affect with the need to minimize multiple comparison concerns. We followed two approaches to minimize the risk of focusing on findings that are statistically significant by chance:

- We **pre-specified** the follow-up measures included in the study before conducting the analyses (see Schochet et al. 2025). We also established a reporting hierarchy further discussed in Section III.B based on the level of statistical significance associated with study findings.
- We **adjusted for multiple comparisons** using the Benjamini and Hochberg (BH) correction (1995). We reported a comparison as statistically significant only if its *p*-value fell below its BH critical value. We calculated this critical value (k*f/m) by using the number of follow-up measures (m) by provider type and domain, each comparison's rank (k) from most to least significant, and the false discovery rate (f = 0.10). We selected the false discovery rate and constrained the number of comparisons within domains and provider types because multiple comparison adjustments also reduce statistical power (or the likelihood of identifying a true effect; Schochet 2009). ◢

References

Benjamini, Y., and Y. Hochberg. "Controlling the False Discovery Rate: A Practical and Powerful Approach to Multiple Testing." *Journal of the Royal Statistical Society*, vol. 57, no. 1, 1995, pp. 289–300.

Bloom, H.S. "Minimum Detectable Effects: A Simple Way to Report the Statistical Power of Experimental Designs." *Evaluation Review*, vol. 10, no. 5, 1995, pp. 547–556.

Bloom, H.S., L. Richburg-Hayes, and A.R. Black. "Using Covariates to Improve Precision: Empirical Guidelines for Studies That Randomize Schools to Measure the Impacts of Educational Interventions." *Educational Evaluation and Policy Analysis*, vol. 29, no. 1, 2007, pp. 30–59.

Cefalu, M., S. Liu, and C. Marti. "Toolkit for Weighting and Analysis of Nonequivalent Groups: A Tutorial on the Twang Commands for Stata Users." TL-170-NIDA. RAND Corporation, September 2015. https://www.rand.org/content/dam/rand/pubs/tools/TL100/TL170/RAND_TL170.pdf.

Hullsiek, K.H., and T.A. Louis. "Propensity Score Modeling Strategies for the Causal Analysis of Observational Data." *Biostatistics*, vol. 3, no. 2., 2002, pp.179–193.

Lee, B.K., J. Lessler, and E.A. Stuart. "Improving Propensity Score Weighting Using Machine Learning." *Statistics in Medicine*, vol. 29, no. 3, 2010, pp. 337–346.

National Survey of Early Care and Education (NSECE) Project Team. "Getting to Know the 2019 NSECE." Webinar from NORC at the University of Chicago, June 16, 2020. https://www.youtube.com/watch?v=XZNfQVwvvEA

NSECE Project Team. "2019 National Survey of Early Care and Education Data Collection and Sampling Methodology Report." OPRE Report #2022-118. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, June 2022.

NSECE Project Team. "National Survey of Early Care and Education COVID-19 Longitudinal Follow-up User's Guide – Center-based Provider." OPRE Report #2023-113. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, October 2023a.

NSECE Project Team. "National Survey of Early Care and Education COVID-19 Longitudinal Follow-up User's Guide – Home-based Provider." OPRE Report #2023-109. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, September 2023b.

Ridgeway, G., D. McCaffrey, A. Morral, B.A. Griffin, and L. Burgette. "Twang: Toolkit for Weighting and Analysis of Nonequivalent Groups." R package version 1.3-20, 2013. http://CRAN.R-project.org/package=twang.

Rotz, D., E. Sama-Miller, and P. Burkander. "Protocol for the Pathways to Work Evidence Clearinghouse: Methods and Standards." OPRE Report #2020-44. Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, March 2020.

Schochet, O., R. Franckle, M. Boyle, S. Navarro, and the Childcare and Meal Provision Data Analysis Team. "Childcare and Meal Provision: Data Analysis Report." Food and Nutrition Service, U.S. Department of Agriculture, June 2024.

Schochet, P.Z. "An Approach for Addressing the Multiple Testing Problem in Social Policy Impact Evaluations." *Evaluation Review*, vol. 33, no. 6, 2009, pp. 539–567.

Westreich D., S.R. Cole, M.J. Funk, M.A. Brookhart, and T. Stürmer. "The Role of the C-Statistic in Variable Selection for Propensity Score Models." *Pharmacoepidemiology and Drug Safety*, vol. 20, no. 3, 2011, pp. 317–320.

Zaslow, M, T. Halle, R. Madill, and N. Forry. "History of the National Survey of Early Care and Education, Part II: The Development of the 2019 NSECE and the NSECE COVID-19 Longitudinal Follow-up." OPRE Report #2024-010. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, March 2024.

Supplemental Methods Exhibits

This page has been left blank for double-sided copying.

Exhibit A.5. Analytic sample sizes, attrition rates, and risk of bias by provider type before and after applying follow-up survey weights

Provider type	Analytic sample sizes		Attrition rates and risk of bias			
	2019	Longitudinal follow-up	Attrition rate	Differential attrition		Risk of bias
				Observed	Threshold	
Unweighted results						
Centers						
Total	4,680	2,840	39.2	0.95	2.7	Low
CACFP centers	3,120	1,900	38.9	—	—	—
Eligible non-CACFP centers	1,560	940	39.9	—	—	—
Homes						
Total	3,700	2,440	33.8	9.47	3.5	High
CACFP homes	2,540	1,760	30.8	—	—	—
Eligible non-CACFP homes	1,160	680	40.3	—	—	—
Weighted results						
Centers						
Total	79,600	69,500	12.7	4.38	6.1	Low
CACFP centers	48,800	43,400	11	—	—	—
Eligible non-CACFP centers	30,800	26,100	15.4	—	—	—
Homes						
Total	80,800	66,200	18.1	4.15	5.7	Low
CACFP homes	54,300	45,200	16.7	—	—	—
Eligible non-CACFP homes	26,500	21,000	20.8	—	—	—

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based and Home-Based Provider Surveys.

Note: Attrition rates calculated as the percentage of providers in the 2019 analytic sample from Schochet et al. (2024) that are not included in the longitudinal follow-up sample. Rates are shown overall and separately for CACFP and eligible non-CACFP providers. Observed differential attrition values are the simple difference in attrition rates between CACFP and eligible non-CACFP groups. Threshold differential attrition values based on WWC attrition standards. WWC sets cutoff values for differential attrition that vary depending on the level of overall attrition. The risk-of-bias classification indicates whether attrition rates are acceptable and meet WWC attrition standards (that is, observed differential attrition values fall below their corresponding threshold values) or risk introducing bias in impact estimates. Differential attrition rates and risk-of-bias classifications for each provider type before and after weighting presented alongside the respective overall attrition rates used to determine each differential attrition threshold.

Exhibit A.6. Operational definitions of sample characteristics used to balance eligible nonparticipating providers with CACFP providers in 2019

Measure	Operational definition
Provider characteristics	
Provider funding, governance, and location	
Funding source(s)	Majority funding source (Head Start/Early Head Start; State public preschool; child care subsidies; private tuition; mixed public or mixed public/private) (categorical) Percentage of currently enrolled children by public funding source (Head Start/Early Head Start; State public preschool; child care subsidies) (continuous)
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)[b]
Economic well-being of children served	Serves one or more children experiencing food insecurity at home (binary)[b]
Operational details and staffing	
Operating hours	Weekly hours of operation during standard hours; nontraditional hours (including evenings, overnight, and weekends) (continuous)
Staffing and group sizes	Total number of paid staff who work with children; do not work with children;[a] staff:child ratio (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)[b] Percentage of staff with a Child Development Associate (CDA) credential (continuous)[b]
Curriculum use and learning activities	
Curriculum	Used curriculum or prepared set of learning activities (binary)[b]
Learning activities	Across age groups, instructional time in typical day spent on whole-group activities; small-group activities; one-on-one activities; child-selected activities; preplanned singing/rhyming; book reading or sharing (continuous)[b]
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)[b]

Measure	Operational definition
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 on vigorous physical activity (continuous)[b]
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; monitor quality of services other than meeting health and safety requirements (binaries) In past year, participated in health or safety training (binary)[b] 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; to 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[b] Percentage of center staff (continuous); home-based provider (binaries) with membership in a professional organization focused on caring for children[b]
Community characteristics	
Demographics and economic well-being	
Community demographic characteristics (American Community Survey)	Percentage of total population living in an urban area; recent immigrants; from 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 (American Community Survey)	Percentage of individuals in households with incomes at or below 100, 185 percent of 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 Care and Education (NSECE) Home-Based and Center-Based Provider Surveys, the 2019 Center-Based Workforce Survey, and the 2013–2017 American Community Survey five-year estimates.

[a] Data element collected from centers only.

[b] Data element drawn from the provider survey for homes and aggregated across workforce survey respondents for centers.

Exhibit A.7. Operational definitions of follow-up measures used to estimate the impact of provider CACFP participation

Measure	Operational definition
Processes and outputs	
Operations and services adjustments	
Operating status	Provided care during focal week (binary)
Meal service continuity	Continued to provide meals for children in care (binary) Participated in CACFP (binary)
Location of care and operating hours	Care provided on-site only; hybrid (on-site and remotely); remotely only (binaries) Typical daily operating hours (continuous)
Enrollment changes	Total number of children enrolled overall; funded by public source(s); funded by private tuition only[a] (continuous) Number of enrollment vacancies (continuous)
Safety protocols[c]	Special health practices in place (additional cleaning and sanitation; small group sizes for social distancing; reduced mixing of children across groups; masks worn by staff; health screening of children on arrival) (binaries)
Financial resilience	
Stimulus funding[d]	Source(s) of stimulus funding (federal Paycheck Protection Program; federal Small Business Administration loan; federal Employee Retention Credit; State supply or retention grants; State funds for essential supplies; other State or federal assistance; donations or private fundraising) (binaries) Source(s) of information about stimulus funding (State or local child care or education agency; State or local public health agency; local resource and referral agency; other child care providers or professionals; national child care organization; federal child care or education or health agency; other information source) (binaries)
Public revenue	Number of children enrolled funded by child care subsidies; funded by public preschool; funded by Head Start (continuous)
Staffing changes	Total number of paid staff; number of paid staff in October 2019 who are no longer employed[a] (continuous)
Outcomes	
Operations and services maintenance	
Sustained or resumed operations	Provided care during focal week (binary) Maintained service delivery with no closures; reopened after unplanned closure (binaries)[e]
Meal service continuity	Continued to provide meals for children in care (binary)
Enrollment continuity	Total number of children enrolled (continuous)
Financial stability	
Cost management	Relative to before the pandemic: harder to cover costs and stay open;[f] charged higher prices to families[a] (binaries)
Staffing retention or recruitment	Number of staff changed since start of pandemic (binary)[a] Number of paid staff in October 2019 who are no longer employed (continuous)[a]

Measure	Operational definition
Staff compensation	Staff earned higher wages than at start of pandemic (binary)[a] Main reason for increased staff wages (increased program funding or public mandate; contract-based pay raise; pandemic-related changes to demand) (binaries)[a,g] Benefit(s) offered to staff (health insurance; paid sick leave) (binaries)[a]
Service quality	
Staff qualifications and class size	Number of staff by highest level of education (no college degree; two-year degree; four-year degree or higher) (continuous)[a] Number of staff with at least two years of experience in field (continuous)[a] Number of staff with a Child Development Associate (CDA) credential or State certification (continuous)[a] Average staff-child ratio across age groups (continuous)
Professional development	Provided staff with mentors, coaches, or consultants (binary)[a] Since the start of the pandemic, participated in health or safety training; had help from coach or attended workshop (binaries)[b]
Child health and well-being	
Health and nutrition services	Had access to nurse or health consultant for children (binary)[a]
Child food insecurity	Number of children experiencing food insecurity (continuous)[b] Any child(ren) experiencing food insecurity (binary)[b]

Source: Data from the COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based and Home-Based Provider Surveys.

Note: Processes and outputs drawn from the first follow-up survey, administered in one wave for both centers (November 2020 to March 2021) and homes (December 2020 to March 2021). Outcomes drawn from the second follow-up survey, administered in two partial waves for centers (April 2021 to June 2021 [spring partial] and October 2021 to February 2022 [fall partial]) and one wave for homes (October 2021 to February 2022). Unless otherwise noted, measures reference the focal weeks for each follow-up survey. The focal week for the first follow-up survey is defined as the last week of October 2020 for centers and homes. The focal week for the second follow-up survey is defined as the last week of September 2021 for centers that responded to the fall partial wave (64 percent of analysis sample) and all homes, and March 2021 otherwise.

[a] Data element collected from centers only.

[b] Data element collected from homes only.

[c] Providers reported on special health practices in place as of April 2020.

[d] Providers reported on experiences with pandemic assistance programs between the start of the pandemic and the time of the first follow-up survey.

[e] Providers reported closures and operating spells between February 2020 and the focal week for the second follow-up survey.

[f] Providers compared difficulty covering costs before the pandemic and the time of the second follow-up survey.

[g] Public mandates to increase staff pay may result from minimum wage laws, wage floors specific to public child care programs (such as Head Start), or contractual or grant conditions (such as stimulus dollars that required spending on staff compensation). Contract-based pay raises may be based on performance, increased staff qualifications (such as degree or credential attainment), or cost of living adjustments. Pandemic-related changes to demand include increased wages for hazard pay, higher hourly rates due to reduced operating hours, and increased wages to meet labor market demand once families returned to work and schools reopened.

This page has been left blank for double-sided copying.

Appendix B

Full results from Study Objective A: Construct comparison groups by balancing eligible nonparticipating providers with CACFP providers

This page has been left blank for double-sided copying.

Research Question A.1

Which provider and community characteristics were most associated with provider CACFP participation in 2019?

This page has been left blank for double-sided copying.

Exhibit B.1. Relative influence of sample characteristics on GBM propensity score estimates among centers and homes in 2019

Sample characteristics	Variable importance for centers Percent	Variable importance for homes Percent
Provider funding, governance, and location		
Majority funding source[a]	3.08	2.22
Percentage of currently enrolled children funded by:		
Child care subsidies	15.8	0.22
Public preschool	1.18	0.41
Head Start	11.4	0.00
Governance[a]	1.85	n.a.
Sponsored by a larger organization	1.12	n.a.
Provider location[a]	5.24	n.a.
Children served and provider size		
Number of children enrolled	1.48	1.18
Percent of capacity enrolled	0.05	3.54
Percent of currently enrolled children who are:		
Infants (<12 months)	0.37	n.a.
Toddlers (1 and 2 years)	2.48	n.a.
Infants and toddlers[b]	n.a.	5.99
Preschoolers (3 to 5 years, not in K)	0.30	1.37
School-aged (5 years plus)	3.28	0.21
Percent of currently enrolled children who are:		
Hispanic/Latino/a	2.18	2.63
White, non-Hispanic/Latino/a	0.23	0.35
Black, non-Hispanic/Latino/a	1.08	0.06
Asian, non-Hispanic/Latino/a	0.42	0.00
Other, non-Hispanic/Latino/a	0.45	0.38
Percent of currently enrolled children who speak a language other than English	0.03	3.33
Served one or more children experiencing food insecurity at home	0.02	0.46
Operating hours and staff		
Weekly standard operating hours	0.13	1.38
Weekly nontraditional operating hours[c]	0.00	0.31
Total number of paid staff	0.05	0.19
Number of paid staff that work with children	0.39	n.a.
Number of paid staff that do not work with children[d]	0.73	n.a.
Child-to-staff ratio[e]	1.53	1.27
Percent of staff by highest level of education:		
No college degree	0.27	1.5
2-year college degree	0.35	0.73

Sample characteristics	Variable importance for centers Percent	Variable importance for homes Percent
4-year college degree	0.69	0.06
Percent of staff with CDA credential[f]	0.33	2.8
Staff average years of experience	0.75	2.53
Curriculum use and learning activities		
Used curriculum or prepared learning activities[g]	0.00	1.17
Number of hours per day typically spent on:[h]		
Whole group activities	0.00	1.78
Small group activities	0.65	0.37
One-on-one activities	0.00	0.80
Child-selected activities	0.62	0.41
Pre-planned singing/rhyming	0.09	3.37
Book reading or sharing	0.00	3.14
Meal services, routine care, and physical activity		
Provided both snacks and meals to children	0.04	0.00
Number of times per week provided 100% fruit juice[a]	0.81	n.a.
Number of hours per day typically spent on routine care[h,i]	0.23	0.06
Number of hours per day typically spent on physical activity[h]	0.00	1.4
Location(s) for physical activity:		
Indoor space for regular care[j]	0.00	0.44
Own outdoor space	0.00	0.00
Nearby public outdoor space	1.54	0.38
Typical daily screen time[a]	0.02	0.80
Additional services for children and families		
In the past year, offered or referred families to:		
Health screening services	0.02	0.29
Developmental assessments	0.00	0.86
Therapeutic services	0.00	0.64
Counseling services	0.04	0.00
Offered child well-being and development services on-site	0.00	0.54
Paid for child well-being and development services	0.00	0.14
Connected families with social services[k]	1.57	2.06
Compliance, quality, and professional activities		
In the past year, reported compliance activities:		
Inspected for health and safety[l]	0.05	2.17
Attended health and safety training[m]	0.00	0.59
Had access to a health consultant or nurse[n]	0.52	0.55
In the past year, received an inspection to monitor quality[o]	0.00	0.00
Participated in a quality rating and improvement system	6.26	5.69
Offered professional development resources for staff:		

Sample characteristics	Variable importance for centers Percent	Variable importance for homes Percent
Funding for off-site courses or trainings	0.83	n.a.
Paid time-off for off-site courses or trainings	0.00	n.a.
Access to on-site coaches, mentors, or consultants	0.67	n.a.
Had relationships with other schools or providers to share access to professional resources	2.09	0.10
Percent member of a professional child care organization[p]	0.00	1.84
In the past year, percent reported professional activities:[p]		
Helped by home-visitor or coach	0.00	1.42
Attended professional workshop[q]	0.00	4.71
Took college-level child care course for credit	0.04	0.00
Community demographics and economic well-being		
Percent of population in urban area	0.04	0.28
Percent of population who identified as:		
Hispanic/Latino/a	0.94	0.57
Black non-Hispanic	1.73	3.65
Non-Hispanic, non-Black	5.2	1.8
Percent of population who were recent immigrants[r]	0.00	3.68
Percent of households that spoke a language other than English	0.18	0.35
Percent of individuals in households with incomes at or below 100% of the federal poverty level	4.69	0.80
Percent of individuals in households with incomes at or below 185% of the federal poverty level	8.15	7.26
Average median income, all workers	1.53	7.25
Percent of females in labor force who were employed	4.21	5.53

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based and Home-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Table presents variable importance values for approximately 2,760 centers and 2,420 homes, representing 65,000 and 62,200 providers across the nation, respectively. The importance metric reflects the relative contribution of each sample characteristic to distinguishing CACFP from eligible non-CACFP providers when estimating propensity scores using GBMs. Values are expressed as percentages and sum to 100 across characteristics, with higher values indicating greater relative influence when variables are used in the boosted trees. All contributions of a variable (including those from splits due to missing values) are incorporated into a single importance score. Follow-up weights provided by the NSECE Project Team are applied. These weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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.

n.a. = not applicable; CDA = Child Development Associate.

[a] Categorical variables are shown with a single importance value across levels. Levels of categorical variables are described in Appendix Exhibit A.6.

[b] Data for homes combine infants and toddlers.

[c] Defined as child care provided during weekday evenings and overnight (between 7:00 PM and 6:00 AM) and on weekends.

[d] Includes full-time and part-time workers, administrators, support staff, drivers, cooks, and any other center staff that do not work directly with children.

[e] Excludes center staff that do not work directly with children.

[f] Center-based provider survey respondents (usually center directors) included in percent of staff by highest level of education and average years of experience but were not asked to report on whether they had a CDA credential.

[g] Includes centers in which all teaching staff reported using a curriculum or prepared set of learning activities.

[h] Average of the values assigned to the following categories across age groups for each activity, which are further averaged across center staff: "no time" = 0; "30 minutes or less" = .5; "about one hour" = 1; "about two hours" = 2; "three hours or more" = 3).

[i] Routine care activities defined as feeding, diapering, or bathroom breaks, not including lunch or nap breaks.

[j] For centers, includes both vigorous physical activity in the classroom or another inside room, such as a gym.

[k] Includes referrals to housing services or food assistance, access to medical care, or help getting assistance from other government or private programs.

[l] Inspected to ensure compliance with health, safety, or other requirements, such as group sizes or staff: child ratios.

[m] Includes centers in which all teaching staff reported having attended a health and safety training in the past year.

[n] Health consultants or nurses may help with nutrition, allergies, or other health-related issues children experience.

[o] Inspected to monitor the quality of child care services other than meeting health, safety, or other requirements.

[p] Indicates the average percent of center staff and the percent of homes that reported each professional activity.

[q] Center staff reported on professional workshops such as those offered by professional associations or child care resource and referral networks. Homes reported on professional workshops such as those sponsored by a community agency of Family Child Care network.

[r] The percentage of the total population who entered the U.S. in 2010 or later.

Exhibit B.2. Multivariate logistic regression predicting CACFP participation from selected sample characteristics among centers and homes in 2019

Sample characteristics	Center participated in CACFP			Home participated in CACFP		
	OR	SE	*p*	OR	SE	*p*
Provider funding, governance, and location						
Majority funding source						
Majority Head Start[a]	2.03	1.25	0.25	—	—	—
Majority public preschool[b]	—	—	—	—	—	—
High subsidy[c]	—	—	—	—	—	—
Majority private tuition[d]	0.52	0.16	0.04	1.1	0.28	0.72
Mixed public or mixed public/private	1.4	0.31	0.13	1.87	0.50	0.02
Percentage of currently enrolled children funded by:						
Child care subsidies	1.02	0.00	0.00	—	—	—
Public preschool	—	—	—	—	—	—
Head Start	1.02	0.01	0.00	—	—	—
Governance						
Private, for-profit	—	—	—	n.a.	n.a.	n.a.
Private, not for-profit	2.06	0.42	0.00	n.a.	n.a.	n.a.
Public	1.09	0.38	0.80	n.a.	n.a.	n.a.
Sponsored by a larger organization	—	—	—	n.a.	n.a.	n.a.
Provider location						
Religious building	0.53	0.15	0.03	n.a.	n.a.	n.a.
Public or private school	0.70	0.18	0.16	n.a.	n.a.	n.a.
University, college, or employer	2.68	1.25	0.03	n.a.	n.a.	n.a.
Other shared structure[e]	—	—	—	n.a.	n.a.	n.a.
Other independent structure	1.49	0.35	0.09	n.a.	n.a.	n.a.
Somewhere else	—	—	—	n.a.	n.a.	n.a.
Children served and provider size						
Number of children enrolled	—	—	—	1.04	0.02	0.08
Percent of capacity enrolled	—	—	—	—	—	—
Percent of currently enrolled children who are:						
Infants (<12 months)	1.01	0.01	0.21	n.a.	n.a.	n.a.
Toddlers (1 and 2 years)	1.01	0.01	0.08	n.a.	n.a.	n.a.
Infants and toddlers[f]	n.a.	n.a.	n.a.	—	—	—
Preschoolers (3 to 5 years, not in K)	—	—	—	—	—	—
School-aged (5 years plus)	—	—	—	—	—	—
Percent of currently enrolled children who are:						
Hispanic/Latino/a	1.01	0.00	0.01	1.01	0.00	0.01
White, non-Hispanic/Latino/a	—	—	—	—	—	—
Black, non-Hispanic/Latino/a	—	—	—	—	—	—

Sample characteristics	Center participated in CACFP			Home participated in CACFP		
	OR	SE	*p*	OR	SE	*p*
Asian, non-Hispanic/Latino/a	0.99	0.01	0.17	—	—	—
Other, non-Hispanic/Latino/a	0.99	0.01	0.09	—	—	—
Percent of currently enrolled children who speak a language other than English	—	—	—	0.99	0.00	0.00
Served one or more children experiencing food insecurity at home	1.46	0.32	0.09	1.29	0.35	0.35
Operating hours and staff						
Weekly standard operating hours	1.01	0.00	0.01	—	—	—
Weekly nontraditional operating hours[g]	—	—	—	—	—	—
Total number of paid staff	0.99	0.00	0.10	1.12	0.14	0.40
Number of paid staff that work with children	—	—	—	n.a.	n.a.	n.a.
Number of paid staff that do not work with children[d]	—	—	—	n.a.	n.a.	n.a.
Child-to-staff ratio[h]	—	—	—	—	—	—
Percent of staff by highest level of education:						
No college degree	—	—	—	—	—	—
2-year college degree	—	—	—	—	—	—
4-year college degree	1	0.00	0.72	—	—	—
Percent of staff with CDA credential[i]	—	—	—	—	—	—
Staff average years of experience	0.99	0.01	0.28	1.02	0.01	0.05
Curriculum use and learning activities						
Used curriculum or prepared learning activities[j]	—	—	—	1.15	0.23	0.49
Number of hours per day typically spent on:[k]						
Whole group activities	—	—	—	—	—	—
Small group activities	—	—	—	—	—	—
One-on-one activities	—	—	—	—	—	—
Child-selected activities	1.15	0.12	0.18	—	—	—
Pre-planned singing/rhyming	—	—	—	0.67	0.11	0.02
Book reading or sharing	—	—	—	—	—	—
Meal services, routine care, and physical activity						
Provided both snacks and meals to children	2.68	0.93	0.00	—	—	—
Number of times per week provided 100% fruit juice:						
Never provided	—	—	—	n.a.	n.a.	n.a.
One to three times	1.35	0.27	0.13	n.a.	n.a.	n.a.
Almost every day	—	—	—	n.a.	n.a.	n.a.
Once a day	0.75	0.16	0.19	n.a.	n.a.	n.a.
Two to three times a day	—	—	—	n.a.	n.a.	n.a.
Four or more times a day	—	—	—	n.a.	n.a.	n.a.
Number of hours per day typically spent on routine care[l,m]	1.13	0.13	0.30	—	—	—

Sample characteristics	Center participated in CACFP			Home participated in CACFP		
	OR	SE	*p*	OR	SE	*p*
Number of hours per day typically spent on physical activity[l]	—	—	—	—	—	—
Location(s) for physical activity:						
Indoor space for regular care[n]	—	—	—	—	—	—
Own outdoor space	—	—	—	—	—	—
Nearby public outdoor space	1.72	0.33	0.01	—	—	—
Typical daily screen time:						
No screen time	—	—	—	0.77	0.18	0.25
Less than 30 minutes	—	—	—	—	—	—
30 minutes to 1.5 hours	—	—	—	—	—	—
1.5 hours or more	0.29	0.16	0.03	—	—	—
Additional services for children and families						
In the past year, offered or referred families to:						
Health screening services	—	—	—	—	—	—
Developmental assessments	—	—	—	—	—	—
Therapeutic services	—	—	—	1.14	0.27	0.58
Counseling services	1.46	0.31	0.07	—	—	—
Offered child well-being and development services on-site	—	—	—	—	—	—
Paid for child well-being and development services	0.72	0.12	0.05	3.8	2.74	0.06
Connected families with social services[o]	1.1	0.21	0.62	1.28	0.39	0.42
Compliance, quality, and professional activities						
In the past year, reported compliance activities:						
Inspected for health and safety[p]	2.02	0.68	0.04	1.48	0.45	0.19
Attended health and safety training[q]	—	—	—	1.46	0.37	0.13
Had access to a health consultant or nurse[r]	1.24	0.22	0.23	1.1	0.22	0.62
In the past year, received an inspection to monitor quality[s]	—	—	—	—	—	—
Participated in a quality rating and improvement system	2.3	0.43	0.00	2.45	0.55	0.00
Offered professional development resources for staff:						
Funding for off-site courses or trainings	—	—	—	n.a.	n.a.	n.a.
Paid time-off for off-site courses or trainings	—	—	—	n.a.	n.a.	n.a.
Access to on-site coaches, mentors, or consultants	1.25	0.25	0.26	n.a.	n.a.	n.a.
Had relationships with other schools or providers to share access to professional resources	1.58	0.31	0.02	1.07	0.21	0.72
Percent member of a professional child care organization[t]	1.53	0.36	0.07	—	—	—
In the past year, percent reported professional activities:[t]						
Helped by home-visitor or coach	—	—	—	1.45	0.30	0.07
Attended professional workshop[u]	—	—	—	1.53	0.32	0.04
Took college-level child care course for credit	1.6	0.38	0.05	1.16	0.25	0.48

Sample characteristics	Center participated in CACFP			Home participated in CACFP		
	OR	SE	*p*	OR	SE	*p*
Community demographics and economic well-being						
Percent of population in urban area	—	—	—	—	—	—
Percent of population who identified as:						
Hispanic/Latino/a	—	—	—	—	—	—
Black non-Hispanic	—	—	—	1.01	0.01	0.20
Non-Hispanic, non-Black	—	—	—	—	—	—
Percent of population who were recent immigrants[v]	—	—	—	—	—	—
Percent of households that spoke a language other than English	—	—	—	—	—	—
Percent of individuals in households with incomes at or below 100% of the federal poverty level	—	—	—	—	—	—
Percent of individuals in households with incomes at or below 185% of the federal poverty level	1.02	0.01	0.01	1.02	0.01	0.08
Average median income, all workers	1	0.00	0.09	1	0.00	0.58
Percent of females in labor force who were employed	—	—	—	—	—	—
Model summary statistics						
Constant	0.01	0.01	0.00	0.16	0.12	0.01
Pseudo-R^2	0.35			0.19		
Unweighted sample size	2,850			2,440		
Weighted sample size	68,500			61,900		

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based and Home-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Table presents odds ratios, standard errors, and *p*-values. Models use LASSO for variable selection and prediction (excluded characteristics marked with "— "). We use dummy variable imputation for variables missing data (indicators omitted). Follow-up weights provided by the NSECE Project Team are applied. These weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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.

n.a. = not applicable; CDA = Child Development Associate; OR = odds ratio; SE = standard error.

[a] Includes providers for which at least 50 percent of children are funded by Head Start or Early Head Start (HS/EHS) and less than 30 percent are funded by other federal, State, or local government sources.

[b] Includes providers for which at least 50 percent of children are funded by State public preschool and less than 30 percent are funded by other federal, State, or local government sources.

[c] Includes providers for which at least 50 percent of children are funded by child care subsidies and less than 30 percent are funded by other federal, State, or local government sources.

[d] Includes providers for which at least 90 percent of their children are funded by private tuition paid by their parents or guardians without any public funding.

[e] Includes providers located in community centers, municipal buildings, or other commercial structures in which the provider is not the sole occupant.

[f] Data for homes combine infants and toddlers.

[g] Defined as child care provided during weekday evenings and overnight (between 7:00 PM and 6:00 AM) and on weekends.

[h] Includes full-time and part-time workers, administrators, support staff, drivers, cooks, and any other center staff that do not work directly with children.

[i] Excludes center staff that do not work directly with children.

[j] Center-based provider survey respondents (usually center directors) included in percent of staff by highest level of education and average years of experience but were not asked to report on whether they had a CDA credential.

[k] Includes centers in which all teaching staff reported using a curriculum or prepared set of learning activities.

[l] Average of the values assigned to the following categories across age groups for each activity, which are further averaged across center staff: "no time" = 0; "30 minutes or less" = .5; "about one hour" = 1; "about two hours" = 2; "three hours or more" = 3).

[m] Routine care activities defined as feeding, diapering, or bathroom breaks, not including lunch or nap breaks.

[n] For centers, includes both vigorous physical activity in the classroom or another inside room, such as a gym.

[o] Includes referrals to housing services or food assistance, access to medical care, or help getting assistance from other government or private programs.

[p] Inspected to ensure compliance with health, safety, or other requirements, such as group sizes or staff: child ratios.

[q] Includes centers in which all teaching staff reported having attended a health and safety training in the past year.

[r] Health consultants or nurses may help with nutrition, allergies, or other health-related issues children experience.

[s] Inspected to monitor the quality of child care services other than meeting health, safety, or other requirements.

[t] Indicates the average percent of center staff and the percent of homes that reported each professional activity.

[u] Center staff reported on professional workshops such as those offered by professional associations or child care resource and referral networks. Homes reported on professional workshops such as those sponsored by a community agency of Family Child Care network.

[v] The percentage of the total population who entered the U.S. in 2010 or later.

This page has been left blank for double-sided copying.

Research Question A.2

How can these characteristics best be used to construct balanced comparison groups of eligible nonparticipating providers that closely resemble participating providers?

This page has been left blank for double-sided copying.

Exhibit B.3. Summary of balance measures before and after propensity score weighting by analytic approach among centers and homes in 2019

	Centers		Homes	
	GBM	Logistic regression	GBM	Logistic regression
Absolute standardized difference				
Maximum across sample characteristics				
Unweighted	0.68	0.84	0.44	0.57
After propensity score weighting	0.24	0.51	0.23	0.39
Mean across sample characteristics				
Unweighted	0.13	0.13	0.14	0.17
After propensity score weighting	0.08	0.08	0.06	0.06
Kolmogorov-Smirnov statistic				
Maximum across sample characteristics				
Unweighted	0.27	0.30	0.22	0.24
After propensity score weighting	0.13	0.20	0.11	0.13
Mean across sample characteristics				
Unweighted	0.06	0.06	0.06	0.06
After propensity score weighting	0.04	0.04	0.03	0.03
Sample size				
CACFP participants	1,880	1,900	1,740	1,760
Eligible nonparticipants	900	940	680	680

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based and Home-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Table presents summary statistics for absolute standardized differences (ASDs) and Kolmogorov-Smirnov statistics across sample characteristics in 2019 by analytic approach used to generate each propensity score. Standardized effect sizes compare the difference in means between CACFP participants and eligible nonparticipants for each sample characteristic, scaled by its pooled standard deviation, and ASDs reflect the absolute value of this difference. Values are expressed in standard-deviation units and larger values indicate greater imbalance between groups. The Kolmogorov-Smirnov statistic compares the full distributions of each sample characteristic between groups and is defined as the maximum absolute difference between the two cumulative distribution functions. Values range from 0 (indicating identical distributions) to 1 (indicating completely non-overlapping distributions). Follow-up weights provided by the NSECE Project Team are applied. These weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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.

Exhibit B.4. Center characteristics by provider CACFP participation status in 2019 before and after propensity score weighting using GBM

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
Provider funding, governance, and location										
Majority funding source										
Majority Head Start[a]	28.4	45.1	31.6	46.5	-0.07	0.03	32.1	46.7	-0.08	0.04
Majority public preschool[b]	9	28.7	4.9	21.6	0.14	0.04	10.4	30.6	-0.05	0.01
High subsidy[c]	14.4	35.1	2.8	16.4	0.33	0.12	9.9	29.8	0.13	0.05
Majority private tuition[d]	8.6	28.1	27.9	44.8	-0.68	0.19	11.9	32.3	-0.11	0.03
Mixed public or mixed public/private	3.9	19.3	7.1	25.7	-0.17	0.03	3.6	18.7	0.01	0.00
Majority funding source: NA	35.6	47.9	25.8	43.7	0.21	0.10	32.1	46.7	0.07	0.04
Percentage of currently enrolled children funded by:										
Child care subsidies	24.8	32.3	10.2	21.1	0.45	0.27	22.6	31	0.07	0.05
Public preschool	22.7	40.2	25.4	53.6	-0.06	0.07	20.7	48.5	0.05	0.11
Head Start	26.9	40.8	7	24.1	0.49	0.27	19	36.8	0.19	0.13
Child care subsidies: NA	17.7	38.2	15.3	36	0.06	0.02	19.1	39.3	-0.04	0.01
Public preschool: NA	7.5	26.4	10.1	30.2	-0.10	0.03	10.8	31	-0.12	0.03
Head Start: NA	12.8	33.4	11.9	32.4	0.03	0.01	13.3	33.9	-0.01	0.01
Governance										
Private, for-profit	36.7	48.2	37.7	48.5	-0.02	0.01	41.6	49.3	-0.10	0.05
Private, not for-profit	52.5	49.9	45.2	49.8	0.14	0.07	43.1	49.5	0.19	0.09
Public	10.4	30.5	16	36.6	-0.18	0.06	14.6	35.3	-0.14	0.04
Governance: NA	0.40	6.7	1.1	10.5	-0.10	0.01	0.60	8	-0.03	0.00
Sponsored by a larger organization	33.3	47.1	32.4	46.8	0.02	0.01	27.1	44.5	0.13	0.06
Sponsored by a larger organization: NA	1.4	11.7	3.8	19.2	-0.21	0.02	4	19.6	-0.22	0.03
Provider location										
Religious building	0.50	6.7	0.00	1.2	0.07	0.00	0.00	1.1	0.07	0.00
Public or private school	38.7	48.7	22.5	41.8	0.33	0.16	32	46.6	0.14	0.07

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
University, college, or employer	15.7	36.4	14.5	35.2	0.04	0.01	19.2	39.4	-0.09	0.04
Other shared structure[e]	29.1	45.4	42.8	49.5	-0.30	0.14	29.5	45.6	-0.01	0.00
Other independent structure	10.1	30.2	18.2	38.6	-0.27	0.08	15.5	36.2	-0.18	0.05
Somewhere else	1.4	11.6	0.70	8.6	0.05	0.01	0.90	9.5	0.04	0.00
Provider location: NA	4.6	20.9	1.3	11.5	0.16	0.03	2.9	16.7	0.08	0.02
Children served and provider size										
Number of children enrolled	77.7	94	88.3	106	-0.11	0.06	72.6	84.6	0.05	0.07
Percent of capacity enrolled	90.1	14.4	89.3	14.6	0.05	0.07	88.3	16.4	0.13	0.10
Percent of capacity enrolled: NA	0.60	7.5	0.20	4.9	0.04	0.00	0.30	5.6	0.03	0.00
Percent of currently enrolled children who are:										
Infants (<12 months)	7.51	11.9	5.63	8.38	0.16	0.12	6.2	8.63	0.11	0.08
Toddlers (1 and 2 years)	23.7	20.4	20.2	20.3	0.17	0.11	22.8	20.7	0.04	0.04
Preschoolers (3 to 5 years, not in K)	54.7	29.5	56.8	29.8	-0.07	0.06	56.9	29.7	-0.08	0.06
School-aged (5 years plus)	14.2	20.1	17.4	25.1	-0.16	0.09	14.1	21.2	0.01	0.05
Percent of currently enrolled children who are:										
Hispanic/Latino/a	22.7	29.8	15.6	24.1	0.24	0.12	21.2	29	0.05	0.04
White, non-Hispanic/Latino/a	50.4	37.8	60.3	36.3	-0.26	0.16	44.7	37.9	0.15	0.11
Black, non-Hispanic/Latino/a	27.4	32.8	21.1	29.1	0.19	0.11	30.7	34.8	-0.10	0.06
Asian, non-Hispanic/Latino/a	2.25	6.3	4.25	11.5	-0.32	0.09	2.91	8.25	-0.10	0.05
Other, non-Hispanic/Latino/a	10.1	16.1	11.3	19.8	-0.07	0.04	12.1	19.3	-0.12	0.06
Hispanic/Latino/a: NA	15.9	36.6	22.7	41.9	-0.19	0.07	17.2	37.7	-0.04	0.01
White, non-Hispanic/Latino/a: NA	26.1	43.9	30.9	46.2	-0.11	0.05	26.9	44.4	-0.02	0.01
Black, non-Hispanic/Latino/a: NA	31.6	46.5	33.9	47.3	-0.05	0.02	28.3	45	0.07	0.03
Asian, non-Hispanic/Latino/a: NA	31.6	46.5	35.7	47.9	-0.09	0.04	31.3	46.4	0.01	0.00
Other, non-Hispanic/Latino/a: NA	39.8	48.9	41.5	49.3	-0.04	0.02	36.2	48	0.07	0.04
Percent of currently enrolled children who speak a language other than English	17.1	26.7	13.1	22.8	0.15	0.08	18.3	26.8	-0.04	0.06

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
Percent of currently enrolled children who speak a language other than English: NA	26	43.9	30.3	46	-0.10	0.04	27.2	44.5	-0.03	0.01
Served one or more children experiencing food insecurity at home	43.6	49.6	30.8	46.2	0.26	0.13	36.8	48.3	0.14	0.07
Served one or more children experiencing food insecurity at home: NA	27	44.4	32.1	46.7	-0.11	0.05	28.1	44.9	-0.02	0.01
Operating hours and staff										
Weekly standard operating hours	45.6	18.8	41.8	19.7	0.20	0.11	44.3	18.9	0.07	0.04
Weekly standard operating hours: NA	1.1	10.4	1.5	12	-0.03	0.00	1.5	12.3	-0.04	0.00
Weekly nontraditional operating hours[f]	1.57	7.19	0.65	4.06	0.13	0.06	1	5.6	0.08	0.04
Weekly nontraditional operating hours: NA	0.20	4.3	0.40	6.3	-0.05	0.00	0.40	6.4	-0.05	0.00
Total number of paid staff	15.4	17.7	17.3	19.6	-0.11	0.06	14.4	18	0.06	0.08
Total number of paid staff: NA	0.50	7.3	0.20	4.4	0.05	0.00	0.20	4	0.05	0.00
Number of paid staff that work with children	11.8	11.6	12.3	12.7	-0.05	0.06	10.7	11.4	0.10	0.09
Number of paid staff that work with children: NA	3.7	18.8	2.7	16.1	0.06	0.01	3	17	0.04	0.01
Number of paid staff that do not work with children[d]	5.13	8.11	5.17	7.86	0.00	0.04	4.76	6.93	0.05	0.05
Number of paid staff that do not work with children: NA	8.5	27.9	12.9	33.5	-0.15	0.04	8.6	28.1	0.00	0.00
Child-to-staff ratio[g]	8.5	17.4	10.5	19.3	-0.12	0.08	8.81	13.2	-0.02	0.05
Child-to-staff ratio: NA	6.1	24	3.2	17.5	0.12	0.03	3.4	18.2	0.11	0.03
Percent of staff by highest level of education:										
No college degree	40.1	32.8	34.3	32.8	0.17	0.09	39.1	32.5	0.03	0.02
2-year college degree	20.6	25.8	18.8	24.9	0.07	0.04	21.2	26.4	-0.02	0.05
4-year college degree	39.4	32.7	46.8	35.2	-0.23	0.10	39.7	32.6	-0.01	0.04
No college degree: NA	1.3	11.4	2.8	16.4	-0.13	0.02	2	14	-0.06	0.01
2-year college degree: NA	1.3	11.4	2.8	16.4	-0.13	0.02	2	14	-0.06	0.01
4-year college degree: NA	1.3	11.4	2.8	16.4	-0.13	0.02	2	14	-0.06	0.01
Percent of staff with CDA credential[h]	29.7	44.1	24.6	42.4	0.12	0.07	28.9	44.8	0.02	0.03
Percent of staff with CDA credential: NA	24.8	43.2	28.8	45.3	-0.09	0.04	24.7	43.1	0.00	0.00

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
Staff average years of experience	17.1	8.52	17.7	9.29	-0.08	0.06	17.1	8.61	0.00	0.03
Staff average years of experience: NA	2.5	15.5	3.9	19.3	-0.09	0.01	2.7	16.2	-0.01	0.00
Curriculum use and learning activities										
Used curriculum or prepared learning activities[i]	87.2	32.5	83.8	36.7	0.10	0.04	85.8	34.8	0.04	0.02
Used curriculum or prepared learning activities: NA	24.9	43.3	28.6	45.2	-0.08	0.04	24.5	43	0.01	0.00
Number of hours per day typically spent on:[j]										
Whole group activities	1.07	0.76	1.03	0.73	0.06	0.02	0.99	0.69	0.10	0.04
Small group activities	0.85	0.59	0.85	0.62	-0.01	0.01	0.80	0.58	0.07	0.04
One-on-one activities	0.64	0.49	0.66	0.53	-0.02	0.05	0.66	0.52	-0.03	0.03
Child-selected activities	1.46	0.90	1.33	0.92	0.14	0.09	1.35	0.90	0.12	0.06
Pre-planned singing/rhyming	0.79	0.54	0.76	0.58	0.05	0.08	0.78	0.57	0.02	0.05
Book reading or sharing	0.76	0.47	0.78	0.51	-0.04	0.03	0.77	0.51	-0.03	0.02
Whole group activities: NA	24.6	43.1	28.6	45.2	-0.09	0.04	25.1	43.3	-0.01	0.00
Small group activities: NA	24.9	43.2	29	45.4	-0.09	0.04	25.1	43.4	0.00	0.00
One-on-one activities: NA	25.5	43.6	29.3	45.5	-0.09	0.04	25.7	43.7	-0.01	0.00
Child-selected activities: NA	24.9	43.2	29	45.4	-0.09	0.04	25	43.3	0.00	0.00
Pre-planned singing/rhyming: NA	25.2	43.4	28.7	45.2	-0.08	0.04	25	43.3	0.00	0.00
Book reading or sharing: NA	24.7	43.1	28.9	45.3	-0.10	0.04	25	43.3	-0.01	0.00
Meal services, routine care, and physical activity										
Provided both snacks and meals to children	97.4	15.8	93	25.6	0.28	0.05	94.3	23.2	0.20	0.03
Provided both snacks and meals to children: NA	3.6	18.5	3	17.1	0.03	0.01	2.5	15.8	0.05	0.01
Number of times per week provided 100% fruit juice:										
Never provided	39.8	48.9	38.4	48.6	0.03	0.01	35.8	47.9	0.08	0.04
One to three times	32.3	46.8	24.7	43.1	0.16	0.08	25.6	43.6	0.14	0.07
Almost every day	3.7	19	6.9	25.4	-0.17	0.03	5.9	23.6	-0.11	0.02
Once a day	14.7	35.5	19.2	39.4	-0.13	0.05	20.2	40.1	-0.15	0.05
Two to three times a day	5.5	22.7	8.2	27.4	-0.12	0.03	10	30	-0.20	0.05

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
Four or more times a day	2.8	16.5	1.6	12.7	0.07	0.01	1.4	11.7	0.09	0.01
Number of times per week provided 100% fruit juice: NA	1.1	10.6	0.90	9.5	0.02	0.00	1.2	10.8	0.00	0.00
Number of hours per day typically spent on routine care[k,l]	1.24	0.91	1.13	0.92	0.12	0.06	1.19	0.95	0.05	0.05
Number of hours per day typically spent on routine care: NA	25.2	43.4	29.2	45.5	-0.09	0.04	25.3	43.5	0.00	0.00
Number of hours per day typically spent on physical activity[k]	1.21	0.71	1.11	0.68	0.13	0.06	1.11	0.64	0.14	0.07
Number of hours per day typically spent on physical activity: NA	24.8	43.2	29.4	45.6	-0.11	0.05	26.4	44.1	-0.04	0.02
Location(s) for physical activity:										
Indoor space for regular care[m]	84.2	36.5	85.1	35.6	-0.03	0.01	81.8	38.6	0.07	0.02
Own outdoor space	97.6	15.3	97.3	16.1	0.02	0.00	96.5	18.4	0.07	0.01
Nearby public outdoor space	30.6	46.1	21.8	41.3	0.19	0.09	23.1	42.1	0.16	0.08
Indoor space for regular care: NA	5.8	23.3	4.9	21.6	0.04	0.01	6.3	24.3	-0.02	0.01
Own outdoor space: NA	0.70	8	0.30	5.4	0.05	0.00	0.40	6.4	0.03	0.00
Nearby public outdoor space: NA	12.8	33.4	15.3	36	-0.08	0.03	14.5	35.2	-0.05	0.02
Typical daily screen time:										
No screen time	40.4	49.1	37.1	48.3	0.07	0.03	36.7	48.2	0.07	0.04
Less than 30 minutes	26.9	44.3	25.1	43.4	0.04	0.02	29.2	45.5	-0.05	0.02
30 minutes to 1.5 hours	6.5	24.7	5.9	23.5	0.03	0.01	6.4	24.4	0.01	0.00
1.5 hours or more	1.3	11.2	3.5	18.3	-0.20	0.02	3	17.2	-0.16	0.02
Typical daily screen time: NA	24.9	43.3	28.4	45.1	-0.08	0.04	24.6	43.1	0.01	0.00
Additional services for children and families										
In the past year, offered or referred families to:										
Health screening services	82.6	37.9	76.2	42.6	0.17	0.06	75.1	43.3	0.20	0.08
Developmental assessments	89.5	30.7	85.4	35.4	0.13	0.04	85.8	35	0.12	0.04
Therapeutic services	86.7	33.9	83.1	37.5	0.11	0.04	82.6	37.9	0.12	0.04
Counseling services	75.6	43	66.2	47.3	0.22	0.09	65.8	47.5	0.23	0.10
Health screening services: NA	1	10.2	0.40	6	0.07	0.01	0.30	5.9	0.07	0.01
Developmental assessments: NA	1.2	10.7	1	9.9	0.02	0.00	1	10	0.01	0.00

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
Therapeutic services: NA	1.9	13.7	2.2	14.8	-0.02	0.00	3.5	18.5	-0.12	0.02
Counseling services: NA	1.3	11.5	1.6	12.4	-0.02	0.00	1.3	11.2	0.01	0.00
Offered child well-being and development services on-site	89.4	30.8	87.8	32.7	0.05	0.02	87.2	33.4	0.07	0.02
Offered child well-being and development services on-site: NA	0.30	5.5	0.10	2.3	0.05	0.00	0.00	1.7	0.05	0.00
Paid for child well-being and development services	41.4	49.3	45.1	49.8	-0.07	0.04	40.7	49.2	0.02	0.01
Paid for child well-being and development services: NA	0.40	6.3	0.10	3.5	0.04	0.00	0.10	2.4	0.05	0.00
Connected families with social services[n]	78	41.5	59.4	49.1	0.45	0.19	68.2	46.6	0.24	0.10
Connected families with social services: NA	0.60	8	1.2	10.9	-0.07	0.01	0.80	8.7	-0.01	0.00
Compliance, quality, and professional activities										
In the past year, reported compliance activities:										
Inspected for health and safety[o]	96.7	17.9	92.8	25.8	0.22	0.04	95.1	21.7	0.09	0.02
Attended health and safety training[p]	90.2	29.2	86.9	33.2	0.11	0.04	87.5	32.5	0.09	0.03
Inspected for health and safety: NA	1.6	12.5	3.5	18.3	-0.15	0.02	2.4	15.4	-0.07	0.01
Attended health and safety training: NA	24.4	43	28.2	45	-0.09	0.04	24.3	42.9	0.00	0.00
Had access to a health consultant or nurse[q]	71.6	45.1	62.8	48.4	0.20	0.09	61.1	48.8	0.23	0.11
Had access to a health consultant or nurse: NA	0.20	4	0.80	9.1	-0.16	0.01	0.30	5.4	-0.03	0.00
In the past year, received an inspection to monitor quality[r]	90.2	29.7	84.6	36.1	0.19	0.06	87.2	33.5	0.10	0.03
In the past year, received an inspection to monitor quality: NA	1.7	12.9	3.8	19.1	-0.16	0.02	2.7	16.2	-0.08	0.01
Participated in a quality rating and improvement system	66	47.4	42.7	49.5	0.49	0.23	58.4	49.3	0.16	0.08
Participated in a quality rating and improvement system: NA	11.2	31.5	17.6	38	-0.20	0.06	13.6	34.3	-0.08	0.02
Offered professional development resources for staff:										
Funding for off-site courses or trainings	61.2	48.8	53.5	49.9	0.16	0.08	55.7	49.7	0.11	0.06
Paid time-off for off-site courses or trainings	45	49.8	44.9	49.8	0.00	0.00	39.1	48.8	0.12	0.06
Access to on-site coaches, mentors, or consultants	65.1	47.7	51.9	50	0.28	0.13	54.2	49.8	0.23	0.11
Funding for off-site courses or trainings: NA	1.4	11.9	1.5	12.1	0.00	0.00	1.7	12.8	-0.02	0.00
Paid time-off for off-site courses or trainings: NA	2.1	14.3	1.9	13.5	0.02	0.00	1.4	11.7	0.05	0.01
Access to on-site coaches, mentors, or consultants: NA	2.8	16.6	1.4	11.6	0.09	0.02	1.1	10.4	0.11	0.02

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
Had relationships with other schools or providers to share access to professional resources	68.7	46.4	57.8	49.4	0.23	0.11	58.2	49.4	0.23	0.11
Had relationships with other schools or providers to share access to professional resources: NA	3.2	17.5	0.40	6.4	0.16	0.03	0.80	9.2	0.13	0.02
Percent member of a professional child care organization[s]	24.8	41.8	14.8	35.3	0.24	0.12	17.6	37.9	0.17	0.09
Percent member of a professional child care organization: NA	24.5	43	28.8	45.3	-0.10	0.04	24.8	43.2	-0.01	0.00
In the past year, percent reported professional activities:[s]										
Helped by home-visitor or coach	40.8	47.9	36.6	47.6	0.09	0.06	38	48	0.06	0.04
Attended professional workshop[t]	80.6	38.6	78.2	40.9	0.06	0.03	76.1	42	0.12	0.05
Took college-level child care course for credit	27.4	43.8	18.8	38.5	0.20	0.09	20.6	40	0.16	0.08
Helped by home-visitor or coach: NA	25.5	43.6	29.2	45.5	-0.08	0.04	25.4	43.6	0.00	0.00
Attended professional workshop: NA	24.4	42.9	28.9	45.3	-0.10	0.05	25.4	43.5	-0.02	0.01
Took college-level child care course for credit: NA	24.9	43.2	29.1	45.4	-0.10	0.04	25.1	43.3	0.00	0.00
Community demographics and economic well-being										
Percent of population in urban area	76	35.1	74.2	36.6	0.05	0.05	82.6	30.3	-0.19	0.13
Percent of population who identified as:										
Hispanic/Latino/a	17.1	20.8	14.1	19.2	0.14	0.10	19.9	23.6	-0.13	0.07
Black non-Hispanic	15.5	19.8	13.4	17.4	0.11	0.08	18	21.6	-0.13	0.09
Non-Hispanic, non-Black	67.5	27	72.5	24.3	-0.19	0.13	62.1	28.4	0.20	0.10
Percent of population who were recent immigrants[u]	1.16	0.54	1.15	0.53	0.00	0.00	1.16	0.54	-0.01	0.00
Percent of households that spoke a language other than English	19.2	20.2	18.3	19	0.05	0.06	22.6	22.3	-0.17	0.13
Percent of individuals in households with incomes at or below 100% of the federal poverty level	17.4	7.91	14.6	8.42	0.35	0.25	18.6	8.86	-0.14	0.09
Percent of individuals in households with incomes at or below 185% of the federal poverty level	35.6	11.8	30.1	13.4	0.47	0.26	36.7	13.4	-0.09	0.09
Average median income, all workers	23,200	12,700	27,900	16,100	-0.37	0.25	25,100	12,000	-0.15	0.07
Percent of females in labor force who were employed	92.6	3.79	93.5	3.24	-0.22	0.12	92.2	3.98	0.13	0.09

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Table presents means for continuous characteristics, percentages for binary characteristics, standard deviations, standardized effect sizes and Kolmogorov-Smirnov statistics. Standardized effect sizes compare the difference in means between CACFP participants and eligible nonparticipants for each sample characteristic, scaled by its pooled standard deviation. Values are expressed in standard-deviation units and larger values indicate greater imbalance between groups. The Kolmogorov-Smirnov statistic compares the full distributions of each sample characteristic between groups and is defined as the maximum absolute difference between the two cumulative distribution functions. Values range from 0 (indicating identical distributions) to 1 (indicating completely non-overlapping distributions). Follow-up weights provided by the NSECE Project Team are applied. These weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Missingness rates for each characteristic (if relevant) indicated by NA.

NA = not available; SD = standard deviation; ES = standardized effect size; KS = Kolmogorov-Smirnov statistic.

[a] Includes providers for which at least 50 percent of children are funded by Head Start or Early Head Start (HS/EHS) and less than 30 percent are funded by other federal, State, or local government sources.

[b] Includes providers for which at least 50 percent of children are funded by State public preschool and less than 30 percent are funded by other federal, State, or local government sources.

[c] Includes providers for which at least 50 percent of children are funded by child care subsidies and less than 30 percent are funded by other federal, State, or local government sources.

[d] Includes providers for which at least 90 percent of their children are funded by private tuition paid by their parents or guardians without any public funding.

[e] Includes providers located in community centers, municipal buildings, or other commercial structures in which the provider is not the sole occupant.

[f] Defined as child care provided during weekday evenings and overnight (between 7:00 PM and 6:00 AM) and on weekends.

[g] Includes full-time and part-time workers, administrators, support staff, drivers, cooks, and any other center staff that do not work directly with children.

[h] Excludes center staff that do not work directly with children.

[i] Center-based provider survey respondents (usually center directors) included in percent of staff by highest level of education and average years of experience but were not asked to report on whether they had a CDA credential.

[j] Includes centers in which all teaching staff reported using a curriculum or prepared set of learning activities.

[k] Average of the values assigned to the following categories across age groups for each activity, which are further averaged across center staff: "no time" = 0; "30 minutes or less" = .5; "about one hour" = 1; "about two hours" = 2; "three hours or more" = 3).

[l] Routine care activities defined as feeding, diapering, or bathroom breaks, not including lunch or nap breaks.

[m] For centers, includes both vigorous physical activity in the classroom or another inside room, such as a gym.

[n] Includes referrals to housing services or food assistance, access to medical care, or help getting assistance from other government or private programs.

[o] Inspected to ensure compliance with health, safety, or other requirements, such as group sizes or staff: child ratios.

[p] Includes centers in which all teaching staff reported having attended a health and safety training in the past year.

[q] Health consultants or nurses may help with nutrition, allergies, or other health-related issues children experience.

[r] Inspected to monitor the quality of child care services other than meeting health, safety, or other requirements.

[s] Indicates the average percent of center staff that reported each professional activity.

[t] Center staff reported on professional workshops such as those offered by professional associations or child care resource and referral networks.

[u] The percentage of the total population who entered the U.S. in 2010 or later.

Exhibit B.5. Balance measures for center characteristics by provider CACFP participation status in 2019 before and after propensity score weighting by analytic approach

Sample characteristics	Before propensity score weighting				After propensity score weighting			
	GBM		Logit		GBM		Logit	
	ES	KS	ES	KS	ES	KS	ES	KS
Provider funding, governance, and location								
Majority funding source								
Majority Head Start[a]	-0.07	0.03	0.36	0.13	-0.08	0.04	0.15	0.06
Majority public preschool[b]	0.14	0.04	-0.16	0.03	-0.05	0.01	0.00	0.00
High subsidy[c]	0.33	0.12	0.15	0.04	0.13	0.05	-0.15	0.04
Majority private tuition[d]	-0.68	0.19	-0.84	0.23	-0.11	0.03	-0.01	0.00
Mixed public or mixed public/private	-0.17	0.03	0.22	0.10	0.01	0.00	0.05	0.02
Majority funding source: NA	0.21	0.10	n.a.	n.a.	0.07	0.04	n.a.	n.a.
Percentage of currently enrolled children funded by:								
Child care subsidies	0.45	0.27	0.47	0.28	0.07	0.05	-0.27	0.14
Public preschool	-0.06	0.07	-0.05	0.08	0.05	0.11	-0.06	0.06
Head Start	0.49	0.27	0.52	0.29	0.19	0.13	0.03	0.08
Child care subsidies: NA	0.06	0.02	0.09	0.03	-0.04	0.01	-0.05	0.02
Public preschool: NA	-0.10	0.03	-0.07	0.02	-0.12	0.03	-0.08	0.02
Head Start: NA	0.03	0.01	0.05	0.02	-0.01	0.01	-0.05	0.02
Governance								
Private, for-profit	-0.02	0.01	-0.10	0.05	-0.10	0.05	-0.05	0.02
Private, not for-profit	0.14	0.07	0.20	0.10	0.19	0.09	0.10	0.05
Public	-0.18	0.06	-0.14	0.04	-0.14	0.04	-0.10	0.03
Governance: NA	-0.10	0.01	-0.08	0.01	-0.03	0.00	0.05	0.00
Sponsored by a larger organization	0.02	0.01	0.07	0.03	0.13	0.06	0.03	0.01
Sponsored by a larger organization: NA	-0.21	0.02	-0.17	0.02	-0.22	0.03	-0.09	0.01
Provider location								
Religious building	0.07	0.00	-0.25	0.07	0.07	0.00	-0.10	0.03
Public or private school	0.33	0.16	-0.30	0.14	0.14	0.07	0.02	0.01
University, college, or employer	0.04	0.01	0.16	0.03	-0.09	0.04	0.05	0.01
Other shared structure[e]	-0.30	0.14	0.02	0.01	-0.01	0.00	-0.21	0.07
Other independent structure	-0.27	0.08	0.32	0.16	-0.18	0.05	0.15	0.07
Somewhere else	0.05	0.01	0.06	0.01	0.04	0.00	0.08	0.01
Provider location: NA	0.16	0.03	n.a.	n.a.	0.08	0.02	n.a.	n.a.
Children served and provider size								
Number of children enrolled	-0.11	0.06	-0.13	0.05	0.05	0.07	0.07	0.08
Percent of capacity enrolled	0.05	0.07	0.07	0.09	0.13	0.10	0.13	0.13
Percent of capacity enrolled: NA	0.04	0.00	0.05	0.00	0.03	0.00	0.03	0.00
Percent of currently enrolled children who are:								

Sample characteristics	Before propensity score weighting				After propensity score weighting			
	GBM		Logit		GBM		Logit	
	ES	KS	ES	KS	ES	KS	ES	KS
Infants (<12 months)	0.16	0.12	0.15	0.11	0.11	0.08	0.14	0.12
Toddlers (1 and 2 years)	0.17	0.11	0.14	0.10	0.04	0.04	0.09	0.09
Preschoolers (3 to 5 years, not in K)	-0.07	0.06	-0.06	0.06	-0.08	0.06	-0.12	0.10
School-aged (5 years plus)	-0.16	0.09	-0.13	0.08	0.01	0.05	0.01	0.08
Percent of currently enrolled children who are:								
Hispanic/Latino/a	0.24	0.12	0.26	0.13	0.05	0.04	0.08	0.12
White, non-Hispanic/Latino/a	-0.26	0.16	-0.33	0.20	0.15	0.11	0.23	0.20
Black, non-Hispanic/Latino/a	0.19	0.11	0.23	0.14	-0.10	0.06	-0.35	0.17
Asian, non-Hispanic/Latino/a	-0.32	0.09	-0.28	0.10	-0.10	0.05	0.05	0.14
Other, non-Hispanic/Latino/a	-0.07	0.04	-0.05	0.04	-0.12	0.06	-0.02	0.12
Hispanic/Latino/a: NA	-0.19	0.07	-0.20	0.07	-0.04	0.01	0.01	0.00
White, non-Hispanic/Latino/a: NA	-0.11	0.05	-0.12	0.05	-0.02	0.01	-0.04	0.02
Black, non-Hispanic/Latino/a: NA	-0.05	0.02	-0.05	0.02	0.07	0.03	0.05	0.02
Asian, non-Hispanic/Latino/a: NA	-0.09	0.04	-0.10	0.05	0.01	0.00	0.01	0.01
Other, non-Hispanic/Latino/a: NA	-0.04	0.02	-0.06	0.03	0.07	0.04	0.11	0.05
Percent of currently enrolled children who speak a language other than English	0.15	0.08	0.14	0.08	-0.04	0.06	0.01	0.08
Percent of currently enrolled children who speak a language other than English: NA	-0.10	0.04	-0.07	0.03	-0.03	0.01	0.02	0.01
Served one or more children experiencing food insecurity at home	0.26	0.13	0.26	0.13	0.14	0.07	0.06	0.03
Served one or more children experiencing food insecurity at home: NA	-0.11	0.05	-0.08	0.04	-0.02	0.01	-0.03	0.01
Operating hours and staff								
Weekly standard operating hours	0.20	0.11	0.19	0.09	0.07	0.04	0.08	0.07
Weekly standard operating hours: NA	-0.03	0.00	-0.03	0.00	-0.04	0.00	-0.01	0.00
Weekly nontraditional operating hours[f]	0.13	0.06	0.13	0.06	0.08	0.04	0.07	0.04
Weekly nontraditional operating hours: NA	-0.05	0.00	-0.05	0.00	-0.05	0.00	-0.07	0.00
Total number of paid staff	-0.11	0.06	-0.11	0.07	0.06	0.08	0.08	0.12
Total number of paid staff: NA	0.05	0.00	0.05	0.00	0.05	0.00	0.05	0.00
Number of paid staff that work with children	-0.05	0.06	-0.06	0.05	0.10	0.09	0.12	0.09
Number of paid staff that work with children: NA	0.06	0.01	0.06	0.01	0.04	0.01	-0.03	0.01
Number of paid staff that do not work with children[d]	0.00	0.04	0.01	0.03	0.05	0.05	-0.02	0.07
Number of paid staff that do not work with children: NA	-0.15	0.04	-0.14	0.04	0.00	0.00	0.02	0.01
Child-to-staff ratio[g]	-0.12	0.08	-0.11	0.08	-0.02	0.05	-0.02	0.09
Child-to-staff ratio: NA	0.12	0.03	0.13	0.03	0.11	0.03	0.05	0.01
Percent of staff by highest level of education:								
No college degree	0.17	0.09	0.17	0.08	0.03	0.02	0.12	0.08
2-year college degree	0.07	0.04	0.08	0.05	-0.02	0.05	-0.07	0.06

Sample characteristics	Before propensity score weighting				After propensity score weighting			
	GBM		Logit		GBM		Logit	
	ES	KS	ES	KS	ES	KS	ES	KS
4-year college degree	-0.23	0.10	-0.23	0.09	-0.01	0.04	-0.06	0.04
No college degree: NA	-0.13	0.02	-0.11	0.01	-0.06	0.01	-0.04	0.00
2-year college degree: NA	-0.13	0.02	-0.11	0.01	-0.06	0.01	-0.04	0.00
4-year college degree: NA	-0.13	0.02	-0.11	0.01	-0.06	0.01	-0.04	0.00
Percent of staff with CDA credential[h]	0.12	0.07	0.13	0.07	0.02	0.03	-0.02	0.03
Percent of staff with CDA credential: NA	-0.09	0.04	-0.07	0.03	0.00	0.00	0.03	0.01
Staff average years of experience	-0.08	0.06	-0.05	0.06	0.00	0.03	-0.02	0.05
Staff average years of experience: NA	-0.09	0.01	-0.10	0.02	-0.01	0.00	0.00	0.00
Curriculum use and learning activities								
Used curriculum or prepared learning activities[i]	0.10	0.04	0.07	0.04	0.04	0.02	-0.08	0.04
Used curriculum or prepared learning activities: NA	-0.08	0.04	-0.06	0.03	0.01	0.00	0.03	0.02
Number of hours per day typically spent on:[j]								
Whole group activities	0.06	0.02	0.06	0.02	0.10	0.04	0.14	0.09
Small group activities	-0.01	0.01	-0.03	0.02	0.07	0.04	0.14	0.10
One-on-one activities	-0.02	0.05	-0.05	0.05	-0.03	0.03	0.02	0.06
Child-selected activities	0.14	0.09	0.10	0.06	0.12	0.06	0.21	0.13
Pre-planned singing/rhyming	0.05	0.08	0.04	0.07	0.02	0.05	0.06	0.06
Book reading or sharing	-0.04	0.03	-0.06	0.02	-0.03	0.02	0.01	0.03
Whole group activities: NA	-0.09	0.04	-0.07	0.03	-0.01	0.00	0.02	0.01
Small group activities: NA	-0.09	0.04	-0.07	0.03	0.00	0.00	0.02	0.01
One-on-one activities: NA	-0.09	0.04	-0.06	0.03	-0.01	0.00	0.02	0.01
Child-selected activities: NA	-0.09	0.04	-0.07	0.03	0.00	0.00	0.02	0.01
Pre-planned singing/rhyming: NA	-0.08	0.04	-0.06	0.02	0.00	0.00	0.02	0.01
Book reading or sharing: NA	-0.10	0.04	-0.07	0.03	-0.01	0.00	0.02	0.01
Meal services, routine care, and physical activity								
Provided both snacks and meals to children	0.28	0.05	0.22	0.04	0.20	0.03	0.02	0.00
Provided both snacks and meals to children: NA	0.03	0.01	0.01	0.00	0.05	0.01	0.07	0.01
Number of times per week provided 100% fruit juice:								
Never provided	0.03	0.01	-0.01	0.01	0.08	0.04	0.21	0.11
One to three times	0.16	0.08	0.20	0.10	0.14	0.07	0.10	0.05
Almost every day	-0.17	0.03	-0.16	0.03	-0.11	0.02	-0.05	0.01
Once a day	-0.13	0.05	-0.14	0.05	-0.15	0.05	-0.10	0.04
Two to three times a day	-0.12	0.03	-0.11	0.02	-0.20	0.05	-0.51	0.12
Four or more times a day	0.07	0.01	0.07	0.01	0.09	0.01	0.03	0.00
Number of times per week provided 100% fruit juice: NA	0.02	0.00	0.04	0.00	0.00	0.00	0.04	0.01
Number of hours per day typically spent on routine care[k,l]	0.12	0.06	0.12	0.06	0.05	0.05	-0.10	0.11

Sample characteristics	Before propensity score weighting				After propensity score weighting			
	GBM		Logit		GBM		Logit	
	ES	KS	ES	KS	ES	KS	ES	KS
Number of hours per day typically spent on routine care: NA	-0.09	0.04	-0.07	0.03	0.00	0.00	0.03	0.01
Number of hours per day typically spent on physical activity[k]	0.13	0.06	0.11	0.04	0.14	0.07	0.11	0.08
Number of hours per day typically spent on physical activity: NA	-0.11	0.05	-0.08	0.04	-0.04	0.02	0.01	0.01
Location(s) for physical activity:								
Indoor space for regular care[m]	-0.03	0.01	-0.03	0.01	0.07	0.02	0.11	0.04
Own outdoor space	0.02	0.00	0.02	0.00	0.07	0.01	0.14	0.02
Nearby public outdoor space	0.19	0.09	0.22	0.10	0.16	0.08	0.15	0.07
Indoor space for regular care: NA	0.04	0.01	0.03	0.01	-0.02	0.01	0.03	0.01
Own outdoor space: NA	0.05	0.00	0.05	0.00	0.03	0.00	0.05	0.00
Nearby public outdoor space: NA	-0.08	0.03	-0.09	0.03	-0.05	0.02	0.05	0.02
Typical daily screen time:								
No screen time	0.07	0.03	0.02	0.01	0.07	0.04	0.16	0.08
Less than 30 minutes	0.04	0.02	0.05	0.02	-0.05	0.02	-0.18	0.08
30 minutes to 1.5 hours	0.03	0.01	0.04	0.01	0.01	0.00	0.01	0.00
1.5 hours or more	-0.20	0.02	-0.18	0.02	-0.16	0.02	-0.04	0.01
Typical daily screen time: NA	-0.08	0.04	-0.06	0.02	0.01	0.00	0.02	0.01
Additional services for children and families								
In the past year, offered or referred families to:								
Health screening services	0.17	0.06	0.19	0.07	0.20	0.08	0.05	0.02
Developmental assessments	0.13	0.04	0.13	0.04	0.12	0.04	0.00	0.00
Therapeutic services	0.11	0.04	0.10	0.03	0.12	0.04	0.10	0.03
Counseling services	0.22	0.09	0.24	0.10	0.23	0.10	0.10	0.04
Health screening services: NA	0.07	0.01	-0.04	0.00	0.07	0.01	0.04	0.00
Developmental assessments: NA	0.02	0.00	0.01	0.00	0.01	0.00	0.03	0.00
Therapeutic services: NA	-0.02	0.00	-0.01	0.00	-0.12	0.02	-0.17	0.02
Counseling services: NA	-0.02	0.00	0.00	0.00	0.01	0.00	0.04	0.00
Offered child well-being and development services on-site	0.05	0.02	0.05	0.01	0.07	0.02	-0.01	0.00
Offered child well-being and development services on-site: NA	0.05	0.00	0.05	0.00	0.05	0.00	0.05	0.00
Paid for child well-being and development services	-0.07	0.04	-0.04	0.02	0.02	0.01	0.06	0.03
Paid for child well-being and development services: NA	0.04	0.00	0.05	0.00	0.05	0.00	0.05	0.00
Connected families with social services[n]	0.45	0.19	0.46	0.19	0.24	0.10	0.05	0.02
Connected families with social services: NA	-0.07	0.01	-0.09	0.01	-0.01	0.00	-0.05	0.00

Sample characteristics	Before propensity score weighting				After propensity score weighting			
	GBM		Logit		GBM		Logit	
	ES	KS	ES	KS	ES	KS	ES	KS
Compliance, quality, and professional activities								
In the past year, reported compliance activities:								
Inspected for health and safety[o]	0.22	0.04	0.17	0.03	0.09	0.02	-0.01	0.00
Attended health and safety training[p]	0.11	0.04	0.06	0.02	0.09	0.03	0.02	0.01
Inspected for health and safety: NA	-0.15	0.02	-0.16	0.02	-0.07	0.01	-0.02	0.00
Attended health and safety training: NA	-0.09	0.04	-0.06	0.03	0.00	0.00	0.03	0.01
Had access to a health consultant or nurse[q]	0.20	0.09	0.25	0.11	0.23	0.11	0.08	0.03
Had access to a health consultant or nurse: NA	-0.16	0.01	-0.15	0.01	-0.03	0.00	-0.04	0.00
In the past year, received an inspection to monitor quality[r]	0.19	0.06	0.17	0.05	0.10	0.03	-0.01	0.00
In the past year, received an inspection to monitor quality: NA	-0.16	0.02	-0.17	0.02	-0.08	0.01	-0.05	0.01
Participated in a quality rating and improvement system	0.49	0.23	0.54	0.26	0.16	0.08	-0.03	0.02
Participated in a quality rating and improvement system: NA	-0.20	0.06	-0.27	0.09	-0.08	0.02	-0.05	0.02
Offered professional development resources for staff:								
Funding for off-site courses or trainings	0.16	0.08	0.20	0.10	0.11	0.06	0.08	0.04
Paid time-off for off-site courses or trainings	0.00	0.00	0.04	0.02	0.12	0.06	0.00	0.00
Access to on-site coaches, mentors, or consultants	0.28	0.13	0.27	0.13	0.23	0.11	0.14	0.07
Funding for off-site courses or trainings: NA	0.00	0.00	0.01	0.00	-0.02	0.00	-0.12	0.01
Paid time-off for off-site courses or trainings: NA	0.02	0.00	0.03	0.01	0.05	0.01	0.02	0.00
Access to on-site coaches, mentors, or consultants: NA	0.09	0.02	0.09	0.02	0.11	0.02	0.08	0.01
Had relationships with other schools or providers to share access to professional resources	0.23	0.11	0.29	0.14	0.23	0.11	0.11	0.05
Had relationships with other schools or providers to share access to professional resources: NA	0.16	0.03	0.16	0.03	0.13	0.02	0.11	0.02
Percent member of a professional child care organization[s]	0.24	0.12	0.23	0.12	0.17	0.09	0.24	0.12
Percent member of a professional child care organization: NA	-0.10	0.04	-0.07	0.03	-0.01	0.00	0.02	0.01
In the past year, percent reported professional activities:[s]								
Helped by home-visitor or coach	0.09	0.06	0.12	0.07	0.06	0.04	0.12	0.07
Attended professional workshop[t]	0.06	0.03	0.04	0.02	0.12	0.05	0.02	0.01
Took college-level child care course for credit	0.20	0.09	0.21	0.10	0.16	0.08	0.17	0.08
Helped by home-visitor or coach: NA	-0.08	0.04	-0.06	0.03	0.00	0.00	0.03	0.01
Attended professional workshop: NA	-0.10	0.05	-0.08	0.03	-0.02	0.01	-0.03	0.01
Took college-level child care course for credit: NA	-0.10	0.04	-0.07	0.03	0.00	0.00	0.02	0.01

Sample characteristics	Before propensity score weighting				After propensity score weighting			
	GBM		Logit		GBM		Logit	
	ES	KS	ES	KS	ES	KS	ES	KS
Community demographics and economic well-being								
Percent of population in urban area	0.05	0.05	0.07	0.05	-0.19	0.13	-0.04	0.08
Percent of population who identified as:								
Hispanic/Latino/a	0.14	0.10	0.16	0.11	-0.13	0.07	-0.15	0.09
Black non-Hispanic	0.11	0.08	0.14	0.09	-0.13	0.09	-0.27	0.13
Non-Hispanic, non-Black	-0.19	0.13	-0.23	0.14	0.20	0.10	0.31	0.15
Percent of population who were recent immigrants[u]	0.00	0.00	0.02	0.01	-0.01	0.00	0.09	0.02
Percent of households that spoke a language other than English	0.05	0.06	0.05	0.06	-0.17	0.13	-0.16	0.11
Percent of individuals in households with incomes at or below 100% of the federal poverty level	0.35	0.25	0.44	0.29	-0.14	0.09	-0.40	0.16
Percent of individuals in households with incomes at or below 185% of the federal poverty level	0.47	0.26	0.58	0.30	-0.09	0.09	-0.30	0.19
Average median income, all workers	-0.37	0.25	-0.42	0.27	-0.15	0.07	0.02	0.14
Percent of females in labor force who were employed	-0.22	0.12	-0.27	0.14	0.13	0.09	0.23	0.15

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Table presents standardized effect sizes and Kolmogorov-Smirnov statistics. Standardized effect sizes compare the difference in means between CACFP participants and eligible nonparticipants for each sample characteristic, scaled by its pooled standard deviation. Values are expressed in standard-deviation units and larger values indicate greater imbalance between groups. The Kolmogorov-Smirnov statistic compares the full distributions of each sample characteristic between groups and is defined as the maximum absolute difference between the two cumulative distribution functions. Values range from 0 (indicating identical distributions) to 1 (indicating completely non-overlapping distributions). Follow-up weights provided by the NSECE Project Team are applied. These weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Missingness rates for each characteristic (if relevant) indicated by NA.

NA = not available; ES = standardized effect size; KS = Kolmogorov-Smirnov statistic.

[a] Includes providers for which at least 50 percent of children are funded by Head Start or Early Head Start (HS/EHS) and less than 30 percent are funded by other federal, State, or local government sources.

[b] Includes providers for which at least 50 percent of children are funded by State public preschool and less than 30 percent are funded by other federal, State, or local government sources.

[c] Includes providers for which at least 50 percent of children are funded by child care subsidies and less than 30 percent are funded by other federal, State, or local government sources.

[d] Includes providers for which at least 90 percent of their children are funded by private tuition paid by their parents or guardians without any public funding.

[e] Includes providers located in community centers, municipal buildings, or other commercial structures in which the provider is not the sole occupant.

[f] Defined as child care provided during weekday evenings and overnight (between 7:00 PM and 6:00 AM) and on weekends.

[g] Includes full-time and part-time workers, administrators, support staff, drivers, cooks, and any other center staff that do not work directly with children.

[h] Excludes center staff that do not work directly with children.

[i] Center-based provider survey respondents (usually center directors) included in percent of staff by highest level of education and average years of experience but were not asked to report on whether they had a CDA credential.

[j] Includes centers in which all teaching staff reported using a curriculum or prepared set of learning activities.

[k] Average of the values assigned to the following categories across age groups for each activity, which are further averaged across center staff: "no time" = 0; "30 minutes or less" = .5; "about one hour" = 1; "about two hours" = 2; "three hours or more" = 3).

[l] Routine care activities defined as feeding, diapering, or bathroom breaks, not including lunch or nap breaks.

[m] For centers, includes both vigorous physical activity in the classroom or another inside room, such as a gym.

[n] Includes referrals to housing services or food assistance, access to medical care, or help getting assistance from other government or private programs.

[o] Inspected to ensure compliance with health, safety, or other requirements, such as group sizes or staff: child ratios.

[p] Includes centers in which all teaching staff reported having attended a health and safety training in the past year.

[q] Health consultants or nurses may help with nutrition, allergies, or other health-related issues children experience.

[r] Inspected to monitor the quality of child care services other than meeting health, safety, or other requirements.

[s] Indicates the average percent of center staff that reported each professional activity.

[t] Center staff reported on professional workshops such as those offered by professional associations or child care resource and referral networks.

[u] The percentage of the total population who entered the U.S. in 2010 or later.

Exhibit B.6. Home characteristics by provider CACFP participation status in 2019 before and after propensity score weighting using GBM

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
Provider funding, governance, and location										
Majority funding source										
Majority Head Start[a]	8.2	27.5	5.9	23.5	0.09	0.02	10.7	30.9	-0.09	0.02
Majority public preschool[b]	7.8	26.8	6.3	24.4	0.06	0.02	9.2	29	-0.05	0.01
High subsidy[c]	0.40	6.3	0.90	9.4	-0.08	0.01	0.30	5.2	0.02	0.00
Majority private tuition[d]	48.5	50	66.5	47.2	-0.36	0.18	52.3	49.9	-0.07	0.04
Mixed public or mixed public/private	0.40	6.1	0.10	2.8	0.05	0.00	0.20	3.9	0.04	0.00
Majority funding source: NA	34.7	47.6	20.3	40.2	0.30	0.14	27.4	44.6	0.15	0.07
Percentage of currently enrolled children funded by:										
Child care subsidies	15.9	31.1	9.34	25.7	0.21	0.12	15.1	30.6	0.03	0.03
Public preschool	3.64	15.5	2.39	13.2	0.08	0.05	4.32	17.5	-0.04	0.02
Head Start	1.93	10.8	1.88	11.9	0.01	0.01	2.11	11.1	-0.02	0.02
Child care subsidies: NA	4.6	21	3.2	17.7	0.07	0.01	6.3	24.3	-0.08	0.02
Public preschool: NA	2.7	16.1	2.3	14.9	0.02	0.00	4.6	21	-0.12	0.02
Head Start: NA	3.4	18.2	1.7	12.9	0.10	0.02	3.5	18.3	0.00	0.00
Children served and provider size										
Number of children enrolled	9.76	6.9	8.36	4.21	0.20	0.11	8.71	4.16	0.15	0.07
Percent of capacity enrolled	83.4	20.8	80.3	23.2	0.15	0.09	83.2	21.5	0.01	0.04
Percent of capacity enrolled: NA	13.3	33.9	18.1	38.5	-0.14	0.05	13.5	34.2	-0.01	0.00
Percent of currently enrolled children who are:										
Infants and toddlers (<3 years)[e]	39.7	23.7	44.3	28.1	-0.19	0.11	42.1	25.7	-0.10	0.05
Preschoolers (3 to 5 years, not in K)	37.8	21.4	36	24.2	0.08	0.10	36.4	22.3	0.06	0.08
School-aged (5 years plus)	22.6	21.8	19.8	23	0.13	0.13	21.5	22.4	0.05	0.06
Percent of currently enrolled children who are:										
Hispanic/Latino/a	16.6	28.2	14	29.1	0.09	0.15	16.2	29.2	0.01	0.06

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
White, non-Hispanic/Latino/a	49.5	41.6	57.6	41.7	-0.19	0.11	51.1	41.2	-0.04	0.04
Black, non-Hispanic/Latino/a	23.9	36.2	15.9	31.3	0.22	0.13	21.3	34	0.07	0.06
Asian, non-Hispanic/Latino/a	1.86	8.83	3.01	13.5	-0.13	0.02	2.29	10.4	-0.05	0.02
Other, non-Hispanic/Latino/a	8.11	15.4	9.37	20	-0.08	0.03	8.99	17.7	-0.06	0.02
Hispanic/Latino/a: NA	7.2	25.8	7.7	26.7	-0.02	0.01	8	27.2	-0.03	0.01
White, non-Hispanic/Latino/a: NA	7.2	25.8	7.7	26.7	-0.02	0.01	8	27.2	-0.03	0.01
Black, non-Hispanic/Latino/a: NA	7.2	25.8	7.7	26.7	-0.02	0.01	8	27.2	-0.03	0.01
Asian, non-Hispanic/Latino/a: NA	7.2	25.8	7.7	26.7	-0.02	0.01	8	27.2	-0.03	0.01
Other, non-Hispanic/Latino/a: NA	7.2	25.8	7.7	26.7	-0.02	0.01	8	27.2	-0.03	0.01
Percent of currently enrolled children who speak a language other than English	15.8	30.8	19	34.6	-0.10	0.06	19.7	34.5	-0.13	0.06
Percent of currently enrolled children who speak a language other than English: NA	0.70	8.2	1.6	12.5	-0.11	0.01	1.4	11.7	-0.09	0.01
Served one or more children experiencing food insecurity at home	19	39.2	10.6	30.8	0.21	0.08	14.9	35.6	0.11	0.04
Served one or more children experiencing food insecurity at home: NA	4.4	20.6	6.9	25.4	-0.12	0.03	6.2	24.2	-0.09	0.02
Operating hours and staff										
Weekly standard operating hours	54.1	15.7	51.9	15.3	0.14	0.13	54.2	16.6	-0.01	0.04
Weekly standard operating hours: NA	1.5	12	1.4	11.9	0.00	0.00	1.4	11.7	0.01	0.00
Weekly nontraditional operating hours[f]	5.58	14.9	4.63	12.6	0.06	0.03	7.12	18.1	-0.10	0.04
Weekly nontraditional operating hours: NA	0.50	7.2	1	9.7	-0.06	0.00	0.90	9.4	-0.05	0.00
Total number of paid staff	1.52	0.89	1.34	0.67	0.20	0.09	1.48	0.79	0.05	0.02
Total number of paid staff: NA	13.7	34.4	15	35.7	-0.04	0.01	14.2	34.9	-0.01	0.01
Child-to-staff ratio	7.18	4.14	7.02	3.93	0.04	0.08	6.83	3.62	0.08	0.08
Child-to-staff ratio: NA	13.7	34.4	15	35.7	-0.04	0.01	14.2	34.9	-0.01	0.01
Percent of staff by highest level of education:										
No college degree	66.9	40.6	63.5	43.6	0.08	0.07	66.1	42.4	0.02	0.04
2-year college degree	16.1	31.6	18.9	35.5	-0.09	0.05	16.8	33.1	-0.02	0.02

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
4-year college degree	17	32.8	17.5	35.2	-0.01	0.03	17	34.2	0.00	0.03
No college degree: NA	2.2	14.7	4.5	20.6	-0.15	0.02	2.2	14.8	0.00	0.00
2-year college degree: NA	2.2	14.7	4.5	20.6	-0.15	0.02	2.2	14.8	0.00	0.00
4-year college degree: NA	2.2	14.7	4.5	20.6	-0.15	0.02	2.2	14.8	0.00	0.00
Percent of staff with CDA credential	25.9	39.4	20	37.8	0.15	0.10	23.7	39.3	0.06	0.05
Percent of staff with CDA credential: NA	3	17.2	8.5	27.9	-0.32	0.05	3.8	19.1	-0.04	0.01
Staff average years of experience	15.2	9.93	15.1	10.2	0.01	0.05	15	9.86	0.02	0.03
Staff average years of experience: NA	2.7	16.2	3.8	19.1	-0.07	0.01	2	13.9	0.05	0.01
Curriculum use and learning activities										
Used curriculum or prepared learning activities	58.6	49.3	43.2	49.6	0.31	0.15	52.3	50	0.13	0.06
Used curriculum or prepared learning activities: NA	2.1	14.4	4.9	21.5	-0.19	0.03	2	13.9	0.01	0.00
Number of hours per day typically spent on:[g]										
Whole group activities	1.21	0.80	1.27	0.86	-0.07	0.03	1.31	0.87	-0.13	0.05
Small group activities	0.96	0.70	0.99	0.78	-0.04	0.04	0.94	0.76	0.02	0.04
One-on-one activities	0.66	0.52	0.69	0.53	-0.05	0.03	0.70	0.58	-0.07	0.02
Child-selected activities	1.62	0.95	1.61	0.96	0.00	0.03	1.59	0.94	0.02	0.02
Pre-planned singing/rhyming	0.80	0.57	0.91	0.67	-0.20	0.09	0.86	0.61	-0.11	0.06
Book reading or sharing	0.85	0.52	0.95	0.64	-0.18	0.07	0.90	0.58	-0.08	0.03
Whole group activities: NA	4.7	21.2	11.3	31.7	-0.31	0.07	5.8	23.4	-0.05	0.01
Small group activities: NA	5.8	23.3	11.9	32.4	-0.26	0.06	6.6	24.8	-0.03	0.01
One-on-one activities: NA	6.5	24.6	12.4	33	-0.24	0.06	6.9	25.3	-0.02	0.00
Child-selected activities: NA	5.7	23.2	11.6	32	-0.25	0.06	6.1	24	-0.02	0.00
Pre-planned singing/rhyming: NA	5.4	22.6	13.4	34.1	-0.35	0.08	6.8	25.1	-0.06	0.01
Book reading or sharing: NA	4.8	21.4	11.6	32	-0.31	0.07	5.9	23.5	-0.05	0.01
Meal services, routine care, and physical activity										
Provided both snacks and meals to children	99.9	3.7	99.7	5.4	0.04	0.00	99.4	7.5	0.12	0.00
Number of hours per day typically spent on routine care[h]	1.16	0.81	1.19	0.86	-0.04	0.02	1.12	0.82	0.05	0.04

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
Number of hours per day typically spent on routine care: NA	7.1	25.7	12.8	33.4	-0.22	0.06	8.4	27.7	-0.05	0.01
Number of hours per day typically spent on physical activity	1.37	0.73	1.47	0.78	-0.14	0.09	1.38	0.74	-0.01	0.03
Number of hours per day typically spent on physical activity: NA	5.7	23.2	11.4	31.8	-0.25	0.06	6.1	24	-0.02	0.00
Location(s) for physical activity:										
Indoor space for regular care	85	35.7	80.9	39.4	0.12	0.04	80.8	39.4	0.12	0.04
Own outdoor space	95.2	21.3	95.3	21.3	0.00	0.00	95.8	20	-0.03	0.01
Nearby public outdoor space	52.9	49.9	54.8	49.8	-0.04	0.02	52.9	50	0.00	0.00
Indoor space for regular care: NA	1.3	11.2	2.2	14.8	-0.08	0.01	1.2	11	0.00	0.00
Own outdoor space: NA	1.2	10.9	2.9	16.6	-0.15	0.02	1.6	12.6	-0.04	0.00
Nearby public outdoor space: NA	2.7	16.1	3.3	17.9	-0.04	0.01	2	14	0.04	0.01
Typical daily screen time:										
No screen time	18.1	38.5	18.9	39.2	-0.02	0.01	17.7	38.1	0.01	0.01
Less than 30 minutes	41.1	49.2	34.6	47.6	0.13	0.07	36.5	48.1	0.09	0.05
30 minutes to 1.5 hours	33	47	37.7	48.5	-0.10	0.05	38.1	48.6	-0.11	0.05
1.5 hours or more	7.6	26.5	8.7	28.2	-0.04	0.01	7.8	26.8	0.00	0.00
Typical daily screen time: NA	0.20	4.8	0.10	2.9	0.03	0.00	0.00	2.1	0.04	0.00
Additional services for children and families										
In the past year, offered or referred families to:										
Health screening services	27.8	44.8	18	38.4	0.22	0.10	24.3	42.9	0.08	0.04
Developmental assessments	34.2	47.5	26	43.9	0.17	0.08	31.4	46.5	0.06	0.03
Therapeutic services	29.7	45.7	18.5	38.9	0.24	0.11	24.3	42.9	0.12	0.05
Counseling services	15.1	35.8	10	30	0.14	0.05	14.9	35.6	0.01	0.00
Health screening services: NA	2	14.1	2.2	14.8	-0.02	0.00	1.3	11.4	0.05	0.01
Developmental assessments: NA	2.2	14.7	6.2	24.1	-0.27	0.04	3.3	17.8	-0.07	0.01
Therapeutic services: NA	1.6	12.5	2.5	15.6	-0.07	0.01	1.6	12.5	0.00	0.00
Counseling services: NA	3.6	18.6	5	21.8	-0.08	0.01	3.1	17.3	0.03	0.01
Offered child well-being and development services on-site	16.8	37.4	11.1	31.4	0.15	0.06	14.5	35.2	0.06	0.02

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
Offered child well-being and development services on-site: NA	0.40	6.1	1	9.7	-0.09	0.01	1.1	10.2	-0.11	0.01
Paid for child well-being and development services	3	17	0.70	8.4	0.13	0.02	1.1	10.6	0.11	0.02
Paid for child well-being and development services: NA	0.60	7.4	1.1	10.3	-0.07	0.01	1.1	10.3	-0.07	0.01
Connected families with social services[i]	24.6	43.1	12.5	33.2	0.28	0.12	18.7	39	0.14	0.06
Connected families with social services: NA	2.4	15.3	4.8	21.3	-0.15	0.02	3.4	18	-0.06	0.01
Compliance, quality, and professional activities										
In the past year, reported compliance activities:										
Inspected for health and safety[j]	95.6	20.5	89.6	30.5	0.29	0.06	93.6	24.5	0.10	0.02
Attended health and safety training	89.4	30.7	82.4	38.1	0.23	0.07	85.5	35.2	0.13	0.04
Inspected for health and safety: NA	2.7	16.1	6.4	24.5	-0.23	0.04	3.2	17.7	-0.03	0.01
Attended health and safety training: NA	1.3	11.2	1.3	11.2	0.00	0.00	0.80	9	0.04	0.00
Had access to a health consultant or nurse[k]	53.8	49.9	45	49.8	0.18	0.09	49.1	50	0.09	0.05
Had access to a health consultant or nurse: NA	2.7	16.2	4.7	21.1	-0.12	0.02	2.9	16.7	-0.01	0.00
In the past year, received an inspection to monitor quality[l]	77.2	42	71.2	45.3	0.14	0.06	70.2	45.8	0.17	0.07
In the past year, received an inspection to monitor quality: NA	3.9	19.3	6.8	25.2	-0.15	0.03	3.4	18.1	0.03	0.01
Participated in a quality rating and improvement system	46.5	49.9	24.7	43.2	0.44	0.22	35.1	47.8	0.23	0.11
Participated in a quality rating and improvement system: NA	23	42.1	27.5	44.7	-0.11	0.05	24.1	42.8	-0.03	0.01
Had relationships with other schools or providers to share access to professional resources	49.4	50	38.6	48.7	0.22	0.11	43.5	49.6	0.12	0.06
Had relationships with other schools or providers to share access to professional resources: NA	2.7	16.2	5.8	23.4	-0.19	0.03	2.4	15.5	0.02	0.00
Percent member of a professional child care organization	28.5	45.1	15.1	35.8	0.30	0.13	22.5	41.8	0.13	0.06
Percent member of a professional child care organization: NA	2	14	5.2	22.1	-0.23	0.03	2.2	14.8	-0.02	0.00
In the past year, percent reported professional activities:[m]										
Helped by home-visitor or coach	39.8	49	24.5	43	0.31	0.15	32.5	46.9	0.15	0.07
Attended professional workshop[n]	75.7	42.9	57.9	49.4	0.41	0.18	69.7	46	0.14	0.06
Took college-level child care course for credit	30.9	46.2	21.6	41.2	0.20	0.09	26.3	44	0.10	0.05

Sample characteristics	CACFP providers		Eligible nonparticipating providers (unweighted)				Eligible nonparticipating providers (GBM weights)			
	Mean/%	SD	Mean/%	SD	ES	KS	Mean/%	SD	ES	KS
Helped by home-visitor or coach: NA	1.2	11	2.2	14.7	-0.09	0.01	1	10.1	0.02	0.00
Attended professional workshop: NA	1.6	12.5	1.5	12.3	0.00	0.00	1.2	10.9	0.03	0.00
Took college-level child care course for credit: NA	1.6	12.5	1.9	13.7	-0.03	0.00	1.7	12.8	-0.01	0.00
Community demographics and economic well-being										
Percent of population in urban area	81	31.6	77.5	35.9	0.11	0.07	85.9	27.2	-0.16	0.09
Percent of population who identified as:										
Hispanic/Latino/a	17.9	21.4	18.2	21.3	-0.01	0.06	20.2	21.7	-0.11	0.11
Black non-Hispanic	15.2	20.3	10.4	15.6	0.24	0.13	13.6	18.2	0.08	0.04
Non-Hispanic, non-Black	66.9	29.2	71.4	29.1	-0.16	0.11	66.2	28.4	0.02	0.09
Percent of population who were recent immigrants[o]	1.91	2.16	1.99	2.38	-0.04	0.06	2.04	2.07	-0.06	0.09
Percent of households that spoke a language other than English	22	21.4	22.8	21.1	-0.04	0.07	24.2	21	-0.10	0.09
Percent of individuals in households with incomes at or below 100% of the federal poverty level	15.8	8.58	13.9	8.62	0.22	0.14	15.9	8.8	-0.01	0.03
Percent of individuals in households with incomes at or below 185% of the federal poverty level	32.9	13.2	29.4	13.5	0.27	0.17	32.5	13.4	0.03	0.05
Average median income, all workers	26,900	12,300	28,700	16,000	-0.15	0.12	28,700	11,500	-0.15	0.09
Percent of females in labor force who were employed	93	3.51	93.6	3.66	-0.19	0.15	92.8	3.7	0.05	0.05

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Home-Based Provider Surveys.

Note: Table presents means for continuous characteristics, percentages for binary characteristics, standard deviations, standardized effect sizes and Kolmogorov-Smirnov statistics. Standardized effect sizes compare the difference in means between CACFP participants and eligible nonparticipants for each sample characteristic, scaled by its pooled standard deviation. Values are expressed in standard-deviation units and larger values indicate greater imbalance between groups. The Kolmogorov-Smirnov statistic compares the full distributions of each sample characteristic between groups and is defined as the maximum absolute difference between the two cumulative distribution functions. Values range from 0 (indicating identical distributions) to 1 (indicating completely non-overlapping distributions). Follow-up weights provided by the NSECE Project Team are applied. These weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Missingness rates for each characteristic (if relevant) indicated by NA.

NA = not available; SD = standard deviation; ES = standardized effect size; KS = Kolmogorov-Smirnov statistic.

[a] Includes providers for which at least 50 percent of children are funded by Head Start or Early Head Start (HS/EHS) and less than 30 percent are funded by other federal, State, or local government sources.

[b] Includes providers for which at least 50 percent of children are funded by State public preschool and less than 30 percent are funded by other federal, State, or local government sources.

[c] Includes providers for which at least 50 percent of children are funded by child care subsidies and less than 30 percent are funded by other federal, State, or local government sources.

[d] Includes providers for which at least 90 percent of their children are funded by private tuition paid by their parents or guardians without any public funding.

[e] Data for homes combine infants and toddlers.

[f] Defined as child care provided during weekday evenings and overnight (between 7:00 PM and 6:00 AM) and on weekends.

[g] Average of the values assigned to the following categories across age groups for each activity: "no time" = 0; "30 minutes or less" = .5; "about one hour" = 1; "about two hours" = 2; "three hours or more" = 3).

[h] Routine care activities defined as feeding, diapering, or bathroom breaks, not including lunch or nap breaks.

[i] Includes referrals to housing services or food assistance, access to medical care, or help getting assistance from other government or private programs.

[j] Inspected to ensure compliance with health, safety, or other requirements, such as group sizes or staff: child ratios.

[k] Health consultants or nurses may help with nutrition, allergies, or other health-related issues children experience.

[l] Inspected to monitor the quality of child care services other than meeting health, safety, or other requirements.

[m] Indicates the percent of homes that reported each professional activity.

[n] Homes reported on professional workshops such as those sponsored by a community agency of Family Child Care network.

[o] The percentage of the total population who entered the U.S. in 2010 or later.

Exhibit B.7. Balance measures for home characteristics by provider CACFP participation status in 2019 before and after propensity score weighting by analytic approach

Sample characteristics	Before propensity score weighting				After propensity score weighting			
	GBM		Logit		GBM		Logit	
	ES	KS	ES	KS	ES	KS	ES	KS
Provider funding, governance, and location								
Majority funding source								
Majority Head Start[a]	0.09	0.02	-0.07	0.00	-0.09	0.02	-0.01	0.00
Majority public preschool[b]	0.06	0.02	0.05	0.00	-0.05	0.01	0.04	0.00
High subsidy[c]	-0.08	0.01	0.02	0.01	0.02	0.00	-0.04	0.01
Majority private tuition[d]	-0.36	0.18	-0.39	0.19	-0.07	0.04	-0.06	0.03
Mixed public or mixed public/private	0.05	0.00	0.35	0.17	0.04	0.00	0.10	0.05
Majority funding source: NA	0.30	0.14	0.08	0.02	0.15	0.07	-0.03	0.01
Percentage of currently enrolled children funded by:								
Child care subsidies	0.21	0.12	0.19	0.12	0.03	0.03	0.06	0.05
Public preschool	0.08	0.05	0.09	0.04	-0.04	0.02	-0.04	0.02
Head Start	0.01	0.01	0.04	0.02	-0.02	0.02	0.00	0.01
Child care subsidies: NA	0.07	0.01	0.08	0.02	-0.08	0.02	-0.02	0.00
Public preschool: NA	0.02	0.00	0.04	0.01	-0.12	0.02	-0.10	0.02
Head Start: NA	0.10	0.02	0.10	0.02	0.00	0.00	0.02	0.00
Children served and provider size								
Number of children enrolled	0.20	0.11	0.26	0.13	0.15	0.07	0.13	0.08
Percent of capacity enrolled	0.15	0.09	0.17	0.10	0.01	0.04	0.01	0.05
Percent of capacity enrolled: NA	-0.14	0.05	-0.11	0.04	-0.01	0.00	-0.09	0.03
Percent of currently enrolled children who are:								
Infants and toddlers (<3 years)[e]	-0.19	0.11	-0.20	0.14	-0.10	0.05	-0.07	0.06
Preschoolers (3 to 5 years, not in K)	0.08	0.10	0.13	0.10	0.06	0.08	0.14	0.13
School-aged (5 years plus)	0.13	0.13	0.08	0.10	0.05	0.06	-0.07	0.07
Percent of currently enrolled children who are:								
Hispanic/Latino/a	0.09	0.15	0.13	0.17	0.01	0.06	0.04	0.13
White, non-Hispanic/Latino/a	-0.19	0.11	-0.18	0.10	-0.04	0.04	-0.06	0.06
Black, non-Hispanic/Latino/a	0.22	0.13	0.19	0.11	0.07	0.06	0.07	0.06
Asian, non-Hispanic/Latino/a	-0.13	0.02	-0.14	0.02	-0.05	0.02	-0.03	0.01
Other, non-Hispanic/Latino/a	-0.08	0.03	-0.11	0.06	-0.06	0.02	-0.07	0.05
Hispanic/Latino/a: NA	-0.02	0.01	-0.07	0.02	-0.03	0.01	-0.07	0.02
White, non-Hispanic/Latino/a: NA	-0.02	0.01	-0.07	0.02	-0.03	0.01	-0.07	0.02
Black, non-Hispanic/Latino/a: NA	-0.02	0.01	-0.07	0.02	-0.03	0.01	-0.07	0.02
Asian, non-Hispanic/Latino/a: NA	-0.02	0.01	-0.07	0.02	-0.03	0.01	-0.07	0.02
Other, non-Hispanic/Latino/a: NA	-0.02	0.01	-0.07	0.02	-0.03	0.01	-0.07	0.02
Percent of currently enrolled children who speak a language other than English	-0.10	0.06	-0.07	0.05	-0.13	0.06	-0.12	0.06

Sample characteristics	Before propensity score weighting				After propensity score weighting			
	GBM		Logit		GBM		Logit	
	ES	KS	ES	KS	ES	KS	ES	KS
Percent of currently enrolled children who speak a language other than English: NA	-0.11	0.01	-0.30	0.02	-0.09	0.01	-0.07	0.01
Served one or more children experiencing food insecurity at home	0.21	0.08	0.25	0.10	0.11	0.04	0.08	0.03
Served one or more children experiencing food insecurity at home: NA	-0.12	0.03	-0.09	0.02	-0.09	0.02	-0.11	0.02
Operating hours and staff								
Weekly standard operating hours	0.14	0.13	0.14	0.14	-0.01	0.04	0.05	0.07
Weekly standard operating hours: NA	0.00	0.00	0.02	0.00	0.01	0.00	0.02	0.00
Weekly nontraditional operating hours[f]	0.06	0.03	0.07	0.03	-0.10	0.04	-0.08	0.03
Weekly nontraditional operating hours: NA	-0.06	0.00	-0.04	0.00	-0.05	0.00	-0.02	0.00
Total number of paid staff	0.20	0.09	0.23	0.11	0.05	0.02	0.13	0.05
Total number of paid staff: NA	-0.04	0.01	-0.06	0.02	-0.01	0.01	-0.03	0.01
Child-to-staff ratio	0.04	0.08	0.09	0.08	0.08	0.08	-0.02	0.06
Child-to-staff ratio: NA	-0.04	0.01	-0.06	0.02	-0.01	0.01	-0.03	0.01
Percent of staff by highest level of education:								
No college degree	0.08	0.07	0.02	0.05	0.02	0.04	-0.02	0.05
2-year college degree	-0.09	0.05	-0.04	0.04	-0.02	0.02	-0.05	0.04
4-year college degree	-0.01	0.03	0.02	0.05	0.00	0.03	0.07	0.06
No college degree: NA	-0.15	0.02	-0.18	0.03	0.00	0.00	-0.01	0.00
2-year college degree: NA	-0.15	0.02	-0.18	0.03	0.00	0.00	-0.01	0.00
4-year college degree: NA	-0.15	0.02	-0.18	0.03	0.00	0.00	-0.01	0.00
Percent of staff with CDA credential	0.15	0.10	0.19	0.12	0.06	0.05	0.06	0.06
Percent of staff with CDA credential: NA	-0.32	0.05	-0.38	0.07	-0.04	0.01	-0.03	0.01
Staff average years of experience	0.01	0.05	0.10	0.08	0.02	0.03	-0.02	0.05
Staff average years of experience: NA	-0.07	0.01	-0.04	0.01	0.05	0.01	0.05	0.01
Curriculum use and learning activities								
Used curriculum or prepared learning activities	0.31	0.15	0.29	0.14	0.13	0.06	0.14	0.07
Used curriculum or prepared learning activities: NA	-0.19	0.03	-0.30	0.04	0.01	0.00	-0.02	0.00
Number of hours per day typically spent on:[g]								
Whole group activities	-0.07	0.03	-0.03	0.03	-0.13	0.05	-0.09	0.04
Small group activities	-0.04	0.04	-0.04	0.02	0.02	0.04	0.03	0.06
One-on-one activities	-0.05	0.03	-0.03	0.02	-0.07	0.02	-0.03	0.02
Child-selected activities	0.00	0.03	0.04	0.03	0.02	0.02	0.06	0.03
Pre-planned singing/rhyming	-0.20	0.09	-0.23	0.12	-0.11	0.06	-0.11	0.06
Book reading or sharing	-0.18	0.07	-0.17	0.06	-0.08	0.03	-0.09	0.04
Whole group activities: NA	-0.31	0.07	-0.43	0.09	-0.05	0.01	-0.05	0.01
Small group activities: NA	-0.26	0.06	-0.44	0.10	-0.03	0.01	-0.04	0.01

Sample characteristics	Before propensity score weighting				After propensity score weighting			
	GBM		Logit		GBM		Logit	
	ES	KS	ES	KS	ES	KS	ES	KS
One-on-one activities: NA	-0.24	0.06	-0.41	0.10	-0.02	0.00	-0.02	0.00
Child-selected activities: NA	-0.25	0.06	-0.36	0.08	-0.02	0.00	-0.01	0.00
Pre-planned singing/rhyming: NA	-0.35	0.08	-0.57	0.13	-0.06	0.01	-0.06	0.01
Book reading or sharing: NA	-0.31	0.07	-0.47	0.10	-0.05	0.01	-0.05	0.01
Meal services, routine care, and physical activity								
Provided both snacks and meals to children	0.04	0.00	0.27	0.01	0.12	0.00	0.08	0.00
Number of hours per day typically spent on routine care[h]	-0.04	0.02	-0.14	0.06	0.05	0.04	0.00	0.02
Number of hours per day typically spent on routine care: NA	-0.22	0.06	-0.32	0.08	-0.05	0.01	-0.03	0.01
Number of hours per day typically spent on physical activity	-0.14	0.09	-0.11	0.07	-0.01	0.03	-0.05	0.06
Number of hours per day typically spent on physical activity: NA	-0.25	0.06	-0.43	0.10	-0.02	0.00	-0.02	0.00
Location(s) for physical activity:								
Indoor space for regular care	0.12	0.04	0.09	0.03	0.12	0.04	0.09	0.03
Own outdoor space	0.00	0.00	-0.03	0.01	-0.03	0.01	-0.04	0.01
Nearby public outdoor space	-0.04	0.02	-0.09	0.05	0.00	0.00	-0.08	0.04
Indoor space for regular care: NA	-0.08	0.01	-0.14	0.02	0.00	0.00	-0.01	0.00
Own outdoor space: NA	-0.15	0.02	-0.21	0.02	-0.04	0.00	-0.09	0.01
Nearby public outdoor space: NA	-0.04	0.01	-0.02	0.00	0.04	0.01	0.03	0.00
Typical daily screen time:								
No screen time	-0.02	0.01	-0.18	0.07	0.01	0.01	0.00	0.00
Less than 30 minutes	0.13	0.07	0.21	0.10	0.09	0.05	0.07	0.04
30 minutes to 1.5 hours	-0.10	0.05	-0.03	0.01	-0.11	0.05	-0.07	0.03
1.5 hours or more	-0.04	0.01	-0.07	0.02	0.00	0.00	-0.02	0.01
Typical daily screen time: NA	0.03	0.00	-0.02	0.00	0.04	0.00	0.03	0.00
Additional services for children and families								
In the past year, offered or referred families to:								
Health screening services	0.22	0.10	0.26	0.12	0.08	0.04	0.03	0.01
Developmental assessments	0.17	0.08	0.23	0.11	0.06	0.03	0.04	0.02
Therapeutic services	0.24	0.11	0.28	0.13	0.12	0.05	0.08	0.04
Counseling services	0.14	0.05	0.17	0.06	0.01	0.00	-0.04	0.01
Health screening services: NA	-0.02	0.00	0.00	0.00	0.05	0.01	0.03	0.00
Developmental assessments: NA	-0.27	0.04	-0.23	0.03	-0.07	0.01	-0.07	0.01
Therapeutic services: NA	-0.07	0.01	-0.05	0.01	0.00	0.00	0.00	0.00
Counseling services: NA	-0.08	0.01	-0.05	0.01	0.03	0.01	-0.03	0.01
Offered child well-being and development services on-site	0.15	0.06	0.18	0.07	0.06	0.02	0.02	0.01

Sample characteristics	Before propensity score weighting				After propensity score weighting			
	GBM		Logit		GBM		Logit	
	ES	KS	ES	KS	ES	KS	ES	KS
Offered child well-being and development services on-site: NA	-0.09	0.01	-0.08	0.01	-0.11	0.01	-0.39	0.02
Paid for child well-being and development services	0.13	0.02	0.14	0.03	0.11	0.02	0.11	0.02
Paid for child well-being and development services: NA	-0.07	0.01	-0.06	0.00	-0.07	0.01	-0.37	0.03
Connected families with social services[i]	0.28	0.12	0.31	0.14	0.14	0.06	0.06	0.03
Connected families with social services: NA	-0.15	0.02	-0.13	0.02	-0.06	0.01	-0.12	0.02
Compliance, quality, and professional activities								
In the past year, reported compliance activities:								
Inspected for health and safety[j]	0.29	0.06	0.27	0.06	0.10	0.02	0.05	0.01
Attended health and safety training	0.23	0.07	0.26	0.08	0.13	0.04	0.09	0.03
Inspected for health and safety: NA	-0.23	0.04	-0.37	0.06	-0.03	0.01	-0.02	0.00
Attended health and safety training: NA	0.00	0.00	-0.07	0.01	0.04	0.00	0.05	0.01
Had access to a health consultant or nurse[k]	0.18	0.09	0.27	0.13	0.09	0.05	0.06	0.03
Had access to a health consultant or nurse: NA	-0.12	0.02	-0.10	0.02	-0.01	0.00	-0.11	0.02
In the past year, received an inspection to monitor quality[l]	0.14	0.06	0.25	0.11	0.17	0.07	0.07	0.03
In the past year, received an inspection to monitor quality: NA	-0.15	0.03	-0.31	0.06	0.03	0.01	0.02	0.00
Participated in a quality rating and improvement system	0.44	0.22	0.48	0.24	0.23	0.11	0.16	0.08
Participated in a quality rating and improvement system: NA	-0.11	0.05	-0.13	0.06	-0.03	0.01	-0.01	0.00
Had relationships with other schools or providers to share access to professional resources	0.22	0.11	0.28	0.14	0.12	0.06	0.05	0.02
Had relationships with other schools or providers to share access to professional resources: NA	-0.19	0.03	-0.28	0.05	0.02	0.00	-0.01	0.00
Percent member of a professional child care organization	0.30	0.13	0.25	0.11	0.13	0.06	0.15	0.07
Percent member of a professional child care organization: NA	-0.23	0.03	-0.20	0.03	-0.02	0.00	0.00	0.00
In the past year, percent reported professional activities:[m]								
Helped by home-visitor or coach	0.31	0.15	0.37	0.18	0.15	0.07	0.08	0.04
Attended professional workshop[n]	0.41	0.18	0.45	0.19	0.14	0.06	0.09	0.04
Took college-level child care course for credit	0.20	0.09	0.22	0.10	0.10	0.05	0.12	0.06
Helped by home-visitor or coach: NA	-0.09	0.01	-0.07	0.01	0.02	0.00	0.04	0.00
Attended professional workshop: NA	0.00	0.00	0.02	0.00	0.03	0.00	0.06	0.01
Took college-level child care course for credit: NA	-0.03	0.00	-0.01	0.00	-0.01	0.00	0.01	0.00
Community demographics and economic well-being								
Percent of population in urban area	0.11	0.07	0.12	0.07	-0.16	0.09	0.06	0.06

Sample characteristics	Before propensity score weighting				After propensity score weighting			
	GBM		Logit		GBM		Logit	
	ES	KS	ES	KS	ES	KS	ES	KS
Percent of population who identified as:								
Hispanic/Latino/a	-0.01	0.06	0.02	0.07	-0.11	0.11	-0.08	0.07
Black non-Hispanic	0.24	0.13	0.23	0.14	0.08	0.04	0.05	0.07
Non-Hispanic, non-Black	-0.16	0.11	-0.17	0.12	0.02	0.09	0.02	0.05
Percent of population who were recent immigrants[o]	-0.04	0.06	0.00	0.05	-0.06	0.09	-0.01	0.05
Percent of households that spoke a language other than English	-0.04	0.07	-0.01	0.06	-0.10	0.09	-0.07	0.06
Percent of individuals in households with incomes at or below 100% of the federal poverty level	0.22	0.14	0.25	0.17	-0.01	0.03	0.01	0.11
Percent of individuals in households with incomes at or below 185% of the federal poverty level	0.27	0.17	0.30	0.19	0.03	0.05	0.06	0.09
Average median income, all workers	-0.15	0.12	-0.18	0.14	-0.15	0.09	-0.10	0.10
Percent of females in labor force who were employed	-0.19	0.15	-0.19	0.15	0.05	0.05	0.03	0.09

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Home-Based Provider Surveys.

Note: Table presents standardized effect sizes and Kolmogorov-Smirnov statistics. Standardized effect sizes compare the difference in means between CACFP participants and eligible nonparticipants for each sample characteristic, scaled by its pooled standard deviation. Values are expressed in standard-deviation units and larger values indicate greater imbalance between groups. The Kolmogorov-Smirnov statistic compares the full distributions of each sample characteristic between groups and is defined as the maximum absolute difference between the two cumulative distribution functions. Values range from 0 (indicating identical distributions) to 1 (indicating completely non-overlapping distributions). Follow-up weights provided by the NSECE Project Team are applied. These weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Missingness rates for each characteristic (if relevant) indicated by NA.

NA = not available; ES = standardized effect size; KS = Kolmogorov-Smirnov statistic.

[a] Includes providers for which at least 50 percent of children are funded by Head Start or Early Head Start (HS/EHS) and less than 30 percent are funded by other federal, State, or local government sources.

[b] Includes providers for which at least 50 percent of children are funded by State public preschool and less than 30 percent are funded by other federal, State, or local government sources.

[c] Includes providers for which at least 50 percent of children are funded by child care subsidies and less than 30 percent are funded by other federal, State, or local government sources.

[d] Includes providers for which at least 90 percent of their children are funded by private tuition paid by their parents or guardians without any public funding.

[e] Data for homes combine infants and toddlers.

[f] Defined as child care provided during weekday evenings and overnight (between 7:00 PM and 6:00 AM) and on weekends.

[g] Average of the values assigned to the following categories across age groups for each activity: "no time" = 0; "30 minutes or less" = .5; "about one hour" = 1; "about two hours" = 2; "three hours or more" = 3).

[h] Routine care activities defined as feeding, diapering, or bathroom breaks, not including lunch or nap breaks.

[i] Includes referrals to housing services or food assistance, access to medical care, or help getting assistance from other government or private programs.

[j] Inspected to ensure compliance with health, safety, or other requirements, such as group sizes or staff: child ratios.

[k] Health consultants or nurses may help with nutrition, allergies, or other health-related issues children experience.

[l] Inspected to monitor the quality of child care services other than meeting health, safety, or other requirements.

[m] Indicates the percent of homes that reported each professional activity.

[n] Homes reported on professional workshops such as those sponsored by a community agency of Family Child Care network.

[o] The percentage of the total population who entered the U.S. in 2010 or later.

Appendix C

Full results from Study Objective B: Estimate the impact of provider CACFP participation in 2019 on follow-up measures

This page has been left blank for double-sided copying.

Research Question B.1

Did provider CACFP participation in 2019 influence processes or outputs measured about one year later, during the first year of COVID-19?

This page has been left blank for double-sided copying.

Exhibit C.1. Impact of provider CACFP participation in 2019 on center operations and services adjustments during the first year of COVID-19 derived using GBM approach

Process or output measure	CACFP participating providers			Eligible nonparticipating providers			Estimated impact			
	N	Mean/%	SE	N	Mean/%	SE	b	SE	p	ES
Operations[a]										
Provided care during focal week	1,880	90.5	1.04	940	91.3	1.37	-0.86	1.73	0.62	-0.06
Services adjustments										
Meal service continuity										
Continued to provide meals for children in care	1,880	82.3	2.02	920	81.8	2.11	0.52	2.66	0.85	0.02
Participated in CACFP	1,860	74.2	2.26	900	23.1	2.96	51.1***	3.64	0.00	1.37
Operating hours and location of care										
Location of care:										
On-site only	1,880	61.8	1.67	940	63.1	2.45	-1.23	2.82	0.66	-0.03
Hybrid (on-site and remotely)	1,880	20	1.31	940	17.1	1.78	2.91	2.27	0.21	0.12
Remote only	1,880	6.58	0.71	940	6.97	0.69	-0.40	0.93	0.67	-0.04
Typical daily operating hours	1,880	8.12	0.14	920	8.14	0.20	-0.02	0.23	0.94	0.00
Enrollment changes										
Number of children enrolled:										
Overall	1,820	48.1	3.24	840	47.8	4.8	0.32	5.84	0.96	0.00
Funded by public source(s)	1,560	36.3	3.52	720	30.9	5.73	5.36	6.93	0.44	0.08
Funded by private tuition only	1,580	11.4	0.78	740	12.5	1.01	-1.11	1.22	0.37	-0.05
Number of enrollment vacancies	1,880	13.9	0.85	940	14.2	1.33	-0.32	1.52	0.84	-0.01
Safety protocols										
Special health practices in place:[b]										
Additional cleaning and sanitation	1,840	91.2	1.42	900	89	1.61	2.15	1.92	0.26	0.15
Small group sizes for social distancing	1,820	81	1.79	900	77	2.96	3.96	3.34	0.22	0.15
Reduced mixing of children across groups	1,800	82.7	1.51	900	77.2	2.61	5.46+	2.93	0.05	0.21
Masks worn by staff	1,840	85.9	1.47	900	84.8	1.85	1.01	2.32	0.66	0.05

Process or output measure	CACFP participating providers			Eligible nonparticipating providers			Estimated impact			
	N	Mean/%	SE	N	Mean/%	SE	b	SE	p	ES
Health screening of children on arrival	1,820	87.9	1.47	900	85.7	2.14	2.14	2.44	0.37	0.11
Sample size (weighted)	35,400-42,400			19,500-24,600						

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Table presents unweighted sample sizes, regression-adjusted means and standard errors for continuous measures, regression-adjusted percentages and standard errors for binary measures, and regression-adjusted differences in means or percentages by research group and their standard errors, p-values, and effect sizes. Effect sizes calculated as Hedge's *g* for continuous outcomes and the Cox Index for binary outcomes. Follow-up weights provided by the NSECE Project Team are first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Because sample sizes vary across measures, we report the range of weighted sample sizes.

SE = standard error; b = estimated impact; ES = effect size.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

[a] Unless otherwise noted, measures reference the focal week for the first follow-up survey (last week of October 2020).

[b] Providers reported on special health practices in place as of April 2020.

Exhibit C.2. Impact of provider CACFP participation in 2019 on center financial resilience during the first year of COVID-19 derived using GBM approach

Process or output measure	CACFP participating providers			Eligible nonparticipating providers			Estimated impact			
	N	Mean/%	SE	N	Mean/%	SE	b	SE	p	ES
Financial resilience[a]										
Stimulus funding[b]										
Received stimulus funding from:										
Federal Paycheck Protection Program	1,900	45.5	2.07	940	34.2	2.45	11.3***	3.13	0.00	0.29
Federal Small Business Administration loan	1,900	11.9	1.17	940	8	1.21	3.88*	1.7	0.03	0.27
Federal Employee Retention Credit	1,900	24.9	2.04	940	14.1	2.62	10.7**	3.47	0.01	0.42
State supply or retention grants	1,900	16.1	1.28	940	18.2	1.82	-2.04	2.11	0.33	-0.09
State funds for essential supplies	1,900	31.2	1.65	940	31.5	2.32	-0.23	2.85	0.94	-0.01
Other State or federal assistance	1,900	35.4	2	940	30.5	2.34	4.96+	2.88	0.09	0.14
Donations or private fundraising	1,900	5.81	0.82	940	5.75	0.90	0.06	1.23	0.96	0.01
Learned about stimulus funding from:										
State or local child care or education agency	1,900	54.9	2.02	940	55.2	2.57	-0.27	3.21	0.93	-0.01
State or local public health agency	1,900	22.8	1.91	940	20.2	2.24	2.65	3.08	0.39	0.10
Local resource and referral agency	1,900	9.58	1.25	940	9.19	1.51	0.38	1.83	0.83	0.03
Other child care providers or professionals	1,900	10.3	1.21	940	13.6	2.03	-3.23	2.4	0.16	-0.19
National child care organization	1,900	3.61	0.64	940	4.03	1.18	-0.42	1.31	0.74	-0.07
Federal child care, education, or health agency	1,900	17.2	1.46	940	10.1	1.55	7.07**	2.2	0.00	0.37
Other information source(s)	1,900	20.3	1.86	940	18.1	2.16	2.2	2.73	0.43	0.09
Public revenue										
Number of children enrolled funded by:										
Child care subsidies	1,420	11.4	0.89	800	8.34	1.18	3.08*	1.46	0.03	0.13
Public preschool	1,440	7.65	0.88	780	7.46	1.33	0.19	1.51	0.90	0.01
Head Start	1,440	7.75	1.01	740	7.02	1.22	0.73	1.53	0.63	0.03

Process or output measure	CACFP participating providers			Eligible nonparticipating providers			Estimated impact			
	N	Mean/%	SE	N	Mean/%	SE	b	SE	p	ES
Staffing changes										
Total number of paid staff	1,860	12.7	0.45	920	12.3	0.72	0.46	0.85	0.59	0.03
Number of staff in 10/2019 no longer employed	1,760	5.15	0.30	880	4.41	0.32	0.75	0.46	0.10	0.11
Sample size (weighted)	32,600-42,600			18,900-24,700						

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Table presents unweighted sample sizes, regression-adjusted means and standard errors for continuous measures, regression-adjusted percentages and standard errors for binary measures, and regression-adjusted differences in means or percentages by research group and their standard errors, p-values, and effect sizes. Effect sizes calculated as Hedge's *g* for continuous outcomes and the Cox Index for binary outcomes. Follow-up weights provided by the NSECE Project Team are first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Because sample sizes vary across measures, we report the range of weighted sample sizes.

SE = standard error; b = estimated impact; ES = effect size.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

[a] Unless otherwise noted, measures reference the focal week for the first follow-up survey (last week of October 2020).

[b] Providers reported on experiences with pandemic assistance programs between the start of the pandemic and the time of the survey (administered November 2020 to March 2021).

Exhibit C.3. Impact of provider CACFP participation in 2019 on center processes and outputs during the first year of COVID-19 derived using multivariate logistic regression

Process or output measure	Estimated impact (GBM weight)				Estimated impact (Logit weight)			
	b	SE	p	ES	b	SE	p	ES
Operations[a]								
Provided care during focal week	-0.86	1.73	0.62	-0.06	0.86	2.24	0.69	0.06
Services adjustments								
Meal service continuity								
Continued to provide meals for children in care	0.52	2.66	0.85	0.02	-1.72	2.9	0.56	-0.08
Participated in CACFP	51.1***	3.64	0.00	1.37	43.4***	3.42	0.00	1.13
Operating hours and location of care								
Location of care:								
On-site only	-1.23	2.82	0.66	-0.03	-0.37	2.64	0.89	-0.01
Hybrid (on-site and remotely)	2.91	2.27	0.21	0.12	0.90	2.6	0.73	0.03
Remote only	-0.40	0.93	0.67	-0.04	0.44	1.35	0.75	0.04
Typical daily operating hours	-0.02	0.23	0.94	0.00	-0.17	0.28	0.54	-0.04
Enrollment changes								
Number of children enrolled:								
Overall	0.32	5.84	0.96	0.00	-1.96	5.42	0.72	-0.03
Funded by public source(s)	5.36	6.93	0.44	0.08	3.53	6.57	0.59	0.05
Funded by private tuition only	-1.11	1.22	0.37	-0.05	-1.31	1.18	0.27	-0.06
Number of enrollment vacancies	-0.32	1.52	0.84	-0.01	-0.16	1.54	0.92	-0.01
Safety protocols								
Special health practices in place:[b]								
Additional cleaning and sanitation	2.15	1.92	0.26	0.15	2.51	1.83	0.16	0.17
Small group sizes for social distancing	3.96	3.34	0.22	0.15	3.81	3.33	0.24	0.14
Reduced mixing of children across groups	5.46+	2.93	0.05	0.21	6.83+	4.41	0.10	0.26
Masks worn by staff	1.01	2.32	0.66	0.05	1.52	2.17	0.48	0.07
Health screening of children on arrival	2.14	2.44	0.37	0.11	1.41	2.43	0.55	0.08
Financial resilience								
Stimulus funding[c]								
Received stimulus funding from:								
Federal Paycheck Protection Program	11.3***	3.13	0.00	0.29	13.4***	3.19	0.00	0.35
Federal Small Business Administration loan	3.88*	1.7	0.03	0.27	4.27*	1.6	0.01	0.32
Federal Employee Retention Credit	10.7**	3.47	0.01	0.42	12.1**	3.59	0.00	0.43
State supply or retention grants	-2.04	2.11	0.33	-0.09	-1.27	2.44	0.60	-0.05
State funds for essential supplies	-0.23	2.85	0.94	-0.01	1.9	3.35	0.57	0.05
Other State or federal assistance	4.96+	2.88	0.09	0.14	5.98+	3.33	0.08	0.17
Donations or private fundraising	0.06	1.23	0.96	0.01	1.44	1.09	0.19	0.18

Process or output measure	Estimated impact (GBM weight)				Estimated impact (Logit weight)			
	b	SE	p	ES	b	SE	p	ES
Learned about stimulus funding from:								
State or local child care/education agency	-0.27	3.21	0.93	-0.01	-4.28	4.76	0.37	-0.11
State or local public health agency	2.65	3.08	0.39	0.10	4.61	3.1	0.14	0.16
Local resource and referral agency	0.38	1.83	0.83	0.03	-0.16	2.5	0.95	-0.01
Other child care providers or professionals	-3.23	2.4	0.16	-0.19	-4.5+	2.69	0.08	-0.25
National child care organization	-0.42	1.31	0.74	-0.07	-0.56	2.09	0.78	-0.09
Federal child care/education/health agency	7.07**	2.2	0.00	0.37	8.69***	2.23	0.00	0.47
Other information source(s)	2.2	2.73	0.43	0.09	3.5	2.65	0.20	0.15
Public revenue								
Number of children enrolled funded by:								
Child care subsidies	3.08*	1.46	0.03	0.13	2.76*	1.23	0.03	0.11
Public preschool	0.19	1.51	0.90	0.01	-2.98	3.59	0.41	-0.11
Head Start	0.73	1.53	0.63	0.03	0.32	1.45	0.83	0.01
Staffing changes								
Total number of paid staff	0.46	0.85	0.59	0.03	-0.01	0.79	0.99	0.00
Number of staff in 10/2019 no longer employed	0.75	0.46	0.10	0.11	0.37	0.70	0.60	0.05
Sample size (weighted)	51,500-67,300				60,800-80,000			

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Table presents unweighted sample sizes, regression-adjusted means and standard errors for continuous measures, regression-adjusted percentages and standard errors for binary measures, and regression-adjusted differences in means or percentages by research group and their standard errors, p-values, and effect sizes. Effect sizes calculated as Hedge's *g* for continuous outcomes and the Cox Index for binary outcomes. Follow-up weights provided by the NSECE Project Team are multiplied by the relevant propensity score weight (GBM or logistic regression). The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Because sample sizes vary across measures, we report the range of weighted sample sizes.

SE = standard error; b = estimated impact; ES = effect size.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

[a] Unless otherwise noted, measures reference the focal week for the first follow-up survey (last week of October 2020).

[b] Providers reported on special health practices in place as of April 2020.

[c] Providers reported on experiences with pandemic assistance programs between the start of the pandemic and the time of the survey (administered November 2020 to March 2021).

Exhibit C.4. Impact of provider CACFP participation in 2019 on home operations and services adjustments during the first year of COVID-19 derived using GBM approach

Process or output measure	CACFP participating providers			Eligible nonparticipating providers			Estimated impact			
	N	Mean/%	SE	N	Mean/%	SE	b	SE	p	ES
Operations[a]										
Provided care during focal week	1,600	72.9	1.86	620	73.8	2.11	-0.89	2.98	0.76	-0.03
Services adjustments										
Meal service continuity[b]										
Continued to provide meals for children in care	1,500	69.6	2.04	560	70.3	2.35	-0.69	3.3	0.84	-0.02
Participated in CACFP	1,480	66	2.42	560	14.1	2.24	51.8***	3.46	0.00	1.49
Operating hours and location of care										
Location of care:										
On-site only	1,580	68.7	1.94	600	70	2.3	-1.36	3.17	0.67	-0.04
Hybrid (on-site and remotely)	1,580	4.01	0.76	600	2.28	0.67	1.72	1.06	0.12	0.35
Remote only	1,580	0.36	0.16	600	0.15	0.09	0.21	0.18	0.23	0.54
Typical daily operating hours[b]	1,460	36.1	1.11	540	36.5	1.58	-0.41	2.11	0.85	-0.01
Enrollment changes[b]										
Number of children enrolled	1,460	6.19	0.23	560	5.76	0.25	0.43	0.34	0.20	0.08
Number of enrollment vacancies	1,100	1.56	0.17	440	1.32	0.17	0.24	0.24	0.32	0.07
Safety protocols										
Special health practices in place:[c]										
Additional cleaning and sanitation	1,620	78.4	1.95	640	78.5	2.32	-0.06	3.15	0.98	0.00
Small group sizes for social distancing	1,580	61.5	1.97	620	63.5	2.63	-2.02	3.29	0.54	-0.05
Reduced mixing of children across groups	1,520	47.7	1.98	600	47.3	2.42	0.48	3.11	0.88	0.01
Masks worn by staff	1,580	57.1	2.04	620	56.1	2.89	0.98	3.33	0.77	0.02
Health screening of children on arrival	1,620	73.4	1.82	640	73.2	2.2	0.20	2.87	0.94	0.01
Sample size (weighted)	27,100-39,600			17,100-23,800						

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Home-Based Provider Surveys.

Note: Table presents unweighted sample sizes, regression-adjusted means and standard errors for continuous measures, regression-adjusted percentages and standard errors for binary measures, and regression-adjusted differences in means or percentages by research group and their standard errors, p-values, and effect sizes. Effect sizes calculated as Hedge's *g* for continuous outcomes and the Cox Index for binary outcomes. Follow-up weights provided by the NSECE Project Team are first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Because sample sizes vary across measures, we report the range of weighted sample sizes.

SE = standard error; b = estimated impact; ES = effect size.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

[a] Unless otherwise noted, measures reference the focal week for the first follow-up survey (last week of October 2020). Relationship-based providers (homes serving three or fewer children with which they all had a prior relationship; N≈180 in analysis sample) were not asked survey questions referencing the focal week period at the first follow-up.

[b] Measures exclude providers in the analysis sample that reported offering care as a paid employee in a home owned by someone else during the focal week (N≈160) that were not asked subsequent survey questions referencing the focal week period at the first follow-up.

[c] Providers reported on special health practices in place as of April 2020.

Exhibit C.5. Impact of provider CACFP participation in 2019 on home financial resilience during the first year of COVID-19 derived using GBM approach

Process or output measure	CACFP participating providers			Eligible nonparticipating providers			Estimated impact			
	N	Mean/%	SE	N	Mean/%	SE	b	SE	p	ES
Financial resilience[a]										
Stimulus funding[b]										
Received stimulus funding from:										
Federal Paycheck Protection Program	1,740	12.8	1.23	680	16.4	2.07	-3.55	2.45	0.14	-0.17
Federal Small Business Administration loan	1,740	15.6	1.39	680	9.57	1.55	6.01**	2.06	0.01	0.34
Federal Employee Retention Credit	1,740	7.06	1.06	680	3.61	0.80	3.45**	1.23	0.01	0.43
State supply or retention grants	1,740	19.6	1.72	680	18.7	2.48	0.83	2.93	0.78	0.03
State funds for essential supplies	1,740	24	1.76	680	25.8	2.91	-1.8	3	0.54	-0.06
Other State or federal assistance	1,740	21.2	1.75	680	22.5	2.32	-1.24	3.03	0.68	-0.04
Donations or private fundraising	1,740	1.06	0.32	680	0.86	0.36	0.20	0.48	0.69	0.13
Learned about stimulus funding from:										
State or local child care or education agency	1,740	49.7	2.3	680	49.8	2.92	-0.08	3.7	0.98	0.00
State or local public health agency	1,740	18.7	2.32	680	12.1	2.14	6.67*	2.8	0.02	0.31
Local resource and referral agency	1,740	11.8	1.71	680	11.9	1.97	-0.08	2.24	0.97	0.00
Other child care providers or professionals	1,740	16.2	1.72	680	11.5	1.82	4.72+	2.76	0.10	0.24
National child care organization	1,740	3.58	0.75	680	2.71	1.12	0.87	1.33	0.54	0.18
Federal child care, education, or health agency	1,740	2.96	0.55	680	3.31	0.84	-0.34	1.05	0.74	-0.07
Other information source(s)	1,740	19.2	1.54	680	20.4	2.35	-1.18	2.77	0.67	-0.04
Public revenue										
Number of children enrolled funded by:[c]										
Child care subsidies	1,400	1.59	0.12	540	1.46	0.17	0.13	0.19	0.47	0.04
Public preschool	1,280	0.28	0.06	500	0.21	0.07	0.08	0.08	0.34	0.05
Head Start	1,280	0.17	0.04	500	0.14	0.04	0.03	0.05	0.52	0.04

Process or output measure	CACFP participating providers			Eligible nonparticipating providers			Estimated impact			
	N	Mean/%	SE	N	Mean/%	SE	b	SE	p	ES
Staffing changes										
Total number of paid staff[c]	1,460	0.39	0.03	560	0.32	0.03	0.07+	0.04	0.10	0.09
Sample size (weighted)	30,400-41,800			19,700-25,900						

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Home-Based Provider Surveys.

Note: Table presents unweighted sample sizes, regression-adjusted means and standard errors for continuous measures, regression-adjusted percentages and standard errors for binary measures, and regression-adjusted differences in means or percentages by research group and their standard errors, p-values, and effect sizes. Effect sizes calculated as Hedge's *g* for continuous outcomes and the Cox Index for binary outcomes. Follow-up weights provided by the NSECE Project Team are first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Because sample sizes vary across measures, we report the range of weighted sample sizes.

SE = standard error; b = estimated impact; ES = effect size.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

[a] Unless otherwise noted, measures reference the focal week for the first follow-up survey (last week of October 2020). Relationship-based providers (homes serving three or fewer children with which they all had a prior relationship; N≈180 in analysis sample) were not asked survey questions referencing the focal week period at the first follow-up.

[b] Providers reported on experiences with pandemic assistance programs between the start of the pandemic and the time of the survey (administered December 2020 to March 2021).

[c] Measures exclude providers in the analysis sample that reported offering care as a paid employee in a home owned by someone else during the focal week (N≈160) that were not asked subsequent survey questions referencing the focal week period at the first follow-up.

Exhibit C.6. Impact of provider CACFP participation in 2019 on home processes and outputs during the first year of COVID-19 derived using multivariate logistic regression

Process or output measure	Estimated impact (GBM weight)				Estimated impact (Logit weight)			
	b	SE	p	ES	b	SE	p	ES
Operations[a]								
Provided care during focal week	-0.89	2.98	0.76	-0.03	0.54	3.56	0.88	0.02
Services adjustments								
Meal service continuity[b]								
Continued to provide meals for children in care	-0.69	3.3	0.84	-0.02	1.34	4.14	0.75	0.04
Participated in CACFP	51.8***	3.46	0.00	1.49	52.4***	3.71	0.00	1.53
Operating hours and location of care								
Location of care:								
On-site only	-1.36	3.17	0.67	-0.04	-2.02	3.86	0.60	-0.06
Hybrid (on-site and remotely)	1.72	1.06	0.12	0.35	2.41*	0.94	0.01	0.58
Remote only	0.21	0.18	0.23	0.54	0.29*	0.16	0.04	0.91
Typical daily operating hours[b]	-0.41	2.11	0.85	-0.01	-0.09	2.42	0.97	0.00
Enrollment changes[b]								
Number of children enrolled	0.43	0.34	0.20	0.08	0.34	0.37	0.37	0.06
Number of enrollment vacancies	0.24	0.24	0.32	0.07	0.38	0.29	0.19	0.12
Safety protocols								
Special health practices in place:[c]								
Additional cleaning and sanitation	-0.06	3.15	0.98	0.00	2.23	3.83	0.56	0.08
Small group sizes for social distancing	-2.02	3.29	0.54	-0.05	-0.83	3.6	0.82	-0.02
Reduced mixing of children across groups	0.48	3.11	0.88	0.01	0.27	3.16	0.93	0.01
Masks worn by staff	0.98	3.33	0.77	0.02	3.22	3.28	0.33	0.08
Health screening of children on arrival	0.20	2.87	0.94	0.01	3.08	3.36	0.36	0.09
Financial resilience								
Stimulus funding[d]								
Received stimulus funding from:								
Federal Paycheck Protection Program	-3.55	2.45	0.14	-0.17	-2.59	2.39	0.26	-0.13
Federal Small Business Administration loan	6.01**	2.06	0.01	0.34	7.08**	2.03	0.00	0.43
Federal Employee Retention Credit	3.45**	1.23	0.01	0.43	3.57**	1.2	0.01	0.47
State supply or retention grants	0.83	2.93	0.78	0.03	2.1	2.92	0.48	0.08
State funds for essential supplies	-1.8	3	0.54	-0.06	-1.41	2.73	0.60	-0.05
Other State or federal assistance	-1.24	3.03	0.68	-0.04	3.22	3	0.29	0.12
Donations or private fundraising	0.20	0.48	0.69	0.13	0.35	0.46	0.47	0.25
Learned about stimulus funding from:								
State or local child care/education agency	-0.08	3.7	0.98	0.00	3.91	3.94	0.32	0.10
State or local public health agency	6.67*	2.8	0.02	0.31	6.91*	3.03	0.03	0.33
Local resource and referral agency	-0.08	2.24	0.97	0.00	0.56	2.38	0.81	0.03

Process or output measure	Estimated impact (GBM weight)				Estimated impact (Logit weight)			
	b	SE	p	ES	b	SE	p	ES
Other child care providers or professionals	4.72+	2.76	0.10	0.24	2.4	4.13	0.57	0.11
National child care organization	0.87	1.33	0.54	0.18	1.23	1.19	0.35	0.26
Federal child care/education/health agency	-0.34	1.05	0.74	-0.07	-0.38	1.07	0.72	-0.07
Other information source(s)	-1.18	2.77	0.67	-0.04	-0.82	3.28	0.80	-0.03
Public revenue								
Number of children enrolled funded by:[b]								
Child care subsidies	0.13	0.19	0.47	0.04	0.06	0.21	0.78	0.02
Public preschool	0.08	0.08	0.34	0.05	0.00	0.13	0.99	0.00
Head Start	0.03	0.05	0.52	0.04	0.01	0.07	0.87	0.01
Staffing changes								
Total number of paid staff[b]	0.07+	0.04	0.10	0.09	0.08+	0.04	0.09	0.10
Sample size (weighted)	44,200-67,700				52,200-79,100			

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Home-Based Provider Surveys.

Note: Table presents unweighted sample sizes, regression-adjusted means and standard errors for continuous measures, regression-adjusted percentages and standard errors for binary measures, and regression-adjusted differences in means or percentages by research group and their standard errors, p-values, and effect sizes. Effect sizes calculated as Hedge's *g* for continuous outcomes and the Cox Index for binary outcomes. Follow-up weights provided by the NSECE Project Team are multiplied by the relevant propensity score weight (GBM or logistic regression). The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Because sample sizes vary across measures, we report the range of weighted sample sizes.

SE = standard error; b = estimated impact; ES = effect size.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

[a] Unless otherwise noted, measures reference the focal week for the first follow-up survey (last week of October 2020). Relationship-based providers (homes serving three or fewer children with which they all had a prior relationship; N≈180 in analysis sample) were not asked survey questions referencing the focal week period at the first follow-up.

[b] Measures exclude providers in the analysis sample that reported offering care as a paid employee in a home owned by someone else during the focal week (N≈160) that were not asked subsequent survey questions referencing the focal week period at the first follow-up.

[c] Providers reported on special health practices in place as of April 2020.

[d] Providers reported on experiences with pandemic assistance programs between the start of the pandemic and the time of the survey (administered December 2020 to March 2021).

Research Question B.2

Did provider CACFP participation in 2019 influence outcomes measured about two years later, during the second year of COVID-19?

This page has been left blank for double-sided copying.

Exhibit C.7. Impact of provider CACFP participation in 2019 on center operations, services maintenance, and financial stability during the second year of COVID-19 derived using GBM approach

Outcome measure	CACFP participating providers			Eligible nonparticipating providers			Estimated impact			
	N	Mean/%	SE	N	Mean/%	SE	b	SE	p	ES
Operations[a]										
Provided care during focal week	1,900	86.4	1.15	940	85	1.72	1.38	1.99	0.48	0.07
Services maintenance										
Maintained service delivery with no closures[b]	1,880	28.2	2.12	940	26.7	2.3	1.47	3.11	0.64	0.04
Reopened after unplanned closure[b]	1,880	57.3	2.09	940	59.7	2.63	-2.4	3.34	0.48	-0.06
Continued to provide meals for children in care	1,880	84.6	1.35	940	80.2	2.08	4.41*	2.31	0.05	0.19
Total number of children enrolled	1,820	57	3.18	920	50.9	3.04	6.13	4.53	0.18	0.08
Financial stability										
Cost management										
Relative to before the pandemic:										
Harder to cover costs and stay open[c]	1,840	53.9	1.77	900	53	2.45	0.89	3.03	0.77	0.02
Higher prices charged to families	1,860	18.1	1.24	940	16.4	1.55	1.65	1.97	0.41	0.07
Staffing retention or recruitment										
Number of staff changed since start of pandemic	1,860	58.5	1.91	920	55.9	2.91	2.61	3.41	0.45	0.06
Number of staff in 10/2019 no longer employed	1,740	5.25	0.26	860	4.57	0.34	0.68	0.42	0.11	0.09
Staff compensation										
Staff earned higher wages than at start of pandemic	1,880	47	1.96	920	39.7	3.03	7.24*	3.57	0.05	0.18
Staff wages increased due to:[d]										
Increased program funding or public mandate	1,860	7.65	1.02	920	4.53	1.1	3.12+	1.54	0.05	0.34
Contract-based pay raise	1,860	24.3	1.79	920	21.7	2.39	2.54	2.87	0.38	0.09
Pandemic-related changes to demand	1,860	14.2	1.21	920	13.4	2.02	0.81	2.43	0.74	0.04
Benefits offered to staff:										
Health insurance	1,860	48.8	1.27	920	45.4	2.29	3.32	2.57	0.20	0.08
Paid sick leave	1,780	57.7	1.6	880	60.1	2.63	-2.38	2.91	0.42	-0.06

Outcome measure	CACFP participating providers			Eligible nonparticipating providers			Estimated impact			
	N	Mean/%	SE	N	Mean/%	SE	b	SE	p	ES
Sample size (weighted)	39,100-42,100			23,100-24,700						

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Table presents unweighted sample sizes, regression-adjusted means and standard errors for continuous measures, regression-adjusted percentages and standard errors for binary measures, and regression-adjusted differences in means or percentages by research group and their standard errors, p-values, and effect sizes. Effect sizes calculated as Hedge's *g* for continuous outcomes and the Cox Index for binary outcomes. Follow-up weights provided by the NSECE Project Team are first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Because sample sizes vary across measures, we report the range of weighted sample sizes.

SE = standard error; b = estimated impact; ES = effect size.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

[a] Unless otherwise noted, measures reference the focal week for the second follow-up survey, defined as the last week of September 2021 for respondents to the fall partial wave (64 percent of analysis sample) and March 2021 otherwise.

[b] Providers reported closures and operating spells between February 2020 and the focal week.

[c] Providers compared difficulty covering costs before the pandemic and the time of the second follow-up survey (administered April 2021 to June 2021 [spring partial] and October 2021 to February 2022 [fall partial]).

[d] Public mandates to increase staff pay may result from minimum wage laws, wage floors specific to public child care programs (such as Head Start), or contractual or grant conditions (such as stimulus dollars that required spending on staff compensation). Contract-based pay raises may be based on performance, increased staff qualifications (such as degree or credential attainment), or cost of living adjustments. Pandemic-related changes to demand include increased wages for hazard pay, higher hourly rates due to reduced operating hours, and increased wages to meet labor market demand once families returned to work and schools reopened.

Exhibit C.8. Impact of provider CACFP participation in 2019 on center service quality and child health and well-being during the second year of COVID-19 derived using GBM approach

Outcome measure	CACFP participating providers			Eligible nonparticipating providers			Estimated impact			
	N	Mean/%	SE	N	Mean/%	SE	b	SE	p	ES
Service quality[a]										
Staff qualifications and class size										
Average staff-child ratio across age groups	1,800	0.24	0.01	900	0.23	0.02	0.01	0.02	0.66	0.02
Number of staff with:										
A 4-year college degree or higher	1,620	2.36	0.12	800	2.3	0.19	0.06	0.21	0.79	0.01
Neither a 2- nor 4-year college degree	1,500	3.23	0.18	740	3.03	0.26	0.21	0.30	0.49	0.04
A CDA or State certification	1,540	2.33	0.10	720	2.1	0.16	0.23	0.19	0.23	0.06
At least 2 years of experience in field	1,620	6.48	0.27	800	6.35	0.39	0.13	0.46	0.79	0.02
Professional development										
Provided staff with mentors/coaches/consultants	1,860	53.8	1.71	920	51	2.72	2.88	3.07	0.35	0.07
Child health and well-being										
Access to nurse or health consultant for children	1,860	58.1	1.78	940	58.1	2.63	0.08	2.98	0.98	0.00
Sample size (weighted)	34,600-41,900			19,300-24,600						

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Table presents unweighted sample sizes, regression-adjusted means and standard errors for continuous measures, regression-adjusted percentages and standard errors for binary measures, and regression-adjusted differences in means or percentages by research group and their standard errors, p-values, and effect sizes. Effect sizes calculated as Hedge's *g* for continuous outcomes and the Cox Index for binary outcomes. Follow-up weights provided by the NSECE Project Team are first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Because sample sizes vary across measures, we report the range of weighted sample sizes.

SE = standard error; b = estimated impact; ES = effect size; CDA = Child Development Associate.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

[a] Unless otherwise noted, measures reference the focal week for the second follow-up survey, defined as the last week of September 2021 for respondents to the fall partial wave (64 percent of analysis sample) and March 2021 otherwise.

Exhibit C.9. Impact of provider CACFP participation in 2019 on center outcomes during the second year of COVID-19 derived using multivariate logistic regression

Outcome measure	Estimated impact (GBM weight)				Estimated impact (Logit weight)			
	b	SE	p	ES	b	SE	p	ES
Operations[a]								
Provided care during focal week	1.38	1.99	0.48	0.07	0.31	2.06	0.88	0.02
Services maintenance								
Maintained service delivery with no closures[b]	1.47	3.11	0.64	0.04	2.23	3.24	0.50	0.07
Reopened after unplanned closure[b]	-2.4	3.34	0.48	-0.06	-2.43	3.55	0.50	-0.06
Continued to provide meals for children in care	4.41*	2.31	0.05	0.19	3.84+	2.38	0.10	0.17
Total number of children enrolled	6.13	4.53	0.18	0.08	4.43	3.82	0.25	0.06
Financial stability								
Cost management								
Relative to before the pandemic:								
Harder to cover costs and stay open[c]	0.89	3.03	0.77	0.02	1.85	3.88	0.63	0.05
Higher prices charged to families	1.65	1.97	0.41	0.07	0.41	2.05	0.84	0.02
Staffing retention or recruitment								
Number of staff changed since start of pandemic	2.61	3.41	0.45	0.06	0.57	3.59	0.87	0.01
Number of staff in 10/2019 no longer employed	0.68	0.42	0.11	0.09	0.65	0.43	0.13	0.09
Staff compensation								
Staff earned higher wages than at start of pandemic	7.24*	3.57	0.05	0.18	8.41+	4.32	0.06	0.21
Staff wages increased due to:[d]								
Increased program funding or public mandate	3.12+	1.54	0.06	0.34	5.22**	2.07	0.01	0.65
Contract-based pay raise	2.54	2.87	0.38	0.09	-0.02	3.51	1	0.00
Pandemic-related changes to demand	0.81	2.43	0.74	0.04	2.26	2.17	0.32	0.13
Benefits offered to staff:								
Health insurance	3.32	2.57	0.20	0.08	2.76	2.24	0.22	0.07
Paid sick leave	-2.38	2.91	0.42	-0.06	-0.50	2.72	0.85	-0.01
Service quality[a]								
Staff qualifications and class size								
Average staff-child ratio across age groups	0.01	0.02	0.66	0.02	0.01	0.03	0.77	0.01
Number of staff with:								
A 4-year college degree or higher	0.06	0.21	0.79	0.01	-0.11	0.24	0.65	-0.03
Neither a 2- nor 4-year college degree	0.21	0.30	0.49	0.04	0.25	0.27	0.34	0.05
A CDA or State certification	0.23	0.19	0.23	0.06	0.00	0.21	0.98	0.00
At least 2 years of experience in field	0.13	0.46	0.79	0.02	0.11	0.44	0.80	0.01
Professional development								
Provided staff with mentors/coaches/consultants	2.88	3.07	0.35	0.07	3.27	2.94	0.26	0.08

Outcome measure	Estimated impact (GBM weight)				Estimated impact (Logit weight)			
	b	SE	p	ES	b	SE	p	ES
Child health and well-being								
Access to nurse or health consultant for children	0.08	2.98	0.98	0.00	0.09	3.27	0.98	0.00
Sample size (weighted)	53,900-66,800				63,900-79,400			

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Center-Based Provider Surveys and the 2019 Center-Based Workforce Survey.

Note: Table presents unweighted sample sizes, regression-adjusted means and standard errors for continuous measures, regression-adjusted percentages and standard errors for binary measures, and regression-adjusted differences in means or percentages by research group and their standard errors, p-values, and effect sizes. Effect sizes calculated as Hedge's *g* for continuous outcomes and the Cox Index for binary outcomes. Follow-up weights provided by the NSECE Project Team are multiplied by the relevant propensity score weight (GBM or logistic regression). The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Because sample sizes vary across measures, we report the range of weighted sample sizes.

SE = standard error; b = estimated impact; ES = effect size; CDA = Child Development Associate.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

[a] Unless otherwise noted, measures reference the focal week for the second follow-up survey, defined as the last week of September 2021 for respondents to the fall partial wave (64 percent of analysis sample) and March 2021 otherwise.

[b] Providers reported closures and operating spells between February 2020 and the focal week.

[c] Providers compared difficulty covering costs before the pandemic and the time of the second follow-up survey (administered April 2021 to June 2021 [spring partial] and October 2021 to February 2022 [fall partial]).

[d] Public mandates to increase staff pay may result from minimum wage laws, wage floors specific to public child care programs (such as Head Start), or contractual or grant conditions (such as stimulus dollars that required spending on staff compensation). Contract-based pay raises may be based on performance, increased staff qualifications (such as degree or credential attainment), or cost of living adjustments. Pandemic-related changes to demand include increased wages for hazard pay, higher hourly rates due to reduced operating hours, and increased wages to meet labor market demand once families returned to work and schools reopened.

Exhibit C.10. Impact of provider CACFP participation in 2019 on home operations, services maintenance, and financial stability during the second year of COVID-19 derived using GBM approach

Outcome measure	CACFP participating providers			Eligible nonparticipating providers			Estimated impact			
	N	Mean/%	SE	N	Mean/%	SE	b	SE	p	ES
Operations[a]										
Provided care during focal week	1,700	77.4	1.56	680	77.6	2	-0.22	2.72	0.94	-0.01
Services maintenance										
Maintained service delivery with no closures[b]	1,700	39.6	2.1	680	43.7	2.68	-4.14	3.52	0.24	-0.10
Reopened after unplanned closure[b]	1,700	38.2	1.89	680	33.3	2.38	4.88	2.98	0.11	0.13
Continued to provide meals for children in care	1,380	71.1	1.89	540	71.2	2.48	-0.14	3.35	0.97	0.00
Total number of children enrolled[c]	1,460	6.18	0.21	580	5.79	0.21	0.39	0.30	0.19	0.07
Financial stability										
Harder to cover costs than before the pandemic[d]	1,620	58.2	2.15	640	60	2.77	-1.9	3.52	0.59	-0.05
Sample size (weighted)	35,200-41,100			22,700-25,800						

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Home-Based Provider Surveys.

Note: Table presents unweighted sample sizes, regression-adjusted means and standard errors for continuous measures, regression-adjusted percentages and standard errors for binary measures, and regression-adjusted differences in means or percentages by research group and their standard errors, p-values, and effect sizes. Effect sizes calculated as Hedge's *g* for continuous outcomes and the Cox Index for binary outcomes. Follow-up weights provided by the NSECE Project Team are first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Because sample sizes vary across measures, we report the range of weighted sample sizes.

SE = standard error; b = estimated impact; ES = effect size.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

[a] Unless otherwise noted, measures reference the focal week for the second follow-up survey, defined as the last week of September 2021. Relationship-based providers were asked survey questions referencing the focal week period at the second follow-up.

[b] Providers reported closures and operating spells between February 2020 and the focal week.

[c] Measure excludes providers in the analysis sample that reported offering care as a paid employee in a home owned by someone else during the focal week (N≈240) that were not asked subsequent survey questions referencing the focal week period at the second follow-up.

[d] Providers compared difficulty covering costs before the pandemic and the time of the second follow-up survey (administered October 2021 to February 2022).

Exhibit C.11. Impact of provider CACFP participation in 2019 on home service quality and child health and well-being during the second year of COVID-19 derived using GBM approach

Outcome measure	CACFP participating providers			Eligible nonparticipating providers			Estimated impact			
	N	Mean/%	SE	N	Mean/%	SE	b	SE	p	ES
Service quality[a]										
Class size										
Average staff-child ratio across age groups	1,320	0.14	0.00	520	0.15	0.01	-0.01	0.01	0.34	-0.06
Professional development										
Since the start of the pandemic:										
Participated in health or safety training	1,640	65.6	1.76	640	64.7	2.7	0.88	3.5	0.80	0.02
Had help from coach or attended workshop	1,640	41.7	1.92	640	42.5	2.55	-0.74	3.17	0.81	-0.02
Child health and well-being										
Number of children experiencing food insecurity	1,460	0.25	0.03	580	0.34	0.07	-0.09	0.08	0.25	-0.08
Any child(ren) experiencing food insecurity	1,560	12.6	1.16	600	18.8	2.53	-6.18*	2.71	0.02	-0.29
Sample size (weighted)	31,900-39,100			20,300-24,800						

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Home-Based Provider Surveys.

Note: Table presents unweighted sample sizes, regression-adjusted means and standard errors for continuous measures, regression-adjusted percentages and standard errors for binary measures, and regression-adjusted differences in means or percentages by research group and their standard errors, p-values, and effect sizes. Effect sizes calculated as Hedge's *g* for continuous outcomes and the Cox Index for binary outcomes. Follow-up weights provided by the NSECE Project Team are first multiplied by the propensity score weight generated using the GBM approach and then applied. The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Because sample sizes vary across measures, we report the range of weighted sample sizes.

SE = standard error; b = estimated impact; ES = effect size.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

[a] Unless otherwise noted, measures reference the focal week for the second follow-up survey, defined as the last week of September 2021. Relationship-based providers were asked survey questions referencing the focal week period at the second follow-up.

Exhibit C.12. Impact of provider CACFP participation in 2019 on home outcomes during the second year of COVID-19 derived using multivariate logistic regression

Outcome measure	Estimated impact (GBM weight)				Estimated impact (Logit weight)			
	b	SE	p	ES	b	SE	p	ES
Operations[a]								
Provided care during focal week	-0.22	2.72	0.94	-0.01	1.91	3.49	0.58	0.06
Services maintenance								
Maintained service delivery with no closures[b]	-4.14	3.52	0.24	-0.10	-3.86	4.38	0.38	-0.10
Reopened after unplanned closure[b]	4.88	2.98	0.11	0.13	5.65	3.4	0.11	0.15
Continued to provide meals for children in care	-0.14	3.35	0.97	0.00	2.23	4.42	0.61	0.06
Total number of children enrolled[c]	0.39	0.30	0.19	0.07	0.37	0.34	0.29	0.07
Financial stability								
Harder to cover costs than before the pandemic[d]	-1.9	3.52	0.59	-0.05	1.56	3.6	0.66	0.04
Service quality[a]								
Class size								
Average staff-child ratio across age groups	-0.01	0.01	0.34	-0.06	0.00	0.01	0.91	0.01
Professional development								
Since the start of the pandemic:								
Participated in health or safety training	0.88	3.5	0.80	0.02	1.9	4.31	0.66	0.05
Had help from coach or attended workshop	-0.74	3.17	0.81	-0.02	-0.55	3.55	0.88	-0.01
Child health and well-being								
Number of children experiencing food insecurity	-0.09	0.08	0.25	-0.08	-0.06	0.09	0.52	-0.05
Any child(ren) experiencing food insecurity	-6.18*	2.71	0.02	-0.29	-5.97*	2.8	0.02	-0.28
Sample size (weighted)	52,200-67,200				60,900-78,100			

Source: Data from the 2019 and COVID-19 Longitudinal Follow-up National Survey of Early Care and Education (NSECE) Home-Based Provider Surveys.

Note: Table presents unweighted sample sizes, regression-adjusted means and standard errors for continuous measures, regression-adjusted percentages and standard errors for binary measures, and regression-adjusted differences in means or percentages by research group and their standard errors, p-values, and effect sizes. Effect sizes calculated as Hedge's *g* for continuous outcomes and the Cox Index for binary outcomes. Follow-up weights provided by the NSECE Project Team are multiplied by the relevant propensity score weight (GBM or logistic regression). The follow-up survey weights build on the 2019 sampling weights with adjustments for nonresponse at the first follow-up wave. 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. Because sample sizes vary across measures, we report the range of weighted sample sizes.

SE = standard error; b = estimated impact; ES = effect size.

+/*/**/*** Estimated impact is statistically significant at the .10/.05/.01/.001 level (two-tailed).

[a] Unless otherwise noted, measures reference the focal week for the second follow-up survey, defined as the last week of September 2021. Relationship-based providers were asked survey questions referencing the focal week period at the second follow-up.

[b] Providers reported closures and operating spells between February 2020 and the focal week.

[c] Measure excludes providers in the analysis sample that reported offering care as a paid employee in a home owned by someone else during the focal week (N≈240) that were not asked subsequent survey questions referencing the focal week period at the second follow-up.

[d] Providers compared difficulty covering costs before the pandemic and the time of the second follow-up survey (administered October 2021 to February 2022).

Mathematica Inc.

Our employee-owners work nationwide and around the world.

Find us at **mathematica.org** and **edi-global.com**.