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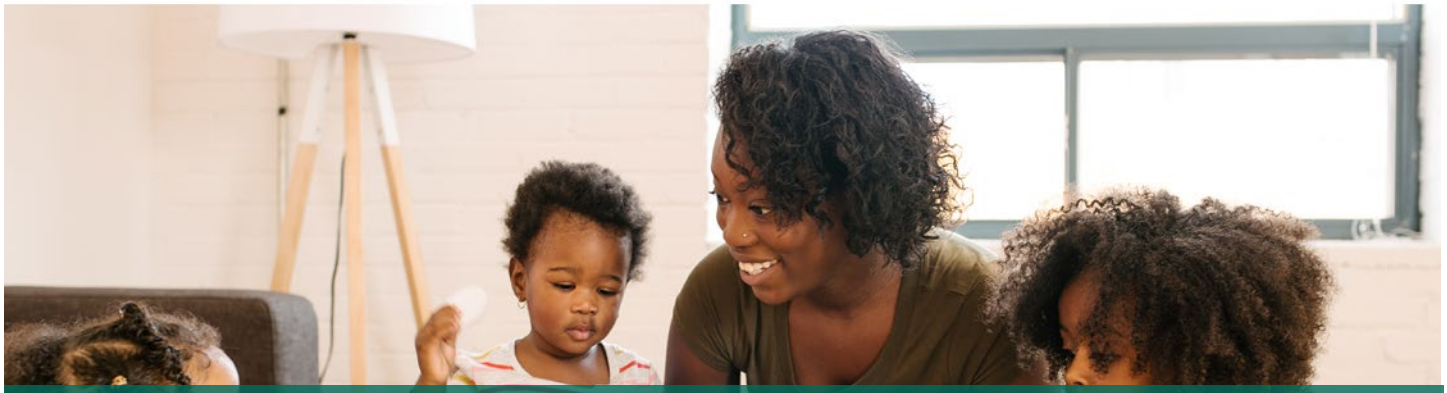

Listed Home-Based Child Care Providers and Child Care and Early Education Policies Series

Technical Report

March 2024

OPRE Report #2023-330

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LISTED HOME-BASED CHILD CARE PROVIDERS AND CHILD CARE AND EARLY EDUCATION POLICIES SERIES

TECHNICAL REPORT

OPRE Report #2023-330

March 2024

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I. INTRODUCTION

This technical report accompanies the "Listed Home-Based Child Care Providers and Child Care and Early Education Policies Series." This series of three research briefs presents findings from the first nationally representative analysis of the patterns and predictors of listed home-based child care (HBCC) providers' interactions with child care and early education (CCEE) policies in the United States (Schochet et al. 2024a, 2024b; Porter et al. 2024). The first brief presents findings on HBCC providers' reported participation and recent progress in state Quality Rating and Improvement Systems (QRISs), which assess the quality of and support quality improvement in CCEE settings. The second brief presents findings on HBCC providers' reported receipt of funding from, preferences for, and payment arrangements related to the Child Care and Development Fund (CCDF), which provides funding to states to subsidize CCEE costs for families with low incomes. The third brief shares findings on HBCC providers' reported interactions with, perceptions of, and responses to state-administered regulations that set and enforce minimum standards related to health and safety in CCEE settings. This technical report provides more details about methods used in the series, full results tables for the main analyses, and supplementary analyses that support the main results. We describe findings and their implications only in the briefs.

II. DATA SOURCES

The analyses draw measures of providers, their settings, and their communities from data collected as part of the 2012 and 2019 waves of the National Survey of Early Care and Education (NSECE) Home-Based Provider Survey and accessed using Level-2 Restricted-Use Files (RUFs). We linked the 2019 RUF by state identifiers to state policy databases corresponding to the timing of data collection in 2019; we linked both 2012 and 2019 RUFs with indicators of state CCEE regulatory policies implemented between the two survey waves. We drew the data on state policies from the Quality Compendium Database (Build Initiative and Child Trends n.d.), the Home-Based Child Care Supply and Quality (HBCCSQ) project's Compendium of Measures and Indicators (Doran et al. 2022), the CCDF Policies Database (Dwyer et al. 2020), the 2013 National Association for Regulatory Administration (NARA) 50-State Child Care Licensing Study (Melusky et al. 2013), the Center for Law and Social Policy and National Women's Law Center (Matthews et al. 2015), and the 2017 Child Care Licensing Study Database (Child Care Technical Assistance Network n.d.; Exhibit 1).

A. The National Survey of Early Care and Education

The briefs primarily analyzed data from the 2019 NSECE Home-Based Provider Survey. The CCEE regulations brief also analyzed data from the 2012 Home-Based Provider Survey. The NSECE is a nationally representative, cross-sectional study of the CCEE workforce in all 50 states and the District of Columbia sponsored by the Office of Planning, Research, and Evaluation (OPRE) within the Administration for Children and Families (ACF; NSECE Project Team 2022). The NSECE Home-Based Provider Surveys provide information at a national level about HBCC provider enrollment and rates, provider participation in public CCEE policies, caregiving activities, characteristics of providers and their households, and provider operations.

The NSECE Project Team selected HBCC providers using a multistage probability design. In the first stage, the NSECE Project Team selected approximately 220 counties or county clusters (primary sampling units, or PSUs). In the second stage, they sampled approximately 750 provider clusters such that every PSU had at least three provider clusters. The NSECE oversampled provider clusters in areas with high densities of families below 250 percent of poverty. The NSECE Project Team selected listed HBCC providers in each provider cluster from state or national listings, often from licensing or accreditation lists. They identified unlisted providers, excluded from these analyses, based on eligible responses to the household survey screener indicating that an adult in the household cared for children other than their own regularly for at least five hours per week in an HBCC setting. More information on the NSECE sample design, key elements of its component surveys, and other unique survey features is available in the 2019 NSECE Data Collection and Sampling Methodology Report (NSECE Project Team 2022).

1. Community characteristics from the American Community Survey

The NSECE Project Team matched the Home-Based Provider Survey RUFs with a rich set of community characteristics using the census tract or group of census tracts where HBCC providers operated. These characteristics were drawn from the American Community Survey (ACS), an ongoing survey of the nation's population conducted by the United States Census Bureau. The ACS provides detailed demographic, housing, social and economic data for all geographic areas (US Census Bureau 2018). The 2012 and 2019 NSECE Home-Based Provider Survey RUFs were linked with the 2016-2010 and 2013-2017 5-year ACS estimates, respectively.

B. State policies databases

The QRIS research brief used state identifiers to link the 2019 NSECE with state QRIS policies for HBCC providers in 2019 from the Quality Compendium Database, a catalog of information on state QRISs developed by the Build Initiative and Child Trends (n.d.). It includes information on the various components of QRISs in different states, including system standards, rating criteria, and the types of supports offered to providers. We supplemented information from this source using our team's scan of state QRIS-related documentation. The results of this scan appear in Appendix B of the HBCCSQ Compendium of Measures and Indicators (Doran et al. 2022).

The CCDF subsidies research brief used similar methods to link the 2019 NSECE with state CCDF policies for HBCC providers in 2019. Using state identifiers provided in the RUF, we linked the NSECE with state CCDF policies for HBCC from the CCDF Policies Database, a comprehensive database of CCDF policies funded by OPRE and maintained by the Urban Institute (Dwyer et al. 2020). The CCDF Policies Database collects information on the policies and practices of each state's subsidy program, including eligibility requirements, provider payment rates, quality improvement efforts, and subsidy regulations. We also used the U.S. Bureau of Economic Analysis's (BEA) Regional Price Parities by State for 2019 to adjust state subsidy payment policies for differences in price levels across states (BEA n.d.).

The CCEE health and safety regulations research brief linked both the 2012 and 2019 NSECE Home-Based Provider Survey RUFs with indicators of state CCEE regulations and licensing requirements in place prior to the 2014 reauthorization of the Child Care Development Block Grant (CCDBG), which increased minimum health and safety regulations for licensing across the nation. We compiled data on state home inspection policies from the 2013 NARA 50-State Child Care Licensing Study (Melusky et al. 2013), and data on criminal background check and group size regulatory policies collected by Child Care Aware of America and reported in Appendix III of "Implementing the [CCDBG] Reauthorization: A Guide for States" (Matthews et al. 2015). We also linked the 2019 NSECE with state policies determining the frequency of licensing inspections for HBCC providers using the 2017 Child Care Licensing Study Database (Child Care Technical Assistance Network n.d.).

Exhibit 1. Definitions of state policy variables included in the briefs

Policy variable	Source(s)	Definition	States with information included in analysis
Quality Rating and Improvement Systems			
Operated a QRIS and included HBCC providers, in 2019	The 2019 Quality Compendium Database (Program Information, Participation)	Whether state QRIS listed in database and state included licensed HBCC providers in its QRIS	The 48 states and DC that operated statewide QRISs (excluding CA and FL)
Designed or tailored QRIS standards for HBCC providers, in 2019	The 2019 Quality Compendium Database (Indicators: Center, Indicators: FCC) HBCCSQ Measures and Indicators Compendium (Appendix B)	Whether state used different sets of QRIS standards and indicators to rate HBCC providers as compared to center-based programs	The 36 states and DC that operated statewide QRISs and included HBCC providers (referred to as the states in the analysis) that reported data on design or tailoring of QRIS standards (excluding SC)
Offered specialized technical assistance to HBCC providers, in 2019	HBCCSQ Measures and Indicators Compendium (Appendix B)	Whether state offered specialized QRIS-related technical assistance to HBCC providers, including coaching or mentoring, professional development advising, or peer-to-peer support	The 36 states and DC in the analysis that reported data on specialized technical assistance policies (excluding SC)
Offered HBCC providers alternative pathways to obtain QRIS ratings, in 2019	The 2019 Quality Compendium Database (Indicators: FCC)	Whether state allowed certain providers to obtain QRIS ratings without going through the traditional rating process (such as through accreditation)	The 35 states and DC in the analysis that reported data on alternative pathways policies (excluding SC and TN)
Required QRIS participation of at least some providers, in 2019	The 2019 Quality Compendium Database (Participation)	Whether state required all eligible providers to participate by auto-enrolling them or made participation mandatory for eligible providers who received public CCEE funding	The 36 states and DC in the analysis that reported data on participation requirements policies (excluding SC)
Used “progressively incremental” tiered child care subsidy reimbursement, in 2019	The 2019 Quality Compendium Database (Financial Incentives)	Whether state used tiered subsidy reimbursement, which typically rewards higher subsidy payments to providers with higher quality ratings, structured such that payments increase in progressive increments with each higher rating level, starting at the lowest voluntary level	The 36 states and DC in the analysis that reported data on tiered subsidy reimbursement policies (excluding SC)
Child Care and Development Fund			
High subsidy payments for HBCC providers, in 2019	The 2019 CCDF Policies Database (Table 37) 2019 BEA Regional Price Parities by State	Whether state was in in top third of distribution of maximum base payment rate for full-time care provided by licensed HBCC providers, averaged across age groups and adjusted for state cost of living	All 50 states and DC
High family copayment, in 2019	The 2019 CCDF Policies Database (Table 33)	Whether state was in in top third of distribution of average monthly family copayments for full-time care for a family of three averaged across annual income levels	All 50 states and DC

Policy variable	Source(s)	Definition	States with information included in analysis
CCDF agency paid providers directly, in 2019	The 2019 CCDF Policies Database (Table 35)	Whether state documented processing and issuing subsidy payments directly to providers	All 50 states and DC
Providers paid for closures, in 2019	The 2019 CCDF Policies Database (Table 35)	Whether state documented providing payment for days settings are closed because of holiday, vacation, or bad weather	All 50 states and DC
Provider could charge families additional fees, in 2019	The 2019 CCDF Policies Database (Table 35)	Whether provider could sometimes or always require families to pay any difference between the provider rate and the subsidy payment rate (in addition to the standard copayment)	All 50 states and DC
CCEE health and safety regulations and requirements			
Introduced comprehensive background checks of HBCC providers, between 2012 and 2019	Implementing the CCDBG Reauthorization: A Guide for States (Appendix III)	Whether state did not previously require criminal history, state and federal fingerprint, child abuse and neglect, and sex offender checks for licensed HBCC providers	All 50 states and DC
Introduced pre-licensure inspections of HBCC providers, between 2012 and 2019	The 2013 NARA 50-State Child Care Licensing Study (page 77, 269)	Whether state did not previously inspect HBCC providers of all sizes prior to issuing a license	All 50 states and DC
Introduced routine, unannounced inspections of HBCC providers, between 2012 and 2019	The 2013 NARA 50-State Child Care Licensing Study (page 82, 274)	Whether state did not previously conduct unannounced routine inspections for compliance with licensing regulations of licensed HBCC providers of all sizes	All 50 states and DC
Introduced regulated group sizes for all age groups, between 2012 and 2019	Implementing the CCDBG Reauthorization: A Guide for States (Appendix III)	Whether state did not previously regulate minimum and maximum group sizes for licensed HBCC providers for every age group ages 5 and younger	All 50 states and DC
Conducted routine, unannounced licensing inspections once per year or more, in 2019	The 2017 Child Care Licensing Study Database (Licensing Agency Policies)	Whether state conducted routine licensing inspections of HBCC providers of all sizes at least once per year (versus once every two to three years)	The 47 states and DC that reported licensing requirements for HBCC providers (excluding LA, NJ, and SD)

Source: Data from the 2019 Quality Compendium Database (Build Initiative and Child Trends n.d.); HBCCSQ Measures and Indicators Compendium, Appendix B (Doran et al. 2022); 2019 CCDF Policies Database (Dwyer et al. 2020); 2019 BEA Regional Price Parities by State (BEA n.d.); Implementing the Child Care and Development Block Grant Reauthorization: A Guide for States, Appendix III (Matthews et al. 2015); 2013 NARA 50-State Child Care Licensing Study (Melusky et al. 2013); and 2017 Child Care Licensing Study Database (Child Care Technical Assistance Network n.d.).

FCC = Family child care.

III. SAMPLE

All research briefs in the series included data from 4,231 listed HBCC providers who responded to the 2019 NSECE Home-Based Provider Survey. The CCEE health and safety regulations research brief also included data from 3,934 listed HBCC providers who responded to the 2012 Home-Based Provider Survey. This analysis also used Level-2 RUF "screener" data collected from approximately 600 listed HBCC providers who were sampled for the 2019 Home-Based Provider Survey but were ineligible to participate because they stopped regularly providing child care. We weighted findings using the relevant provider-level NSECE weights that adjust estimates to represent all listed HBCC providers across the nation (91,154 providers in 2019 and 121,014 providers in 2012). These weights also adjust for eligibility and differences in survey response rates among providers sampled. We also specified the PSU and cluster to account for variations in the probabilities of selection to ensure that we calculated the correct standard errors for valid statistical inference.

Although these weights account for unit nonresponse, they do not account for item-level missing data. Of the 4,231 providers in 2019 (and the 3,934 providers in 2012), we included providers for whom we had key study outcomes in each analysis. To keep as many cases with valid information about each outcome as possible, we used missing data dummy codes for other variables (see section on missing data dummy codes). Exhibit 2 details the analytic sample sizes and restrictions for each key outcome analyzed in the series. Tables A.1, B.1, and C.1 present univariate descriptive statistics for study outcomes within the analysis samples.

Exhibit 2. Analysis sample sizes and restrictions by key outcome and brief

Study outcome	Who was asked	Who responded	Who was included
Quality Rating and Improvement Systems			
Had a rating from state QRIS	4,065 listed providers who were non-relationship-based[a] or relationship-based and "FCC-like"[b]	3,953 providers who indicated a valid response (yes\no\not eligible\not aware)	All providers who responded ~3,040 providers who were aware of their state QRIS ~2,060 of those providers were in the 37 states in the analysis that reported data on QRIS-related policies
Improved rating from state QRIS in the prior two years	1,163 listed providers who were non-relationship-based[a] or relationship-based and "FCC-like"[b] and who reported having a rating	1,131 providers who indicated a valid response (yes/no)	~980 providers were in the 37 states in the analysis that reported data on QRIS-related policies
Child Care and Development Fund			
Received funds for one or more children from subsidies[c]	4,091 listed providers who received payment for regular care	3,957 providers who did not receive public funding or provided valid response (count of children receiving subsidies)[d]	3,829 providers who knew the number of children funded by subsidies[e]

Study outcome	Who was asked	Who responded	Who was included
Preferences for subsidies compared to private pay	~3,820 listed providers who received payment for regular care and served at least four children	~3,400 providers who indicated valid response (for example, subsidy much more) or were unaware of subsidies	All providers who responded ~2,880 of whom were aware of subsidies
Families served paid co-pays, additional fees for subsidies	~1,340 listed providers who received payment for regular care, served at least four children, and received funding from subsidies	~1,180 providers indicated valid response (yes/no)	All providers who responded
Percentage of full-time rate covered by subsidy across age groups	4,091 listed providers who received payment for regular care	~3,800 providers indicated valid response for private, full-time rates by age groups served ($; unit [hour, day, week, month, and so on])	~1,260 providers who responded and received any funding from subsidies
CCEE health and safety regulations and requirements			
Attended an online or in-person health and safety training in the prior year	4,231 listed providers	4,080 providers who indicated valid responses to whether participated and to whether online (yes/no)	All providers who responded
Inspected to monitor compliance with health and safety requirements	4,010 listed providers who were non-relationship-based[a] or relationship-based, served at least four children, and received any public funding	3,938 providers who indicated valid responses (yes/no)	All providers who responded ~3,840 of those providers were in states that reported HBCC licensing requirements
Opinions on and comfort with background checks	4,231 listed providers asked opinions on background checks for protecting children and comfort doing them on household members 2,570 listed providers who served more than six children asked if background checks delayed hiring staff	~4,100 and ~3,900, respectively, who indicated valid responses (such as strongly agree) ~2,360 providers who indicated valid responses	All providers who responded
Received funds for one or more children from subsidies (2012 NSECE)	3,725 listed providers who received payment for regular care	3,104 providers who did not receive public funding or provided valid response (count of children receiving subsidies)[f]	All providers who responded

Source: Data from the 2012 and 2019 NSECE Home-Based Provider Surveys, 2019 Quality Compendium Database, and 2017 Child Care Licensing Study Database.

Note: Study outcome variables drawn from the 2019 NSECE unless otherwise noted. All estimates drawn from RUFs (identified with ~) are reported out to a maximum of three significant digits and rounded to the nearest 20 in accordance with reporting requirements.

[a] The NSECE Project Team defined non-relationship-based providers as those who cared for one or more children with whom they did not have a prior personal relationship.

[b] The NSECE Project Team defined relationship-based and “family child care (FCC)-like” providers as those who exclusively cared for children with whom they had a prior personal relationship but who regularly cared for four or more children in their own home and provided care to at least one child for 21 hours or more per week.

[c] Our study analyzed whether providers received child care subsidies for one or more children in 2012 and in 2019 as part of the quasi-experimental analysis of CCEE health and safety regulations.

[d] In 2019, providers who served four or more children and received public funding were asked to report counts of children served by age group (under age 3; 3 to 5; 5 or older). Responding providers either provided a non-missing count of children or indicated they served "at least one child" with subsidies for one or more age groups.

[e] Providers who were unsure of the number of children funded by subsidies for all age groups served (or exclusively alongside missing values for other age groups) were excluded.

[f] In 2012, providers who served four or more children and received public funding were asked to report counts of children served across all age groups. Responding providers provided a non-missing count of children.

A. Missing data dummy codes

To account for missing data on some provider characteristics, we included missing data dummy codes for variables that were included as predictors in the multivariate analysis but had item-level nonresponse because providers did not report them. Two to 14 percent of providers were missing information on these predictors across the analyses. We did not include data dummy codes for variables with no or less than one percent missing data (all community characteristics, number of children served, whether offered non-traditional hours care, and number of hours open per week). We coded each dummy variable as 1 for every provider missing data on the applicable variable and as 0 for every provider with valid data on that variable. For example, for providers missing information about the ages of children they served, including a separate missing value dummy variable in our regression models allowed providers with missing information to have a different mean outcome value than that of non-missing providers, without influencing the relationship between the other characteristics and the outcome. Including the missing value category allowed us to retain the full sample while providing additional statistical power. In addition, if the providers who were missing information were not randomly missing information, the coefficient on the missing value category can account for that, providing a more accurate picture of the true mean of the outcome variable.

IV. ANALYTIC APPROACH

A. Descriptive analyses

We first examined differences in study outcomes by provider-level and community-level characteristics described in Exhibit 3. We included characteristics in the descriptive analyses because they were theoretically important (that is, we expected them to be associated with QRIS, CCDF, or CCEE health and safety regulations outcomes) and might explain why providers in states with different policies had different outcomes. To assess whether there were statistically significant differences in each characteristic and key study outcomes, we used t-tests to examine differences. All cited differences were statistically significant at the .05 level and lower, using a two-tailed test (Tables A.2, B.2, and C.2).

Exhibit 3. Study characteristics and variable definitions by level of analysis

Characteristic	Definition of variable(s)
Provider-level characteristics	
Race/ethnicity	Categorical (Hispanic/Latino/a; Black; non-Black, non-Hispanic)
Household income	Continuous ($)
Family size	Count (household members)
Self-reported health status	Indicator (very good or excellent)
Age	Count (years from 2019)
Highest level of education	Indicator (associate degree or above)
Had a child development associate credential	Indicator (binary)
Had state certification or endorsement	Indicator (binary)
Attended a CCEE-related course for credit in prior year	Indicator (binary)
Had help from coach or home visitor in prior year	Indicator (binary)
Knowledge of effective teacher-child interactions[a]	Scale (count of between 0 and 4 items correct)
Number of children served	Count (children)
Age groups served	Indicators (infants and toddlers; school-aged children)
Offered non-traditional hours care	Indicator (binary)
Number of hours open per week	Count (hours)
Had prior relationship with any child(ren)	Indicator (binary)
Had other paid staff	Indicator (binary)
Community-level characteristics	
Density of households with incomes at or below the federal poverty level	Categorical (high [> 20 percent]; moderate [> 14 percent])
Density of population that lived in urban areas	Categorical (high [> 85 percent]; moderate [> 30 percent])
Density of population who immigrated at or after 2010	Indicator (high [> 5 percent]; binary)
Density of population who identify as Hispanic/Latino/a	Indicator (high [> 50 percent]; binary)
Density of population who identify as Black	Indicator (high [> 40 percent]; binary)

Source: Data from the 2012 and 2019 NSECE Home-Based Provider Surveys.

[a] Teachers' Knowledge of Effective Teacher-Child Interactions (Abbreviated) scale (Hamre & Pianta 2007).

Next, for each study outcome described in Exhibit 2, we also examined unadjusted differences by relevant state-level policies. We described each state policy variable and data source(s) in Exhibit 1 and included more detailed information about each state policy variable in each research brief, including listings of states that did and did not have each policy. To assess whether there were statistically significant differences in each state policy indicator and the related study outcome(s), we used t-tests to examine differences. All cited differences were statistically significant at the .05 level and lower, using a two-tailed test (Tables A.3, B.3, B.4, B.5, and C.3).

B. Regression analyses

We then conducted a series of logistic and ordinary least squares (OLS) linear regression models predicting provider outcomes based on the related state policy variables as well as the provider- and community-level characteristics selected through the descriptive analysis. For the regression analyses, we report whether coefficients were significant at the .05 level and lower or whether there was a trend in the association at the .10 level. We present results from the final, fully specified regression models, described next.

1. Selecting variables to include

We first specified our multivariate models by jointly including the related state policy indicators. Accounting for multiple state policy indicators is important because CCEE policies and services may associate with one another. For example, states that require providers receiving subsidy funding to participate in their QRIS may be less likely to incentivize QRIS participation through offering higher subsidy payments to providers who enroll. State policies may also relate in ways that are more conditional. For example, states with the most generous subsidy payment rates might be able to reimburse providers at higher levels because they also require families to contribute a greater proportion through copayments.

We then added sets of additional provider- and community-level predictor variables in a stepwise fashion, with each model including the related state policy indicators along with variables included in the previous models. We did this to determine whether accounting for characteristics of providers and the communities in which they operated would explain why providers were more or less likely to interact with CCEE policies in states who design or implement these policies in different ways. We primarily included variables based on whether they differed across levels of study outcomes in the descriptive analyses. When two statistically significant variables were highly correlated (for instance, whether providers were Hispanic/Latino/a and the Hispanic/Latino/a population density of their community), we included the predictor with the lowest *p*-value to avoid multicollinearity which results in less reliable statistical inferences. We indicate variables dropped because of multicollinearity in Tables A.2, B.2, and C.2.

In two instances, we also controlled for whether HBCC providers reported other CCEE policy outcomes based on each brief's theory of change and statistically significant associations with the outcome under study (Exhibit 4). First, we controlled for whether providers received subsidy funding and/or reported participating in the Child and Adult Care Food Program (CACFP) in models predicting participation in state QRISs. Some QRIS policies seek to attract providers who receive subsidy funding (also see section on specifying interaction effects), and others may require them to participate, whereas providers who participate in CACFP may have already taken steps to meet certain quality standards related to nutrition. Second, we controlled for whether providers reported participating in QRISs, received funding from subsidies, and/or participated in the CACFP in models predicting CCEE health and safety regulations outcomes. These policies often have their own regulations that may be more extensive or specific than those in minimum licensing requirements. In our analysis of CCDF subsidies, we did not control for QRIS or CACFP participation. QRIS participation is not a prerequisite for accepting subsidies in any state, and CACFP is tied to the poverty level of families served and uses similar eligibility criteria to subsidies. We did not control for interactions with CCEE health and safety regulations in the other analyses because of the possibility that QRIS participation or receipt of subsidy funding leads to increased compliance with policy-specific regulations, not the reverse.

Exhibit 4. Bivariate correlations between listed HBCC provider reported participation in QRIS, receipt of subsidy funding, participation in CACFP, and recent interactions with CCEE health and safety regulations

Outcome	Bivariate correlations				
	(1)	(2)	(3)	(4)	(5)
Participated in a state QRIS	-	-	-	-	-
Received funding from CCDF subsidies	0.170***	-	-	-	-
Participated in CACFP	0.163***	0.151***	-	-	-
Inspected for health and safety last year	0.097***	0.061***	0.120***	-	-
Inspected to monitor quality last year	0.179***	0.124***	0.131***	0.362***	-
Attended health and safety training last year	0.096***	0.007	0.137***	0.227***	0.100***

Source: Data from the 2019 NSECE Home-Based Provider Survey.

Note: The table presents weighted correlation coefficients. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. Provider QRIS outcomes asked of non-relationship-based or FCC-like providers. These estimates excluded providers who did not know their QRIS rating but included providers in all states, regardless of whether states operated a statewide QRIS or reported valid information on QRIS-related policies, to maximize the proportion of the sample with data on multiple outcomes. All listed, paid providers were asked whether they received public funding from child care subsidies and, if so, for how many children. Provider participation in inspections asked of non-relationship-based and large, relationship-based providers who served at least one child with public funds.

***/** Differences between provider subgroups are statistically significant at the .01/.05 level, two-tailed t-test.

2. Specifying interaction effects

We further examined whether associations between state CCEE policies and study outcomes might be moderated by other state policy or provider-level characteristics in two instances. In our analysis of QRIS outcomes, we first interacted whether states used progressively incremental tiered subsidy reimbursement with whether providers received funding from subsidies because we hypothesized that states target subsidized providers with this QRIS policy. Second, in our analysis of CCDF outcomes, we interacted whether states offered more generous (higher) subsidy payment amounts to providers with whether they also set more generous (lower) copayments for families. This interaction allowed us to simultaneously estimate associations between provider outcomes and state policies determining what states contribute directly through state funds, families contribute through copayments, and providers then receive.

We mean centered all predictors prior to estimating the final equations, which we discuss next. This process involves subtracting a constant equal to each variable's weighted mean (over all providers and states) from each provider's true value. We did this separately for each analytic sample. Mean centering has several benefits. First, it allows for an easier interpretation of the regression coefficients for the main effects of two variables that are interacted. When the predictors are mean centered, these effects represent the expected change in the outcome associated with a one-unit change in the predictor at the "average" level of the other predictor rather than when the other predictor is held constant at zero. Mean centering also improves the interpretability of the intercept (constant) which comes to represent the expected value of the outcome when all predictors are at their average levels rather than the expected value of the outcome when all predictors are held constant at zero.

3. Regression models and interpretation

Tables A.4, A.5, B.6, B.7, B.8, C.4, C.5, and C.7 present the coefficients and their standard errors and *p*-values from the logistic or OLS regression models used to produce the marginal means and percentages presented in the briefs. For example, Table A.4 uses a logistic regression to measure how the probability that listed HBCC providers participated in their state's QRIS differed by whether states adopted specific QRIS policies, including after accounting for additional differences in selected provider characteristics. We estimated this equation as:

(1)
$$\begin{aligned} Logit\left(QRIS_{is}\right) &= \beta_0 + \beta_1\left(Req_s\right) + \beta_2\left(Coach_s\right) + \beta_3\left(Tier_s\right) + \beta_4\left(Rate_s\right) \\ &+ \beta_5\left(Tier_s * Sub_i\right) + \beta_6\left(Rate_s * Sub_i\right) + \beta_7\left(Sub_i\right) + \beta_8\left(CACFP_i\right) \\ &+ \beta_9\left(Cert_i\right) + \beta_{10}\left(CDA_i\right) + \varepsilon_{is} \end{aligned}$$

where:

- $QRIS_{is}$ is a binary outcome variable indicating whether provider *i* in state *s* participated in QRIS.
- Req_s is a binary variable indicating whether state s required some or all providers to participate in its QRIS; $Coach_s$ is a binary variable indicating whether state *s* provided specialized technical assistance for QRIS participants; $Tier_s$ is a binary variable indicating whether state *s* used progressively incremental tiered reimbursement for child care subsidies; $Rate_s$ is a binary variable indicating whether state *s* offered generous payment amounts for subsidies adjusted for cost of living.
- Sub_i is a binary variable indicating whether provider *i* served one or more children funded by subsidies; $CACFP_i$ is a binary variable indicating whether provider *i* reported participating in the CACFP; $Cert_i$ is a binary variable indicating whether provider *i* had a state certification or endorsement for CCEE; CDA_i is a binary variable indicating whether provider *i* had a child development associate credential.
- ε_{is} is an error term for provider *i* in state *s*

We present estimated coefficients from logistic regressions as odds ratios because they are easier to interpret than log-odds coefficients. An odds ratio of two, for example, indicates that the odds of the outcome occurring are twice as high for one group compared to another. This expression is more intuitive and easier to understand than interpreting a log-odds coefficient of 0.693 (which is the log of 2). The odds ratios for the parameters of the logistic regression model estimated in Equation (1) are interpreted as follows:

- $\beta_1(\widehat{Req_s})$, $\beta_2\left(\widehat{Coach_s}\right)$: The difference in the odds of providers participating in QRIS between states that have each policy and those that do not, after controlling for the other predictors in the model
- $\beta_3(\widehat{Tier_s})$, $\beta_4(\widehat{Rate_s})$: The difference in the odds of providers participating in QRIS between states that have each policy and those that do not, holding Sub_i constant at its mean value and after controlling for the other predictors in the model
- $\beta_5(\widehat{Tier_s * Sub_i})$, $\beta_6(\widehat{Rate_s * Sub_i})$: The difference in the effect of having each state policy on the odds of providers participating in QRIS between providers who do and do not report receiving funding from subsidies, after controlling for the other predictors in the model
- $\beta_7(\widehat{Sub_i})$: The difference in the odds of providers participating in QRIS between providers who do and do not report receiving funding from subsidies, holding $Tier_s$ and $Rate_s$ constant at their mean values and after controlling for other predictors in the model
- $\beta_8(\widehat{CACFP_i})$, $\beta_9(\widehat{Cert_i})$, $\beta_{10}(\widehat{CDA_i})$: The difference in the odds of providers

participating in QRIS between providers who do and do not report each characteristic, after controlling for other predictors in the model

- $\widehat{\beta_0}$: The odds of providers participating in QRIS when all predictor variables in the model are held constant at their means

The estimated odds ratios for the parameters in the logistic regression models presented in Tables A.4, A.5, B.6, B.7, B.8, C.4, and C.5 are interpreted in this way. The estimated coefficients for the parameters in the OLS regression models presented in Tables B.6 and B.7 capture the expected change in each continuous outcome (in that outcome's units) that is associated with a one-unit change in the predictor variable.

a. Regression-adjusted estimates in briefs

We present results from the regression analyses by visualizing the regression adjusted, or "marginal," means or percentages in the briefs. Marginal means are the predicted values of the outcome at specific levels of the predictors in a regression model, holding all other variables constant at their means. They provide an estimate of the average outcome for a specific group or level of a predictor, accounting for the effects of other predictors in the model. Marginal means are often easier to interpret than coefficients from regression models that underly them because they represent the actual values of the dependent variable at specific levels of the predictors rather than the change in the outcome that is associated with a one-unit change in the predictor.

We relied on computer programming to compute regression-adjusted means for particular levels of model predictors, though it is also possible to do this manually to calculate the estimates in the briefs from the underlying regression models presented here. For instance, Figure 6 in the CCDF brief presents average percentages of children served by subsidies among funding recipients (or subsidy density), by whether providers served infants or toddlers. These means are derived from OLS regression estimates we present in the final column of Table B.6. We also depict them as the navy blue bars of Exhibit 5.

This linear regression model can be simplified and reordered:

(2a) $$SubDen_{is} = \beta_0 + \beta_1 \left(Infant_{is} \right) + \sum \gamma_j (CCDF_{js}) + \sum \delta_k (Cov_{kis}) + \varepsilon_{is}$$

where:

- $SubDen_{is}$ is the subsidy density for provider *i* in state *s*
- $Infant_{is}$ is the binary variable indicating whether provider *i* in state *s* served one or more infants or toddlers in its setting
- $CCDF_{js}$ represents the *j*th state-level CCDF policy characteristic (for example, whether the state had high subsidy payment amounts)
- Cov_{iks} represents the *k*th additional characteristic selected as an individual-level

covariate for provider *i* in state *s*

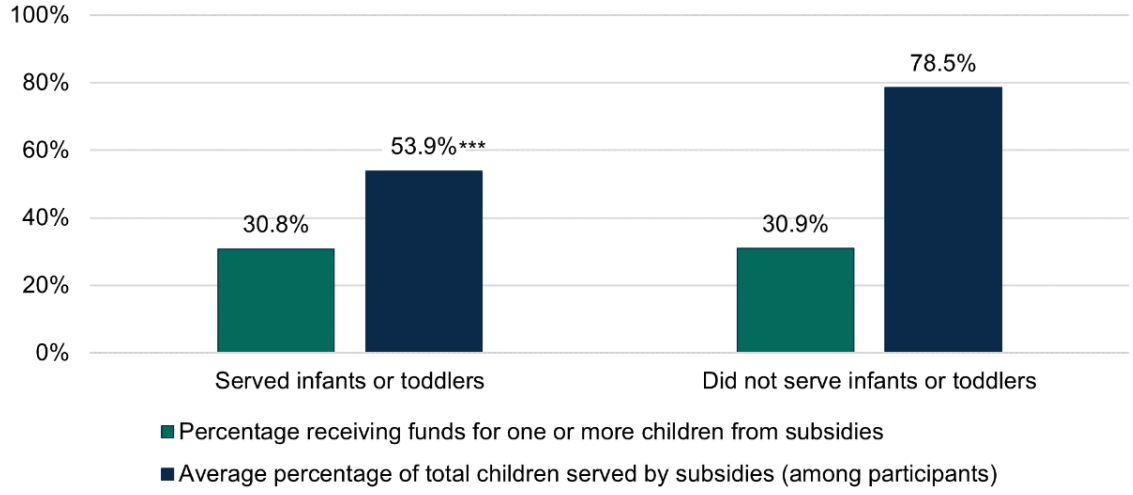
To produce regression-adjusted means, we can use the estimated coefficients presented in Table B.6 to evaluate the expression for providers who did and who did not serve infants or toddlers at the means of the other state- and individual-level predictors. Because we mean centered all predictors, such that they equal zero at their average values, and because approximately 88 percent of providers in the analysis sample served one or more infants or toddlers, the regression-adjusted mean subsidy density for providers who served infants or toddlers is the following:

$$\begin{aligned}\widehat{SubDen} &= 56.8 + -24.7\left(1 - \overline{Infant}\right) + \sum \gamma_j \left(0\right) + \sum \delta_k \left(0\right) + \varepsilon_{is} \\ &= 56.8 - 24.7\left(1 - .88\right) \\ &= 53.9\end{aligned} \quad \text{(2b)}$$

The same expression can be evaluated for providers who did not serve infants or toddlers, but were otherwise "average":

$$\begin{aligned}\widehat{SubDen} &= 56.8 + -24.7\left(0 - \overline{Infant}\right) + \sum \gamma_j \left(0\right) + \sum \delta_k \left(0\right) + \varepsilon_{is} \\ &= 56.8 - 24.7\left(0 - .88\right) \\ &= 78.5\end{aligned} \quad \text{(2c)}$$

Exhibit 5. Adaptation of Figure 6 from the child care subsidies research brief that presents regression-adjusted percentages and means at two levels of a predictor variable



Source: Data from the 2019 NSECE Home-Based Provider Survey.

Note: The figure presents percentages and 95 percent confidence intervals adjusted using a multivariate logistic regression including approximately 3,820 providers, weighted to represent approximately 83,400 providers across the nation. Data were drawn from Table B.6. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits in accordance with RUF reporting requirements. All listed, paid providers were asked whether they received public funding from child care subsidies and, if so, the percentage of children served whose care was funded.

***/**/* Differences between provider subgroups are statistically significant at the .01/.05/.10 level, two-tailed t-test.

We followed a similar approach for computing predicted probabilities (percentages) from multivariate logistic regression models, such as that presented in the first column of Table B.6 which we used to adjust the percentages displayed as the blue bars in Exhibit 5. This model predicted the probability that providers served one or more children with subsidies (Sub_{is}), from the same set of predictors we describe in Equation (2a):

(3a) $$Logit\left(Sub_{is}\right)=\beta_0+\beta_1\left(Infant_{is}\right)+\sum\gamma_j\left(CCDF_{js}\right)+\sum\delta_k\left(Cov_{kis}\right)+\varepsilon_{is}$$

In this case, based on the estimated odds ratios in Table B.6, we can rewrite the equation as

(3b) $$\widehat{Logit(Sub)}=0.374+0.993\left(Infant_{is}-\left[\overline{Infant}=0.88\right]\right)+\sum\gamma_j\left(0\right)+\sum\delta_k\left(0\right)+\varepsilon_{is}$$

and get the predicted probabilities of providers accepting subsidies for those who did $\left(Infant_{is}=1\right)$ and did not $\left(Infant_{is}=0\right)$ serve infants or toddlers, by exponentiating both sides of the equation:

$$\widehat{Sub}=\frac{\exp\left(0.374+0.993\left(Infant_{is}-0.88\right)\right)}{1+\exp\left(0.374+0.993\left(Infant_{is}-0.88\right)\right)}$$

C. Quasi-experimental analyses

In the CCEE health and safety regulations brief, we present results from a quasi-experimental impact analysis examining the impact of increased regulatory requirements introduced by the 2014 reauthorization of the Child Care and Development Block Grant (CCDBG) on listed HBCC provider reports of receiving subsidy funding. We used a difference-in-differences (DiD) approach that compares differences in outcomes over time between providers in states that were required to introduce different numbers of regulations to comply with the policy change. This design is particularly useful in evaluating the impact of federal policy changes that affect states in different ways, as in the case of the CCDBG reauthorization.

The analysis included listed HBCC providers in each of the 2012 and 2019 NSECE Home-Based Provider Surveys. The outcome was whether providers served one or more children funded by subsidies. The treatment variable was an index of the number of regulations states were required to add. We included this index as a continuous variable before separately testing the influence of each regulation. This analysis also controlled for the same set of provider- and community-level characteristics included in the CCDF brief.

We estimated the effect of the policy change by using a multivariate logistic regression model with an interaction term between the treatment variable and the post-reform

period (2019 versus 2012). The model also included a period fixed effect to account for any temporal trends in the outcome, as well as the vector of selected covariates also interacted with the period fixed effect. The DiD equation took the general form for provider *i* in state *s*:

$$Logit\left(Sub_{is}\right) = \beta_0 + \beta_1\left(Regs_s\right) + \beta_2\left(Post_t\right) + \beta_3\left(Regs_s * Post_t\right) + \sum \gamma_j\left(Cov_{ijs}\right) + \sum \delta_j\left(Cov_{ijs} * Post_t\right) + \varepsilon_{is} \quad (4)$$

where:

- Sub_{is} is a binary outcome variable indicating whether provider *i* in state *s* reported serving one or more children funded by subsidies.
- $Regs_s$ is the treatment variable, representing the number of regulations added for state *s*. In the secondary specification, we substituted this variable for indicators of whether state *s* added each individual regulation.
- $Post_t$ is the time period dummy indicating whether the data were from the 2012 or 2019 cross-section.
- Cov_{ijs} represents the *j*th provider- or community-level characteristics selected as a covariate for provider *i* in state *s*. We controlled for community poverty density, provider health status, provider race/ethnicity, number of children served, whether provider paid other staff, whether provider served infants or toddlers, whether provider served school-age children, and whether provider offered non-traditional hours care.
- ε_{is} is an error term for provider *i* in state *s*.

The estimated coefficient on the interaction between the treatment variable and period fixed effect captures the differential effect of the policy change over time. Its interpretation is similar to the interaction effects discussed in Equation (1). For instance, if $\widehat{\beta_3}$ is negative and statistically significant, it means that the effect of $Regs_s$ on the odds ratio of providers accepting subsidies is more negative in 2019 than in 2012, after controlling for other predictors in the model. A narrative interpretation of this finding might be that subsidy participation rates decreased in states that added a greater number of regulations and remained similar in states that added fewer regulations.

In Tables C.6 and C.7, we show the regression coefficients from the DiD analysis. Table C.6 presents these coefficients before controlling for other predictors, and Table C.7 presents coefficients after controlling for other predictors (which we present in the brief). Because of the cross-sectional design of the NSECE, we estimated the key parameters by separately estimating effects within each period and comparing them to one another using post-estimation Wald tests. Doing so is functionally equivalent to the treatment effect in the fully interacted model presented in Equation (4). We present and interpret these marginal means in Figures 8 and 9 in the CCEE health and safety regulations brief.

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APPENDIX A.

QUALITY RATING AND IMPROVEMENT SYSTEMS TABLES

Table A.1. Univariate descriptive statistics for QRIS-related outcomes

Provider QRIS-related outcomes	Unweighted sample size	Weighted sample size	Percentage
Reported QRIS participation status	2,700	51,400	
Setting had quality rating			38.0
Setting did not have quality rating			43.5
Setting was not eligible for quality rating			3.2
Setting did not know quality rating status			15.4
Reported improving their quality rating in the prior 2 years (if participated in QRIS)	980	21,320	36.2

Source: Data from the 2019 NSECE Home-Based Provider Survey and the 2019 Quality Compendium Database.

Note: The table presents unweighted sample sizes, weighted sample sizes, and unadjusted percentages. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. Provider QRIS outcomes asked of non-relationship-based or FCC-like providers. Providers in Florida and California were excluded because QRIS policies were made at the county level. Providers from South Carolina were excluded because of missing information about QRIS. Providers in states where QRIS did not include HBCCs were excluded. Only providers who reported participating in QRIS were asked about increased rating levels.

Table A.2. Listed HBCC provider characteristics by levels of QRIS-related outcomes

Characteristics	Participated in QRIS	Did not participate in QRIS	Improved QRIS rating in prior 2 years	Did not improve QRIS rating in prior 2 years
Provider-level characteristics				
Race/ethnicity				
Hispanic/Latino/a	13.0	16.3	21.4	8.1***
Black, non-Hispanic	24.9	16.5	25.9	30.2
Household income ($; mean)	67,200	67,000	70,900	65,100
Number of household members (count; mean)	3.9	3.8	4.1	3.7
Had very good or excellent health	86.8	84.1	83.9	88.5
Age in 2019 (years; mean)	50.4	48.7	48.5	50.7
Had an associate degree or higher	38.3	36.6	36.8	39.2
Had child development associate credential	37.9	19.1***	46	33.9
Had state certification or endorsement	57.2	30.2***	67.5	51.6**
Attended a CCEE course for credit in prior year	35.1	23***	47.5	28.5***
Had help from coach or home visitor in prior year	55.6	25.6*** [a]	73.6	45.9***
Knowledge of teacher-child interactions (score; mean)	3.40	3.32	3.54	3.32**
Number of children served (count; mean)	9.3	9.1	10.1	8.8
Age groups served				
Infants and toddlers (0 to 3 years)	92.2	94.7	93	91.7
School-aged children (5 years or above)	62.2	66.9	60.5	61.8
Offered non-traditional hours care	26.5	20.8	23.9	27.4
Number of hours open per week (hours; mean)	55.8	54.6	58	54.7
Had prior relationship with any child(ren)	45.4	48.3	45.8	45
Had other paid staff	27.4	28.5	34.2	23.2
Community-level characteristics				
High poverty density	27.2	23.6	24	25.5
High urban population density	65.3	61.2	71.1	61.3
High recent immigrant population density	8.4	10.9	12.4	5.8
High Hispanic/Latino/a population density	4.4	6.2	3.6	1.1** [a]
High Black, non-Hispanic population density	15.4	10.3	14.7	20.2
Unweighted sample size	920	1,140	360	620
Weighted sample size	20,100	25,800	7,860	13,900

Source: Data from the 2019 NSECE Home-Based Provider Survey and the 2019 Quality Compendium Database.

Note: The table presents unadjusted percentages unless otherwise noted. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. Provider QRIS outcomes asked of non-relationship-based or FCC-like providers. Providers in Florida and California were excluded because QRIS policies were made at the county level. Providers from South Carolina were excluded because of missing information about QRIS. Providers in states where QRIS did not include HBCCs were excluded. These analyses excluded providers who did not know their QRIS rating. Only providers who reported participating in QRIS were asked about increased rating levels.

[a] Variable omitted from multivariate analysis because of collinearity with another selected predictor.

***/** Differences between provider subgroups are statistically significant at the .01/.05 level, two-tailed t-test.

Table A.3. Listed HBCC provider unadjusted QRIS-related outcomes by state QRIS policies

State QRIS policies	Participated in QRIS Percentage	Improved QRIS rating in prior 2 years (if participated in QRIS) Percentage
State QRIS policies tailored for HBCC		
Designed or tailored QRIS standards for HBCC		
Different rating standards and indicators compared to centers	52.4	32.3
Same rating standards and indicators as for centers	50.5	40.9
Specialized technical assistance supports		
Offered specialized supports for QRIS	51.1**	35.9
Did not offer specialized supports for QRIS	38.2	37.5
Alternative pathways to obtain QRIS ratings		
Offered alternative pathways for HBCC	48.7	44.9**
Did not offer alternative pathways for HBCC	50.6	31.7
State QRIS policies not tailored for HBCC		
QRIS participation requirements		
Mandatory for some or all HBCC providers	61.0***	33.4
Voluntary for all HBCC providers	24.6	38.5
Tiered child care subsidy reimbursement		
Used progressively incremental tiered subsidy reimbursement	63.2**	27.7**
Did not use progressively incremental tiered subsidy reimbursement	41.3	48.3
Unweighted sample size	2,060	980
Weighted sample size	46,800	21,320

Source: 2019 NSECE Home-Based Provider Questionnaire and the 2019 Quality Compendium Database.

Note: The table presents unadjusted percentages. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. Provider QRIS outcomes asked of non-relationship-based or FCC-like providers. Providers in Florida and California were excluded because QRIS policies were made at the county level. Providers from South Carolina were excluded because of missing information about QRIS. Providers in states where QRIS did not include HBCCs are excluded. These analyses excluded providers who did not know their QRIS rating. Only providers who reported participating in QRIS were asked about increased rating levels.

***/** Differences between state subgroups are statistically significant at the .01/.05 level, two-tailed t-test.

Table A.4. Prediction of listed HBCC provider participation in a QRIS based on state QRIS policies and selected characteristics, multivariate logistic regression

State policies and provider characteristics	Participated in QRIS		
	OR	SE	*p*
QRIS participation was mandatory for some or all HBCC providers	5.43	1.24	0.000
Specialized technical assistance supports for HBCC providers	1.77	0.446	0.023
Used progressively incremental tiered subsidy reimbursement	2.36	0.630	0.001
Used progressively incremental tiered subsidy reimbursement x provider received subsidy funding	2.52	1.15	0.043
High provider payments for child care subsidies	1.90	0.451	0.007
High provider payments x provider received subsidy funding	3.55	1.54	0.003
Provider received child care subsidy funding	1.82	0.388	0.005
Provider participated in the CACFP	2.06	0.581	0.011
Provider had state certification or endorsement	1.78	0.433	0.018
Provider had a child development associate credential	2.16	0.479	0.001
Provider attended a CCEE-related course for credit in prior year	1.33	0.331	0.245
Constant	0.772	0.086	0.020
Unweighted sample size	2,060		
Weighted sample size	46,800		

Source: 2019 NSECE Home-Based Provider Questionnaire and the 2019 Quality Compendium Database.

Note: The table presents odds ratios, standard errors, and *p*-values. Probability of sampling weights were applied. Covariates were selected to optimize model predictions. We used dummy variable imputation (indicators omitted) for variables missing data. All model variables were mean centered. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. Participation in QRIS asked of non-relationship-based or FCC-like providers. Providers in Florida and California were excluded because QRIS policies were made at the county level. Providers from South Carolina were excluded because of missing information about QRIS. Providers in states where QRIS did not include HBCCs are excluded. These analyses excluded providers who did not know their QRIS rating.

CACFP = Child and Adult Care Food Program; OR = odds ratio; SE = standard error.

Table A.5. Prediction of listed HBCC provider improved QRIS rating among participants based on state QRIS policies and selected characteristics, multivariate logistic regression

State policies and provider characteristics	Improved QRIS rating in prior 2 years (if participated in QRIS)		
	OR	SE	*p*
Offered alternative pathways to obtain QRIS ratings	2.16	0.618	0.007
Used progressively incremental tiered subsidy reimbursement	0.794	0.402	0.441
Used progressively incremental tiered subsidy reimbursement x provider received subsidy funding	0.270	0.172	0.047
Provider received child care subsidy funding	2.28	0.719	0.009
Provider had state certification or endorsement	1.39	0.457	0.321
Provider had help from coach or home visitor in prior year	2.51	0.747	0.002
Provider attended a CCEE-related course for credit in prior year	2.20	0.654	0.008
State designed or tailored QRIS standards for HBCC providers	0.692	0.220	0.246
Knowledge of effective teacher-child interactions score (0 to 4)	1.56	0.332	0.036
State designed or tailored QRIS standards for HBCC providers x Knowledge of effective teacher-child interactions score	0.480	0.189	0.064
Provider was Hispanic/Latino/a	2.61	1.12	0.025
Constant	0.538	0.091	0.000
Unweighted sample size	980		
Weighted sample size	21,320		

Source: 2019 National Survey of Early Care and Education (NSECE) Home-Based Provider Questionnaire and the 2019 Quality Compendium Database.

Note: The table presents odds ratios, standard errors, and *p*-values. Probability of sampling weights were applied. Covariates were selected to optimize model predictions. We used dummy variable imputation (indicators omitted) for variables missing data. All model variables were mean centered. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. Participation in QRIS asked of non-relationship-based or FCC-like providers. These estimates excluded providers in Florida, California, and South Carolina, and providers in states where QRIS did not include HBCCs. Providers in Tennessee were excluded from estimates of alternative pathways to obtain QRIS ratings because of missing information about this QRIS policy. These analyses excluded providers who did not report participating in QRIS.

OR = odds ratio; SE = standard error.

APPENDIX B.

CHILD CARE SUBSIDIES TABLES

Table B.1. Univariate descriptive statistics for CCDF-related outcomes

Provider CCDF-related outcomes	Unweighted sample size	Weighted sample size	Percentage or mean	SE
Provider subsidy and other public funding receipt				
Providers reported receiving funds for one or more children from each source				
CCDF subsidy program	3,820	83,400	30.8	n.a.
Head Start or Early Head Start	3,540	75,900	4.5	n.a.
State or local public preschool or board of education	3,580	76,100	8.3	n.a.
Percentage of total children providers served who were funded by each source (among funding recipients; mean)				
CCDF subsidy program	1,260	25,700	56.8	1.68
Head Start or Early Head Start	160	3,280	41.6	4.04
State or local public preschool or board of education	300	6,320	48.2	2.89
Provider preferences for subsidies and private pay				
Reliability of payment	3,440	74,200		
Preferred subsidy much or somewhat more			21.2	n.a.
Preferred subsidy and private pay about the same			29.1	n.a.
Preferred private pay much or somewhat more			26.8	n.a.
Not aware of subsidies			22.8	n.a.
Amount of money received for a child	3,400	73,300		
Preferred subsidy much or somewhat more			15.2	n.a.
Preferred subsidy and private pay about the same			32.7	n.a.
Preferred private pay much or somewhat more			29.5	n.a.
Not aware of subsidies			22.8	n.a.
Paperwork or other administrative requirements	3,360	72,900		
Preferred subsidy much or somewhat more			11.8	n.a.
Preferred subsidy and private pay about the same			25.6	n.a.
Preferred private pay much or somewhat more			39.8	n.a.
Not aware of subsidies			22.8	n.a.
Ease of filling vacancies	3,260	69,500		
Preferred subsidy much or somewhat more			16.4	n.a.
Preferred subsidy and private pay about the same			40.9	n.a.
Preferred private pay much or somewhat more			19.9	n.a.
Not aware of subsidies			23.1	n.a.
Provider subsidy payment arrangements				
Providers reported charging some or all families additional fees (among funding recipients)	1,180	23,900	14.1	n.a.
Providers reported families served paid subsidy copays (among funding recipients)	1,180	23,900	60.0	n.a.
Percentage of provider rate accounted for by each source (among funding recipients)	1,260	24,500		
Family co-payments			14.3	1.53
Direct state subsidy funds			71.0	2.04

Provider CCDF-related outcomes	Unweighted sample size	Weighted sample size	Percentage or mean	SE
Provider received subsidy payment equal to provider rate (among funding recipients)	1,260	24,500	24.3	n.a.

Source: Data from the 2019 NSECE Home-Based Provider Survey and the 2019 CCDF Policies Database.

Note: The table presents unweighted sample sizes, weighted sample sizes, and unadjusted percentages unless otherwise noted as means (and standard errors). Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. All listed, paid providers were asked whether they received public funding from child care subsidies and, if so, for how many children. Whether families pay additional fees to supplement provider payment rates was asked of providers who reported serving one or more children funded by subsidies who were either non-relationship-based providers or relationship-based and serving four or more children. Listed, paid providers who served at least four children were asked their preferences for subsidies.

n.a. = not applicable; SE = standard error.

Table B.2. Listed HBCC provider characteristics by levels of selected CCDF-related outcomes

Characteristics	Received subsidy funding	Did not received subsidy funding	Charged subsidized families additional fees	Did not charge subsidized families additional fees	Preferred payment amount from subsidy to private pay	Did not prefer payment amount from subsidy to private pay
Provider-level characteristics						
Race/ethnicity						
Hispanic/Latino/a	22.7	18	12.9	23.7***	27	18.5***
Black, non-Hispanic	32.9	17.9***	41.6	31.5	40.6	21.5***
Household income ($; mean)	60,700	68,600	66,000	61,100	61,500	67,700
Number of household members (count; mean)	3.8	3.8	4.1	3.9	4	3.8
Had very good or excellent health	77.6	87.8***	85.7	76.7**	81.1	84.7
Age in 2019 (years; mean)	49.6	50.3	49.3	49.1	50.1	49.8
Had an associate degree or higher	38	38.1	45	38	39.2	39
Had child development associate credential	32.6	28	31.4	37	39.1	32.8
Had state certification or endorsement	49.8	43.3	49.8	50.3	55.1	47.2
Number of children served (count; mean)	9.9	8.1***	10.6	10.1	9.9	9.7
Percentage of children funded by subsidies (mean)	n.a.	n.a.	54.7	56	35.5	19.1***
Age groups served						
Infants and toddlers (0 to 3 years)	90.7	92	97.5	92.5**	86.9	96.8***
School-age children (5 years or above)	80.4	55.8***	71.2	82.2**	71.3	69.1
Offered non-traditional hours care	38.9	16.5***	41.1	38.8	41.7	24.4***
Number of hours open per week (hours; mean)	61.8	51.6***	67.7	62.2	64.4	57.2***
Had prior relationship with any child(ren)	58.1	44.9***	57.5	57.1	44	50.4
Had other paid staff	43.2	23.2***	58.6	43.2**	39.6	34
Community-level characteristics						
High poverty density	38.3	18.9***	34.4	39.6	47.3	25.2***
High urban population density	75.2	69	72.5	78	75.5	70.9
High recent immigrant population density	10.5	10.9	6.4	11.8	12.4	9
High Hispanic/Latino/a population density	12.2	9.4	7.8	13.3	24.5	8.7*** [a]
High Black, non-Hispanic population density	18.1	9.9*** [a]	22.4	17.3	22.2	10.6*** [a]

Characteristics	Received subsidy funding	Did not received subsidy funding	Charged subsidized families additional fees	Did not charge subsidized families additional fees	Preferred payment amount from subsidy to private pay	Did not prefer payment amount from subsidy to private pay
Unweighted sample size	1,280	2,560	200	980	620	2,220
Weighted sample size	25,700	57,700	3,280	20,100	11,500	46,500

Source: Data from the 2019 NSECE Home-Based Provider Survey.

Note: The table presents unadjusted percentages unless otherwise noted. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. All listed, paid providers were asked whether they received public funding from child care subsidies and, if so, for how many children. Whether families pay additional fees to supplement provider payment rates was asked of providers who reported serving one or more children funded by subsidies who were either non-relationship-based providers or relationship-based and serving four or more children. Listed, paid providers who served at least four children were asked their preferences for subsidies. These estimates excluded providers who reported they were not aware of subsidies.

n.a. = not applicable.

[a] Variable omitted from multivariate analysis because of collinearity with another selected predictor.

***/** Differences between provider subgroups are statistically significant at the .01/.05 level, two-tailed t-test.

Table B.3. Listed HBCC provider unadjusted subsidy funding receipt outcomes by state subsidy rate and select provider payment policies

State subsidy policies	Whether cared for one or more children funded by subsidies	Percentage of children funded by subsidies (among funding recipients)	
	Percentage	Mean	SE
State subsidy rate policies			
Adjusted average payment rates for full-time HBCC			
In top third of the distribution	24.4***	52.3**	2.24
In middle or bottom third of the distribution	41.1	61.1	3.23
Average state co-payment rates for a family of three in HBCC			
In bottom third of the distribution	25.5**	51.7**	2.99
In middle or top third of the distribution	36.3	60.7	2.67
State provider payment policies			
Additional family fees to supplement subsidy payments			
Providers can charge some or all families additional fees	28.1***	54.1**	2.54
Providers can never charge families additional fees	43.8	63.3	3.16
Unweighted sample size	3,820	1,260	
Weighted sample size	83,400	25,700	

Source: 2019 NSECE Home-Based Provider Questionnaire and the 2019 CCDF Policies Database.

Note: The table presents unadjusted percentages or means and standard errors. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. All listed, paid providers were asked whether they received public funding from child care subsidies and, if so, for how many children.

***/** Differences between state subgroups are statistically significant at the .01/.05 level, two-tailed t-test.

SE = standard error.

Table B.4. Listed HBCC provider unadjusted subsidy payment arrangement outcomes by state subsidy rate and select provider payment policies

State subsidy policies	Whether families paid co-pays for child care subsidies	Whether families paid additional fees to supplement provider subsidy payments	Percentage of private rate accounted for by average family co-payment		Percentage of provider rate accounted for by direct state subsidy funds	
	Percentage	Percentage	Mean	SE	Mean	SE
State subsidy rate policies						
Adjusted average payment rates for full-time HBCC						
In top third of the distribution	51.3**	14.6	11.4**	0.015	75.5**	0.016
In middle or bottom third of the distribution	64.7	13.6	16.9	0.016	67.0	0.024
Average state co-payment rates for a family of three in HBCC						
In bottom third of the distribution	49.7***	14.0	5.1***	0.011	75.9**	0.019
In middle or top third of the distribution	70.2	14.1	20.7	0.015	68.7	0.021
State provider payment policies						
Additional family fees to supplement subsidy payments						
Providers can charge some or all families additional fees	61.4	16.5***	12.2**	0.015	70.9	0.019
Providers can never charge families additional fees	62.7	5.8	24.1	0.022	74.4	0.024
Unweighted sample size	1,180	1,180	1,260		1,260	
Weighted sample size	23,900	23,900	24,500		24,500	

Source: 2019 NSECE Home-Based Provider Questionnaire and the 2019 CCDF Policies Database.

Note: The table presents unadjusted percentages or means and standard errors. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. All listed, paid providers who reported serving one or more children whose care was funded by subsidies were asked whether participating families paid copays or additional fees. All listed, paid providers were asked to report their private pay rates for full-time care. These estimates excluded providers who did not report serving one or more children funded by subsidies.

***/** Differences between state subgroups are statistically significant at the .01/.05 level, two-tailed t-test.

SE = standard error.

Table B.5. Listed HBCC provider unadjusted subsidy preferences outcomes by state provider payment policies

State subsidy policies	Preferred child care subsidies to private pay in terms of…			
	Reliability of payment	Amount of money received	Paperwork and administrative requirements	Ease of filling program vacancies
	Percentage	Percentage	Percentage	Percentage
State provider payment policies				
Additional family fees to supplement subsidy payments				
Providers can charge some or all families additional fees	27.6	21.8**	14.1	21.3
Providers can never charge families additional fees	30.9	15.7	18.8	25.9
HBCC provider payments from lead agencies				
Providers paid directly from lead agencies	28.9***	20.2**	15.1**	22.1
Providers paid indirectly through families served	16.8	12.2	6.7	18.9
Subsidy payments for days providers are closed				
Providers are sometimes or always reimbursed for days closed	28.8	23.3**	15.3	21.2
Providers never reimbursed for days closed	29.9	14.9	11.1	28.5
Unweighted sample size	2,880	2,840	2,800	2,700
Weighted sample size	59,700	58,000	58,200	56,700

Source: 2019 NSECE Home-Based Provider Questionnaire and the 2019 CCDF Policies Database.

Note: The table presents unadjusted percentages. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. Listed, paid providers who served at least four children were asked their preferences for subsidies. These estimates excluded providers who reported they were not aware of subsidies.

***/** Differences between state subgroups are statistically significant at the .01/.05 level, two-tailed t-test.

Table B.6. Prediction of listed HBCC provider subsidy funding receipt based on state subsidy rate policies and selected characteristics, multivariate logistic regression

State subsidy policies and provider and community characteristics	Whether cared for one or more children funded by child care subsidies			Percentage of children funded by child care subsidies (among funding recipients)		
	OR	SE	*p*	b	SE	*p*
High provider payments (in top third)	0.638	0.094	0.002	-0.525	2.30	0.819
Low family co-payments (in bottom third)	0.646	0.098	0.004	-4.39	2.28	0.055
High payments x low co-payments	0.296	0.090	0.000	-1.11	4.67	0.811
Providers can charge families additional fees	0.395	0.072	0.000	-8.88	2.74	0.001
Community poverty density						
High poverty density	2.06	0.374	0.000	16.8	3.07	0.000
Moderate poverty density	1.60	0.288	0.009	4.17	2.85	0.144
Provider had very good or excellent health	0.618	0.133	0.025	-1.14	2.83	0.689
Provider race/ethnicity						
Hispanic/Latino/a	1.58	0.334	0.029	12.8	3.21	0.000
Black, non-Hispanic	2.23	0.420	0.000	11.2	2.87	0.000
Number of children served in setting	1.03	0.020	0.176	-2.02	0.333	0.000
Whether provider paid other HBCC staff	2.14	0.371	0.000	4.66	2.51	0.064
Whether provider served infants/toddlers	0.993	0.265	0.979	-24.7	4.08	0.000
Whether provider served school-aged children	2.91	0.468	0.000	7.86	2.98	0.008
Whether offered non-traditional hours care	1.54	0.300	0.025	11.8	2.95	0.000
Number of hours open per week	1.01	0.004	0.030	0.154	0.057	0.008
Constant	0.374	0.029	0.000	56.8	1.10	0.000
Unweighted sample size	3,820			1,260		
Weighted sample size	83,400			25,700		

Source: Data from the 2019 NSECE Home-Based Provider Survey and the 2019 CCDF Policies Database.

Note: The table presents odds ratios for binary measures, linear coefficient estimates for continuous measures, standard errors, and *p*-values. Probability of sampling weights were applied. Covariates were selected to optimize model predictions. We used dummy variable imputation (indicators omitted) for variables missing data. All model variables were mean centered. All estimates are reported out to a maximum of three significant digits in accordance with RUF reporting requirements. All listed, paid providers were asked whether they received public funding from child care subsidies and, if so, for how many children.

OR = odds ratio; SE = standard error.

Table B.7. Prediction of listed HBCC provider subsidy payment arrangements based on state subsidy rate and provider payment policies and selected characteristics, multivariate logistic and linear regression

State subsidy policies and provider and community characteristics	Whether families paid co-pays for child care subsidies			Whether families paid additional fees to supplement provider subsidy payments			Proportion of private rate covered by average family co-payment			Proportion of provider rate accounted for by direct state subsidy funds		
	OR	SE	*p*	OR	SE	*p*	b	SE	*p*	b	SE	*p*
High provider payments (in top third)	0.483	0.110	0.001	1.46	0.400	0.164	-0.077	0.007	0.000	0.106	0.014	0.000
Low family co-payments (in bottom third)	0.656	0.158	0.081	0.990	0.252	0.968	-0.132	0.007	0.000	0.142	0.013	0.000
High payments x low co-payments	2.48	1.12	0.044	1.29	0.706	0.639	-0.035	0.014	0.012	0.033	0.026	0.200
Provider could charge families additional fees	1.20	0.304	0.482	1.76	0.098	0.000	-0.071	0.025	0.004	0.052	0.024	0.048
Community poverty density												
High poverty density	1.03	0.288	0.921	1.04	0.332	0.901	0.000	0.021	0.983	0.015	0.027	0.583
Moderate poverty density	0.894	0.261	0.700	1.84	0.668	0.092	0.010	0.023	0.661	0.019	0.026	0.455
Provider had very good or excellent health	1.34	0.374	0.300	1.74	0.564	0.088	0.000	0.020	0.986	0.000	0.026	0.988
Provider race/ethnicity												
Hispanic/Latino/a	0.723	0.228	0.304	0.437	0.169	0.033	0.000	0.026	0.991	-0.068	0.029	0.021
Black, non-Hispanic	0.737	0.206	0.275	1.01	0.340	0.974	-0.036	0.017	0.035	-0.087	0.027	0.001
Number of children served in setting	1.02	0.034	0.557	1.01	0.038	0.812	0.001	0.003	0.686	-0.001	0.003	0.833
Whether provider paid other HBCC staff	1.16	0.292	0.548	1.83	0.567	0.052	-0.013	0.016	0.435	-0.017	0.026	0.517
Whether provider served infants/toddlers	0.745	0.321	0.495	4.71	3.44	0.034	-0.037	0.031	0.223	-0.018	0.045	0.687
Whether provider served school-aged children	0.783	0.198	0.332	0.465	0.138	0.010	-0.038	0.029	0.197	0.017	0.028	0.542
Whether offered non-traditional hours care	0.935	0.247	0.800	1.04	0.362	0.902	-0.029	0.015	0.053	-0.031	0.027	0.253
Number of hours open per week	1.01	0.005	0.011	1.01	0.008	0.235	0.000	0.000	0.862	0.000	0.000	0.586
Constant	1.57	0.171	0.000	0.122	0.018	0.000	0.142	0.003	0.000	0.742	0.015	0.000
Unweighted sample size	1,180			1,180			1,260			1,260		
Weighted sample size	23,900			23,900			24,500			24,500		

Source: Data from the 2019 NSECE Home-Based Provider Survey and the 2019 CCDF Policies Database.

Note: The table presents odds ratios for binary measures, linear coefficient estimates for continuous measures, standard errors, and *p*-values. Probability of sampling weights were applied. Covariates were selected to optimize model predictions. We used dummy variable imputation (indicators omitted) for variables missing data. All model variables were mean centered. All estimates are reported out to a maximum of three significant digits in accordance with RUF reporting requirements. All listed, paid providers who reported serving one or more children whose care was funded by subsidies were asked whether participating families paid copays or additional fees. All listed, paid providers were asked to report their private pay rates for full-time care. These estimates excluded providers who did not report serving one or more children funded by subsidies.

OR = odds ratio; SE = standard error.

Table B.8. Prediction of listed HBCC provider preferences for subsidies based on state provider payment policies and selected characteristics, multivariate logistic regression

State subsidy policies and provider and community characteristics	Preferred child care subsidies to private pay in terms of…											
	Reliability of payment			Amount of money received			Paperwork/administrative requirements			Ease of filling program vacancies		
	OR	SE	*p*	OR	SE	*p*	OR	SE	*p*	OR	SE	*p*
CCDF agency paid providers directly	2.88	1.22	0.013	2.55	1.40	0.088	1.79	0.942	0.269	1.60	0.606	0.218
Providers were paid for closures	1.22	0.219	0.265	1.41	0.290	0.097	1.29	0.378	0.391	0.817	0.165	0.316
Provider could charge families additional fees	0.976	0.205	0.909	1.46	0.156	0.034	0.706	0.191	0.200	0.887	0.201	0.596
Community poverty density												
High poverty density	1.92	0.374	0.001	2.80	0.670	0.000	0.765	0.209	0.327	1.70	0.361	0.012
Moderate poverty density	1.07	0.207	0.722	2.15	0.513	0.001	0.797	0.218	0.406	0.940	0.194	0.766
Provider had very good or excellent health	0.723	0.158	0.138	0.833	0.202	0.451	0.917	0.275	0.773	0.878	0.206	0.580
Provider race/ethnicity												
Hispanic/Latino/a	1.42	0.275	0.067	1.78	0.372	0.006	1.24	0.313	0.387	1.75	0.365	0.008
Black, non-Hispanic	1.69	0.330	0.007	2.11	0.505	0.002	0.848	0.301	0.642	1.43	0.305	0.095
Number of children served in setting	1.02	0.026	0.489	1.03	0.023	0.198	0.933	0.031	0.040	1.04	0.026	0.118
Percentage of children served receiving child care subsidies	1.01	0.002	0.000	1.01	0.003	0.017	0.989	0.004	0.003	1.01	0.003	0.000
Whether provider paid other HBCC staff	0.806	0.148	0.241	0.995	0.209	0.983	0.688	0.167	0.122	0.884	0.166	0.510
Whether provider served infants/toddlers	0.323	0.094	0.000	0.231	0.067	0.000	0.789	0.329	0.570	0.523	0.197	0.085
Whether provider served school-aged children	1.19	0.232	0.369	0.812	0.176	0.334	1.04	0.299	0.897	0.905	0.179	0.614
Whether offered non-traditional hours care	1.15	0.212	0.462	1.31	0.275	0.196	0.669	0.205	0.191	1.67	0.442	0.051
Number of hours open per week	1.01	0.004	0.039	1.00	0.003	0.626	0.999	0.006	0.878	1.00	0.005	0.963
Constant	0.425	0.033	0.000	0.249	0.023	0.000	0.126	0.016	0.000	0.271	0.024	0.000
Unweighted sample size	2,880			2,840			2,800			2,700		
Weighted sample size	59,700			58,000			58,200			56,700		

Source: Data from the 2019 NSECE Home-Based Provider Survey and the 2019 CCDF Policies Database.

Note: The table presents odds ratios for binary measures, linear coefficient estimates for continuous measures, standard errors, and *p*-values. Probability of sampling weights were applied. Covariates were selected to optimize model predictions. We used dummy variable imputation (indicators omitted) for variables missing data. All model variables were mean centered. All estimates are reported out to a maximum of three significant digits in accordance with RUF reporting requirements. Listed, paid providers who served at least four children were asked their preferences for subsidies. These estimates excluded providers who reported they were not aware of subsidies.

OR = odds ratio; SE = standard error.

APPENDIX C.

HEALTH AND SAFETY REGULATIONS TABLES

Table C.1. Univariate descriptive statistics for CCEE health and safety regulations outcomes

Provider CCEE regulations outcomes	Unweighted sample size	Weighted sample size	Percentage
Provider interactions with health and safety trainings and inspections			
Attended health and safety training in prior year	4,100	89,200	
Attended training in-person			26.4
Attended training online			60.7
Did not attend a training			12.9
Received an inspection in the prior year	3,940	87,100	
Inspected for health and safety and to monitor quality of other services			72.1
Inspected for compliance with health and safety requirements			21.6
Did not receive an inspection			6.3
Provider perceptions of background checks			
Background checks on staff protect children	4,100	88,100	
Strongly agree			79.2
Agree			18.9
Disagree			<1
Strongly disagree			<1
Some providers are uncomfortable doing background checks on household members	3,920	83,900	
Strongly agree			14.2
Agree			26.7
Disagree			34.1
Strongly disagree			25.0
Background checks cause delays in ability to hire staff	2,360	52,500	
Strongly agree			22.7
Agree			25.0
Disagree			37.7
Strongly disagree			14.6
Reasons former providers stopped providing regular, paid care (screener data)			
Did not feel they were helping parents and children	580	n.a.	
Contributed very much			3.8
Contributed somewhat			5.3
Did not contribute at all			90.9
Difficulties complying with regulations and requirements	600	n.a.	
Contributed very much			11.4
Contributed somewhat			17.2
Did not contribute at all			71.4
Financial reasons such as funding a new job or not enough income from providing child care	600	n.a.	
Contributed very much			28.1

Provider CCEE regulations outcomes	Unweighted sample size	Weighted sample size	Percentage
Contributed somewhat			23.0
Did not contribute at all			48.9

Source: Data from the 2019 NSECE Home-Based Provider Survey and the 2019 NSECE Home-Based Provider Survey Screener.

Note: The table presents unweighted sample sizes, weighted sample sizes, and unadjusted percentages. Data are drawn from the 2019 NSECE Home-Based Provider Survey unless otherwise noted. Probability of sampling weights were applied to estimates from the 2019 NSECE Home-Based Provider Survey. Estimates from the 2019 NSECE Home-Based Provider Survey Screener are unweighted because probability of sampling weights were not generated for providers who were ineligible for the survey. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. Provider participation in inspections asked of non-relationship-based and large, relationship-based providers who served at least one child with public funds. Perceptions of background checks on hiring staff only asked of listed providers who regularly served more than six children. Screener data were collected from listed providers who recently stopped providing regular, paid care to one or more children under age 13 who were not their own.

n.a. = not applicable.

Table C.2. Listed HBCC provider characteristics by levels of selected CCEE health and safety regulations outcomes

Characteristics	Received health and safety inspection in prior year	Did not receive health and safety inspection in prior year	Attended health and safety training in prior year	Did not attend health and safety training in prior year	Providers comfortable with background checks on household	Some providers uncomfortable with background checks on household
Provider-level characteristics						
Race/ethnicity						
Hispanic/Latino/a	18.8	34.1***	17.6	33.4***	17.7	21.8
Black, non-Hispanic	22.3	27.7	22.8	23.3	23.1	23.4
Household income ($; mean)	66,700	60,800	66,800	58,800	67,800	61,600
Number of household members (count; mean)	3.8	3.9	3.8	3.9	3.8	3.8
Had very good or excellent health	84.4	87.2	84.8	83.1	85.2	82.4
Age in 2019 (years; mean)	49.8	49.9	50	50.1	49.5	50.2
Had an associate degree or higher	38.4	39.9	38.9	32.5	39.5	36.6
Had child development associate credential	31.6	38	29.4	29.8	29.1	29.5
Had state certification or endorsement	46.6	50.9	46.4	43.5	44.7	48.4
Number of children served (count; mean)	9.2	8***	8.9	7.9***	9.1	8.3
Age groups served						
Infants and toddlers (0 to 3 years)	94	83***	92.8	84.6***	92.7	90.1
School-aged children (5 years or above)	66.1	54.4**	65.7	62.2	66	64.9
Offered non-traditional hours care	23.7	28.1	22.9	34.7***	27.4	27.3
Number of hours open per week (hours; mean)	55.5	52.7	54.5	56.1	55.2	54.6
Had prior relationship with any child(ren)	45.6	37.5	49.4	48.4	50.9	47.9
Had other paid staff	32	21.5**	35.1	20.3***	29.4	27.9
Community-level characteristics						
High poverty density	24.8	35.4**	24.2	40.3***	22.7	29.6**
High urban population density	70.1	86***	69.5	82.9***	72.1	69.3
High recent immigrant population density	11.3	13.9	11.1	10.4	11.3	10.3
High Hispanic/Latino/a population density	9.8	24.1*** [a]	9.3	21.4*** [a]	8.3	14.2***

Characteristics	Received health and safety inspection in prior year	Did not receive health and safety inspection in prior year	Attended health and safety training in prior year	Did not attend health and safety training in prior year	Providers comfortable with background checks on household	Some providers uncomfortable with background checks on household
High Black, non-Hispanic population density	12.1	18.1	12.9	11.1	10.4	15.5**
Unweighted sample size	3,530	320	3,520	600	2,300	1,600
Weighted sample size	78,900	6,450	76,800	11,300	49,600	34,300

Source: Data from the 2019 NSECE Home-Based Provider Survey and the 2017 Child Care Licensing Study Database.

Note: The table presents unadjusted percentages unless otherwise noted. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. Provider participation in inspections asked of non-relationship-based and large, relationship-based providers who served at least one child with public funds. Providers in Louisiana, New Jersey, and South Dakota were excluded from these estimates because these states did not report licensing policies for HBCC providers.

[a] Variable omitted from multivariate analysis because of collinearity with another selected predictor.

***/** Differences between provider subgroups are statistically significant at the .01/.05 level, two-tailed t-test.

Table C.3. Listed HBCC provider unadjusted inspections outcomes by select state CCEE regulatory policies

State CCEE regulatory policies	In the prior year…		
	Inspected for health and safety and to monitor quality of other services	Inspected for compliance with health and safety requirements	Did not receive an inspection
	Percentage	Percentage	Percentage
Frequency of licensing inspections			
At least once per year	75.7**	20.6	3.7***
Once every two or three years	64.5	19.1	16.4
License renewal inspection policies			
Renewal inspections conducted	74.2	21.8	4.0
Renewal inspections not conducted	72.5	18.6	8.9**
Unweighted sample size	3,840	3,840	3,840
Weighted sample size	83,800	83,800	83,800

Source: Data from the 2019 NSECE Home-Based Provider Survey and the 2017 Child Care Licensing Study Database.

Note: The table presents unadjusted percentages. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits and all sample sizes are rounded to the nearest 20 in accordance with RUF reporting requirements. Non-relationship-based and large, relationship-based providers who served at least one child with public funds were asked about inspections. Providers in Louisiana, New Jersey, and South Dakota were excluded because these states did not report licensing policies for HBCC providers.

***/** Differences between state subgroups are statistically significant at the .01/.05 level, two-tailed t-test.

Table C.4. Prediction of listed HBCC provider interactions with CCEE health and safety regulations based on state licensing policies and selected characteristics, multivariate logistic regression

State CCEE regulatory policies and provider and community characteristics	Inspected for compliance with health and safety requirements in prior year			Inspected for health and safety and to monitor quality of other services in prior year			Participated in a health or safety training in prior year		
	OR	SE	*p*	OR	SE	*p*	OR	SE	*p*
Inspections conducted once per year or more	1.695	0.088	0.000	1.396	0.113	0.007		n.a.	
License renewal inspections conducted	0.874	0.275	0.669	0.869	0.160	0.445		n.a.	
Community poverty density									
High poverty density	0.442	0.133	0.007	1.14	0.216	0.483	0.390	0.081	0.000
Moderate poverty density	0.523	0.140	0.015	1.07	0.204	0.725	0.483	0.111	0.002
Community urban population density									
High urban population density	0.173	0.099	0.002	0.543	0.176	0.060	0.622	0.234	0.208
Moderate urban population density	0.150	0.104	0.006	0.501	0.191	0.069	0.854	0.388	0.729
Provider received child care subsidy funding	1.47	0.424	0.185	1.52	0.274	0.021	1.04	0.207	0.839
Provider participated in QRIS	1.72	0.632	0.139	2.22	0.472	0.000	1.78	0.372	0.006
Provider participated in the CACFP	1.95	0.488	0.007	1.54	0.262	0.012	2.17	0.395	0.000
Provider race/ethnicity									
Hispanic/Latino/a	0.419	0.159	0.038	1.35	0.261	0.118	0.604	0.137	0.026
Black, non-Hispanic	0.755	0.266	0.426	0.867	0.188	0.512	1.14	0.299	0.613
Number of children served in setting	1.02	0.031	0.519	1.04	0.022	0.047	1.02	0.025	0.393
Whether provider paid other HBCC staff	1.54	0.468	0.158	1.11	0.195	0.554	1.19	0.220	0.343
Whether provider served infants/toddlers	1.92	0.506	0.013	1.53	0.350	0.065	1.53	0.412	0.112
Whether provider served school-aged children	1.32	0.341	0.288	0.884	0.150	0.468	1.02	0.191	0.913
Constant	20.4	4.39	0.000	2.88	0.312	0.000	8.40	0.932	0.000
Unweighted sample size	3,860			3,840			3,860		
Weighted sample size	84,700			83,800			84,760		

Source: Data from the 2019 NSECE Home-Based Provider Survey and the 2017 Child Care Licensing Study Database.

Note: The table presents odds ratios, standard errors, and *p*-values. Probability of sampling weights were applied. Covariates were selected to optimize model predictions. We used dummy variable imputation (indicators omitted) for variables missing data. All model variables were mean centered. All estimates are reported out to a maximum of three significant digits in accordance with RUF reporting requirements. Non-relationship-based and large, relationship-based providers who served at least one child with public funds were asked about inspections. Providers in Louisiana, New Jersey, and South Dakota are excluded because these states did not report licensing policies for HBCC providers.

CACFP = Child and Adult Care Food Program; n.a. = not applicable; OR = odds ratio; SE = standard error.

Table C.5. Prediction of listed HBCC provider perceptions of background checks by selected community characteristics, multivariate logistic regression

Community characteristics	Agreed or strongly agreed that:					
	Background checks cause delays in ability to hire new staff			Some providers are uncomfortable having to do background checks on family members or others who live in household		
	OR	SE	*p*	OR	SE	*p*
High poverty density (>.2)	1.05	0.180	0.759	1.01	0.150	0.966
High Hispanic/Latino/a population density (>.5)	1.74	0.335	0.004	1.42	0.224	0.027
High Black, non-Hispanic population density (>.4)	1.08	0.257	0.822	0.811	0.291	0.560
High Black, non-Hispanic population density x High poverty density	2.60	1.28	0.047	2.97	1.52	0.033
Constant	0.630	0.054	0.000	0.654	0.050	0.000
Unweighted sample size	2,360			3,920		
Weighted sample size	52,500			83,900		

Source: Data from the 2019 NSECE Home-Based Provider Survey.

Note: The table presents odds ratios, standard errors, and *p*-values. Probability of sampling weights were applied. Covariates were selected to optimize model predictions. We used dummy variable imputation (indicators omitted) for variables missing data. All model variables were mean centered. All estimates are reported out to a maximum of three significant digits in accordance with RUF reporting requirements. Perceptions of background checks on hiring staff only asked of listed providers who regularly served more than six children.

OR = odds ratio; SE = standard error.

Table C.6. Prediction of listed HBCC provider receipt of subsidy funding in 2012 and 2019 based on changes in state CCEE health and safety regulation policies required by the CCDBG reauthorization, bivariate and multivariate logistic regression

Received subsidy funding (%)	2012 HBCC provider cohort 34.2%						2019 HBCC provider cohort 30.8%						Comparison across cohorts
State CCEE regulatory policies	**OR**	**SE**	***p***	**OR**	**SE**	***p***	**OR**	**SE**	***p***	**OR**	**SE**	***p***	
Number of regulations with which state did not comply prior to CCDBG reauthorization (0 to 4)	1.31	0.055	0.000		n.a.		1.08	0.074	0.233		n.a.		**
Regulations with which states did not comply prior to CCDBG reauthorization:													
Unannounced annual inspections of HBCC providers		n.a.		1.32	0.211	0.083		n.a.		0.696	0.097	0.009	**
Comprehensive background checks of HBCC providers		n.a.		1.97	0.342	0.000		n.a.		1.00	0.159	0.991	***
Regulated group sizes ages 5 and younger		n.a.		1.20	0.335	0.511		n.a.		0.993	0.168	0.969	
Constant	0.493	0.042	0.000	0.490	0.044	0.000	0.445	0.030	0.000	0.443	0.029	0.000	
Unweighted sample size	3,100			3,100			3,820			3,820			n.a.
Weighted sample size	96,500			96,500			84,800			84,800			n.a.

Source: Data from the 2012 and 2019 NSECE Home-Based Provider Surveys, Implementing the Child Care and Development Block Grant Reauthorization: A Guide for States (Appendix III), and 2013 NARA 50-State Child Care Licensing Study.

Note: The table presents odds ratios, standard errors, and *p*-values. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits in accordance with RUF reporting requirements. The final column compares estimates across study cohorts using post-hoc tests. All model variables were mean centered. In both 2012 and 2019, all listed, paid providers were asked whether they received public funding from child care subsidies.

The number of regulations with which state did not comply prior to CCDBG reauthorization sums whether states (1) required pre-licensure inspections; (2) conducted annual, unannounced inspections of licensed providers; (3) conducted comprehensive background checks; and (4) regulated group size for all age groups for children age 5 and younger. We combined indicators of whether states required pre-licensure inspections and whether states conducted annual, unannounced inspections in models estimating effects on individual regulations because they overlapped.

***/**/* Differences between state policy subgroups between study cohorts are statistically significant at the .01/.05/.10 level, two-tailed t-test.

n.a. = not applicable; OR = odds ratio; SE = standard error.

Table C.7. Prediction of listed HBCC provider receipt of subsidy funding in 2012 and 2019 based on changes in state CCEE health and safety regulation policies required by the CCDBG reauthorization and selected provider characteristics, multivariate logistic regression

Received subsidy funding (%)	2012 HBCC provider cohort 34.2%						2019 HBCC provider cohort 30.8%						Comparison across cohorts
State CCEE regulatory policies and provider and community characteristics	OR	SE	*p*	OR	SE	*p*	OR	SE	*p*	OR	SE	*p*	
Number of regulations with which state did not comply prior to CCDBG reauthorization (0 to 4)	1.35	0.056	0.000		n.a.		1.04	0.073	0.325		--		***
Regulations with which states did not comply prior to CCDBG reauthorization:													
Unannounced annual inspections of HBCC providers		n.a.		1.42	0.262	0.057		n.a.		0.775	0.122	0.106	**
Comprehensive background checks of HBCC providers		n.a.		2.25	0.428	0.000		n.a.		1.13	0.209	0.503	***
Regulated group sizes ages 5 and younger		n.a.		1.40	0.336	0.161		n.a.		0.816	0.136	0.225	
Community poverty density													
High poverty density (versus low)	2.76	0.667	0.000	2.66	0.689	0.000	2.56	0.471	0.000	2.44	0.450	0.000	
Moderate poverty density (versus low)	1.53	0.312	0.038	1.58	0.323	0.026	2.01	0.353	0.000	1.92	0.340	0.000	
Provider had very good or excellent health	0.669	0.155	0.082	0.664	0.158	0.085	0.607	0.126	0.016	0.606	0.126	0.016	
Provider race/ethnicity													
Hispanic/Latino/a (versus white/other)	0.755	0.191	0.268	0.663	0.161	0.091	1.21	0.245	0.345	1.19	0.243	0.390	
Black, non-Hispanic (versus white/other)	2.59	0.545	0.000	2.47	0.536	0.000	1.88	0.354	0.001	1.88	0.360	0.001	
Number of children served in setting	1.07	0.026	0.003	1.08	0.027	0.003	1.02	0.020	0.265	1.02	0.019	0.191	*
Whether provider paid other HBCC staff	1.04	0.420	0.921	1.07	0.457	0.880	2.27	0.384	0.000	2.14	0.363	0.000	**
Whether provider served infants/toddlers	1.67	0.566	0.131	1.68	0.596	0.145	1.08	0.284	0.769	0.987	0.259	0.960	
Whether provider served school-aged children	0.989	0.207	0.958	0.970	0.207	0.887	2.72	0.434	0.000	2.78	0.446	0.000	***
Whether offered non-traditional hours care	3.62	0.688	0.000	3.70	0.722	0.000	1.85	0.320	0.000	1.95	0.338	0.000	**
Constant	0.519	0.143	0.017	0.525	0.157	0.033	0.379	0.033	0.000	0.379	0.033	0.000	*
Unweighted sample size	3,100			3,100			3,820			3,820			n.a.
Weighted sample size	96,500			96,500			84,800			84,800			n.a.

Source: Data from the 2012 and 2019 NSECE Home-Based Provider Surveys, Implementing the Child Care and Development Block Grant Reauthorization: A Guide for States (Appendix III), and 2013 NARA 50-State Child Care Licensing Study.

Note: The table presents odds ratios, standard errors, and *p*-values. Probability of sampling weights were applied. All estimates are reported out to a maximum of three significant digits in accordance with RUF reporting requirements. The final column compares estimates across study cohorts using post-hoc tests. Covariates were selected to optimize model predictions. We used dummy variable imputation (indicators omitted) for variables missing data. All model variables were mean centered. In both 2012 and 2019, all listed, paid providers were asked whether they received public funding from child care subsidies.

The number of regulations with which state did not comply prior to CCDBG reauthorization sums whether states (1) required pre-licensure inspections; (2) conducted annual, unannounced inspections of licensed providers; (3) conducted comprehensive background checks; and (4) regulated group size for all age groups for children age 5 and younger. We combined indicators of whether states required pre-licensure inspections and whether states conducted annual, unannounced inspections in models estimating effects on individual regulations because they overlapped.

***/**/* Differences between state policy subgroups or provider characteristics between study cohorts are statistically significant at the .01/.05/.10 level, two-tailed t-test.

n.a. = not applicable; OR = odds ratio; SE = standard error.

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