

Are Higher Subsidy Payment Rates and Provider-Friendly Payment Policies Associated with Child Care Quality?

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Introduction and Purpose

The Child Care and Development Block Grant (CCDBG) Act of 2014 reauthorized the Child Care and Development Fund (CCDF) with twin goals: promoting economic self-sufficiency among low-income families and supporting the growth, development, and school readiness of young children through age 13. The CCDBG Act, as amended in 2014, encourages state administrators to place greater emphasis on quality, partly through the implementation and evaluation of specific quality improvement activities and an increased minimum quality set-aside (Office of Child Care 2014). Outside of the quality set-aside, the bulk of CCDF funds are spent on direct funding for child care subsidies. We hypothesize that some child care subsidy policies serve as levers for supporting or encouraging low-income families' access to higher-quality child care by increasing effective payment rates, increasing stability of payments, or directly incentivizing quality through tiered reimbursement.

This brief explores methodological considerations for using the CCDF Policies Database (funded by the Office of Planning, Research, and Evaluation and maintained by the Urban Institute) in statistical analyses. Our study demonstrates the utility of using the CCDF Policies Database to probe the multiple components of CCDF child care subsidy policies developed and implemented by the 50 states and the District of Columbia. Here, we provide lessons learned for converting these subsidy policy components into variables for inclusion in statistical analyses to inform future research, including considerations for doing so beyond the bounds of our study. We share this brief to help those who might want to use our variables for other analyses and those who might want to convert other variables in the CCDF Policies Database.

Our study combined data on provider payment rates and other subsidy policies (drawn largely from the CCDF Policies Database) with several quality indicators available in the 2012 National Survey of Early Care and Education (NSECE). Specifically, we drew on responses to NSECE surveys of center-based providers and listed home-based providers who reported serving at least one child with CCDF subsidy funding at the time of the survey. Our full study design and analysis is available in our full report, *Are Higher Subsidy Payment Rates and Provider-Friendly Payment Policies Associated with Child Care Quality?* (Greenberg et al. 2018).

First, we provide the research questions for this methods brief and summarize the research questions we explored in the full report. Next, we discuss the CCDF Policies Database and the policies and rates that our study examined. The bulk of this brief explores the methodological challenges and solutions to using the CCDF Policies Database for statistical analyses. Finally, we look at implications for future research and provide links to related resources.

Research Questions

This brief aims to answer two questions:

1. How do we transform information from the CCDF Policies Database into variables usable for quantitative analysis?
2. How do we transform those variables to be usable for matching with NSECE data?

We pose these questions within the context of our study research question: What is the association between payment rates and policies and the quality of child care serving subsidized children?

Sample

The CCDF Policies Database is a comprehensive, longitudinal database of CCDF subsidy policies for all 50 states, the District of Columbia, and the US

territories and outlying areas. Each state and territory administers the federal CCDF program with its own policies, including variations in how families are enrolled and when and how providers are paid. The CCDF Policies Database has captured these state-level program characteristics for each year since 2009 by transforming policy manuals into data elements that can be used for research. It includes more than 1,800 policy variables, such as income limits, definitions of family, provider tuition reimbursement rates, provider participation requirements, parent fees, and various administrative procedures (Giannarelli, Minton, and Durham 2016). These policies shape providers' and families' experiences with child care subsidies. The CCDF Policies Database can help researchers explore variations across states and, when paired with other data sources, the impacts of these different policies on care quality and child outcomes. Please see the CCDF Policies Database website for the available data files, data tables, codebooks, and search tools.¹

Our sample is restricted to the policies that were in effect as of October 1, 2011, for all 50 states and the District of Columbia so that the policies would align with data collected in 2012 by the NSECE. In states where county-level variations exist for at least some policies, we followed CCDF Policies Database procedures and used state-level policies when available and the substate policies for the most populous area when state policies are not available (e.g., provider reimbursement rate dollar amounts often vary across different counties or regions within a state).

Method

Our study focused on the CCDF policy levers we hypothesized would influence provider quality or the types of providers participating in the subsidy system:

- reimbursement rates at the base level
- reimbursement rates tiered by quality
- requirements for families receiving subsidies to pay additional tuition (above their copayment amount)

- payment policies for days providers are closed (e.g., for vacations or professional development)
- payment policies for days children are absent (e.g., when children are sick or families are on vacation)
- the frequency of redetermination of family eligibility

We also included the share of subsidies administered through contracts (rather than vouchers) using information reported by the Administration for Children and Families.² We considered other policy levers that may have similar influence on improving the effective payment rate for child care providers or on improving the stability of payments but found either insufficient variation in those policies across states or insufficient detail in the policy manuals to determine if the variation existed (i.e., too much missing data). See the sections below for more detail.

Methodological Challenges and Solutions

We present our methodological challenges and our solutions to those challenges in three parts: (1) challenges related to subsidy rate variables, (2) challenges related to subsidy policy variables, and (3) special considerations related to connecting the CCDF Policies Database to the NSECE data. We also explore considerations for choosing among the wealth of child care subsidy policies and child care subsidy rates available within the CCDF Policies Database.

Challenges and Solutions

Related to Subsidy Rate Variables

One feature of a child care subsidy system is the reimbursement rates that child care providers are eligible to receive when serving subsidized children. The rate, typically referred to as the child care subsidy reimbursement rate, is meant to be set by the states using a market rate study. CCDF regulations suggest that child care operators be paid up to the 75th percentile of the market rate. Providers are paid the lower of their own tuition rate or the subsidy reimbursement rate.

All states have at least a base reimbursement rate level. In some states, this is the maximum rate for all

¹ "The Child Care and Development Fund (CCDF) Policies Database," Urban Institute, accessed November 15, 2017, <http://ccdf.urban.org/>.

² "FY 2012 Final Data Table 2 - Percent of Children Served by Payment Method," US Department of Health

and Human Services, Administration for Children and Families, Office of Child Care, October 8, 2014, <https://www.acf.hhs.gov/occ/resource/fy-2012-ccdf-data-tables-final-table-2>.

providers (of the same type, serving the same age child, for the same amount of time). Other states have maximum reimbursement rates tiered by level of quality, typically to align with their quality rating and improvement system (QRIS) programs.

Thus, we had to determine which subsidy reimbursement rates would be the most relevant to include in our regression models. Alignment with NSECE data led us to focus on payment rates for children who were not yet school age, but that still left a range of rates from infants up through age 5 but not yet school-age. Alignment with NSECE also led us to include rates of centers, rates of family child care homes, and rates of group homes.

Rates by Provider Type

CCDF subsidy reimbursement rates are recorded in the database under four provider types: centers, family child care homes, group family child care homes, and in-home care. We used the CCDF center rate for the center portion of the NSECE sample. For home-based care, we used a weighted average of the group home rate and the family home rate (weighted by the state-specific proportion of children in family and group homes for states that make a distinction between them). The weighted average allowed us to capture information from both the family home rate and the group home rate.

Rates by Age of Child

States may have several different rates for children ages 5 and under, generally paying more for younger children, but age groupings vary from state to state. The CCDF Policies Database makes certain age rates available in easily accessible tables, and others are available in the full datasets. We considered what was available in the easily accessible tables first. These tables provide rates by state for children ages 11 months, 35 months, 59 months, and 84 months.³ Instead, we used rates for children at 48 months (4 years) as the midpoint of the preschool range. We considered also including rates at 24 months, but results are easier to interpret with a single rate, and there is strong correlation between rates at 48 months and rates at 24 months.

Rates by Quality Rating Level

Using the policies effective October 1, 2011, 22 states had rates tiered by quality rating. The tiered rating

helps child care programs that charge more for higher-quality care recoup more of their costs through subsidy payments, improving the effective payment rate for the providers. States may have multiple tiers, and the CCDF Policies Database records all tier levels for each provider and age category.

Because the CCDF Policies Database provides both the base reimbursement rate and the highest tiered level, there are multiple ways the quality tiered rate could be used in a statistical equation, including the following:

- Create a binary dummy variable indicating yes (1) if the tier is present or no (0) if the tier is not present.
- Use the full rate level of the highest tier (if also using the base rate in the equation, this may cause problems because of the high correlations between variables).
- Calculate the difference between the base rate and the highest rate (this captures the magnitude of the difference); where there is no tiered rate, the difference is zero.
- Interact the dummy and the difference.

We hypothesized that the magnitude of the difference would be more meaningful and would better differentiate variation among state support for quality because of how this would elevate the effective payment rate. We also included the binary variable indicating if the tier was present. Because this binary variable was highly correlated with whether a QRIS program existed in the state, we dropped the QRIS variable from our analysis (25 states had a QRIS program, and 22 of those states had a tiered reimbursement rate).

Adjusting Rates to Account for Cost-of-Living Differences

The CCDF Policies Database provides the actual rates that states pay child care providers participating in the child care subsidy system. States select rates based on their own child care markets, which are, in turn, influenced by the costs of doing business in that state. Thus, higher payment rates may reflect more generous payments by the state or may simply be reflective of higher operating costs.

³ See tables 34, 35, and 36 in Minton and colleagues (2012).

In our analysis, it was important to capture some measure of the generosity of state reimbursement rates. To adjust for differences in cost of living across states, we used the state regional price parity adjustments generated by the Department of Commerce’s Bureau of Economic Analysis and applied them to the base rate and the tiered reimbursement rates. This does not specifically adjust for differences in child care costs but for cost of living more generally.

Summary of Subsidy Reimbursement Rate Decisions

Thus, in our analyses, the child care subsidy reimbursement rates reflected the type of provider in the center-based model, a weighted average of family homes and group homes in the home-based model, the child age of 48 months, the base rate, and the difference between the base and highest tiered rates, with rates adjusted for regional price parity.

Challenges and Solutions

Related to Subsidy Policy Variables

Although subsidy reimbursement rate policies are complex, child care subsidy policies are even more multidimensional. In the 2011 CCDF Policies Database codebook, 2 of the 32 categories of variables described are related to reimbursement rates. The other 30 cover multiple policy dimensions, including how providers become eligible to participate in the subsidy process, various family eligibility criteria, redetermination frequency and methods, parent copayment requirements, waiting list policies, and fraud determination and payback requirements.

Deciding which Policies to Use

Although subsidy policy dimensions are detailed in the codebook, finding the policies of interest to your research can be challenging. For example, an uninformed reader may skim over “Other Provider Policies” thinking that category may not be as important given the detailed level of categories available; if so, they would miss key policies used to inform our model.

Three of the policies in our final model fell into the “Other Provider Policies” category, which includes policies related to payments other than the setting of reimbursement rates:

- Thirty-two states required families receiving subsidies to pay additional tuition (above their copayment amount) if provider tuition

exceeds maximum reimbursement amounts (18 did not, and 1 state had missing data).

- Twenty-four states paid for days centers are closed (e.g., for vacations or professional development).
- Twenty-five states paid for days children are absent (e.g., when children are sick or families are on vacation).

Each of these policies influences the effective payment rate for the provider. If parents must pay the difference between the maximum reimbursement rate and the provider’s tuition, then the provider does not have to give up those funds to participate in the subsidy program (we recognize that some provider-friendly policies such as this are less parent friendly). If providers are paid for days they are closed, that helps them offer staff paid time off for holidays and professional development. If providers are paid for days that children are absent, that stabilizes their income.

Because we were most interested in exploring the relationship between subsidy policies and provider quality, we focused on the policies targeted to the provider’s participation experience, especially those that would affect the amount of funds a provider could earn to support their quality maintenance and improvement efforts. The stability of the provider experience was also important, and this is why we included the redetermination frequency for parent eligibility. More frequent redetermination has been shown to lead to more turnover among families, which creates unstable income for providers. As of 2012, 23 states set a maximum redetermination period of 12 months, and the rest used a period of 6 or 8 months. Note that actual redetermination periods may be shorter than the maximum for many families.

If we had been interested in family-friendly policies that help parents access higher-quality care, we would have examined the potential policies through a different lens and may have selected some different policies, such as the level of family copayment.

Handling Certain CCDF Policy Manual Codes

State CCDF subsidy administration policies must address certain key federal subsidy requirements, but they can also address many more policy dimensions. Alternatively, states may have multiple policy documents that attend to various subsidy policy dimensions and, therefore, do not include all potentially relevant policies in the state caseworker

manuals collected by the CCDF Policies Database team.

The CCDF Policies Database team has attempted to catalog these manuals at a level of detail that may be of most use to policy administrators who want to learn from policies in other states and to researchers exploring various issues. Recognizing that some policies exist despite not being listed in the manual, the CCDF Policies Database codes these as “not in manual.” In research analyses, these “not in manual” codes become missing data unless the team has the time and resources to contact the states directly to ask them about these policies.

Another code used by the CCDF Policies Database that creates an additional step for researchers is “varies.” Policies labeled as “varies” include notes that indicate the circumstances under which the policy varies. Researchers may be able to determine from these notes a more suitable code to use for their analyses; if not, then this code will also result in missing data.

In the 2011 data we used, 19 states were silent in the manual (i.e., had missing data) on whether centers are paid for days they are closed; 11 states did not address payment during children’s absences, and 1 state did not indicate whether providers were required or allowed to charge additional amounts when tuition exceeded the maximum reimbursement rate (in recent years, the CCDF database team has sought supplemental documentation from the states so that fewer states have missing data). These missing data are problematic for the analyses as they reduce the analytic sample size and, therefore, reduce statistical power. The states with missing policies could be coded as not having the policy, but that may not accurately reflect state policy contexts and has the disadvantage of adding noise to related estimates.

We found the most effective way to handle missing data was to create a provider-friendly policy index. The index made sense within our conceptualization of provider friendliness because multiple provider-friendly policies could result in a cumulative effect, and it had the added benefit of diminishing our missing data problem. The index assigned a 1 to each of the following variables:

- The state requires families to pay the difference between the maximum rate and the

provider’s rate (in addition to the copayment).

- The state pays for days children are absent.
- The state pays for days providers are closed (centers only).
- The state has a 12-month redetermination period.

States receive a score between 1 and 4 on the index, and the index allows all states to be included in the analysis.

Special Considerations for Linking with NSECE

The primary focus of this methods brief is understanding how to use the CCDF Policies Database for statistical modelling, particularly how to pair it with data related to child care quality. In this section, we explore considerations for using the CCDF Policies Database with the NSECE dataset.

NSECE datasets are available as quick tabulation, public, restricted use level 1, restricted use level 2, or restricted use level 3 datasets. Linking the CCDF Policies Database variables and the NSECE dataset variables requires a state-level identifier in the NSECE data, which is available only in the restricted use level 2 and 3 datasets. The concern is that the data become more identifiable when used at the state level, so extra care must be taken.

Concern over possible identification of individual providers places restrictions on the use of the CCDF Policies Database after connecting the two datasets. The administrators of the NSECE dataset required evidence that each estimate (regression coefficient, summary statistic, etc.) included information from providers in at least three states, meaning that each payment policy had to cover at least three states (the District of Columbia is considered a state for this purpose).

In our analyses, this restriction was not an issue because we wanted to use policy variables where there was sufficient variation across states to detect differences in associations between subsidy policies and child care provider quality.

Implications for Future Research

The CCDF Policies Database is a rich source of information on the various dimensions of state child care subsidy policies and child care subsidy rates. It takes the first step in translating state caseworker subsidy manuals, which were not designed for research purposes, into numeric, categorical, and text

variables intended to balance the needs of different users. Quantitative researchers can use some variables as-is but will need to combine or adapt other variables for their analyses.

As states grapple with implementing the 2014 CCDF reauthorization mandates, the CCDF Policies Database may serve as a repository of information about how state policies have changed over time to meet new needs and how states leverage their subsidy policies to meet those needs.

For more information:

- Questions about information contained in this brief or about the primary study, *Are Higher Subsidy Payment Rates and Provider-Friendly Payment Policies Associated with Child Care Quality?*, may be addressed to the corresponding author, Erica Greenberg at egreenberg@urban.org
- Questions about the CCDF Policies Database can be submitted through the contact form on the project’s website: <http://ccdf.urban.org/contact-us>
- The CCDF Policies Database, including codebooks, related reports and briefs, and datasets from all available years, may be accessed at <http://ccdf.urban.org/>
- Codebooks for each year of the CCDF Policies Database are available at <http://ccdf.urban.org/database-documentation>
- More information about the NSECE datasets is available at <http://www.researchconnections.org/content/child-care/find/nsece.html>

References

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