



RESEARCH REPORT

Approaches to Narrow Cost Analysis

A Report for CCDF Lead Agencies
OPRE Report #2022-278

Katie Gonzalez
MATHEMATICA

Julia B. Isaacs
URBAN INSTITUTE

Pia Caronongan
MATHEMATICA

Peter Willenborg
URBAN INSTITUTE
November 2022

Lynn A. Karoly
RAND CORPORATION

Approaches to Narrow Cost Analysis

A Report for CCDF Lead Agencies

Katie Gonzalez (Mathematica), Julia B. Isaacs (Urban Institute), Pia Caronongan (Mathematica), Peter Willenborg (Urban Institute), and Lynn A. Karoly (RAND Corporation)

OPRE REPORT #2022-278
NOVEMBER 2022

SUBMITTED TO

Alysia Blandon, Project Officer; Office of Planning, Research, and Evaluation, Administration for Children and Families, US Department of Health and Human Services

Contract Number: HHSP2332015000064I

SUBMITTED BY

Julia Isaacs, Project Director; Urban Institute; 500 L'Enfant Plaza SW, Washington, DC 20024

This report is in the public domain. Permission to reproduce is not necessary. Suggested citation: Gonzalez, Katie, Julia B. Isaacs, Pia Caronongan, Peter Willenborg, and Lynn A. Karoly. 2022. *Approaches to Narrow Cost Analysis: A Report for CCDF Lead Agencies*. OPRE Report #2022-278. Washington, DC: Urban Institute.

DISCLAIMER

The views expressed in this publication do not necessarily reflect the views or policies of the Office of Planning, Research, and Evaluation, the Administration for Children and Families, or the US Department of Health and Human Services.

This report and other publications sponsored by the Office of Planning, Research, and Evaluation are available at www.acf.hhs.gov/opre.

Connect with OPRE



Contents

Acknowledgments	iv
Overview	v
Approaches to Narrow Cost Analysis	1
Introduction	1
Cost Models	3
Cost Surveys	11
Using a Cost Survey to Inform a Cost Model	18
What Approach Is Best for You?	20
What Makes for a Good Narrow Cost Analysis?	23
Conclusion	29
Glossary	30
Appendix. State Examples of Narrow Cost Analysis	33
References	38
About the Authors	40
Statement of Independence	41
About the Child Care Research and Evaluation Capacity Building Center	41

Acknowledgments

This report was funded by the Office of Planning, Research, and Evaluation (OPRE) in the US Department of Health and Human Services' Administration for Children and Families (ACF). We are grateful to them and to all our funders, who make it possible for Urban to advance its mission.

The views expressed are those of the authors and should not be attributed to the Urban Institute, its trustees, or its funders. Funders do not determine research findings or the insights and recommendations of Urban experts. Further information on the Urban Institute's funding principles is available at urban.org/fundingprinciples.

We thank Lorraine McKelvey of the University of Arkansas for Medical Sciences, Jeanie Mills of the National Center for Child Care Subsidy Innovation and Accountability and Roberta Weber of Oregon State University for their input and review throughout the drafting process. We also thank all the CCDF Lead administrators and staff at the Office of Child Care who provided expert input (listed by name in note 1). We also thank project officer Alysia Bandon of OPRE; Meryl Barofsky, Megan Campbell, Francesca Longo and Rebecca Shaw of OCC; and our colleague Gretchen Kirby of Mathematica for their helpful feedback on drafts. We thank Lauren Lastowka and Liza Hagerman for editorial assistance.

The views expressed in this publication do not necessarily reflect the views or policies of the Office of Planning, Research, and Evaluation, the Administration for Children and Families, or the US Department of Health and Human Services. This report and other reports sponsored by the Office of Planning, Research, and Evaluation are available at www.acf.hhs.gov/opre.

Overview

Introduction

This is the second in a series on narrow cost analysis. The aim of the series is to help Child Care and Development Fund (CCDF) Lead Agencies understand the requirements, approaches, and uses of a narrow cost analysis.

Defining Narrow Cost Analysis (the first in this series) outlines the requirements for a narrow cost analysis. They also are described in the Office of Child Care’s Program Instruction for CCDF Lead Agencies, “Guidance on Alternative Methodologies and Cost Analyses for Purposes of Establishing Subsidy Payment Rates.”¹

This report, *Approaches to Narrow Cost Analysis*, describes three widely used approaches:

- *cost models*
- *limited cost surveys*
- cost models informed by limited cost surveys

We describe how to use each approach in your state or territory, drawing on state examples and expert advice. We define italicized key terms in a glossary at the end of this report.

Highlights

As a CCDF Lead Agency, you can choose how you approach narrow cost analysis. Common methods include building a cost model, using a cost survey, or combining a cost model with a cost survey.

You can use available tools to build a cost model. One tool is the [Provider Cost and Quality Calculator](#) (PCQC). To use this tool, you will need to make assumptions about certain costs. You should check these with providers and others familiar with child care in your state or territory to validate these

¹ “Guidance on Alternative Methodologies and Cost Analyses for Purposes of Establishing Subsidy Payment Rates: Program Instruction CCDF-ACF-PI-2018-04,” US Department of Health and Human Services (HHS), Administration for Children and Families (ACF), Office of Child Care (OCC), memorandum to the State and Territory Lead Agencies administering child care programs under the Child Care and Development Block Grant (CCDBG) Act of 2014 and other interested parties, February 26, 2018, https://www.acf.hhsna.gov/sites/default/files/documents/occ/ccdf_acf_pi_2018_01.pdf.

assumptions. Cost models work best when you use state-specific data. You can use existing data or you can also ask providers about their costs to inform your model.

A cost survey collects data from a group of child care providers. It uses this data to calculate the costs needed to provide child care services. A large-scale cost survey follows research methods to collect cost data from a large number of carefully selected providers. It involves a lot of time and resources. More limited cost surveys can also serve as a narrow cost analysis.

Combining a cost model with a cost survey can bring together the advantages of both. This approach can ground your model in actual cost data from a *sample* of providers in your state or territory.

Each approach has strengths and caveats. Choosing an approach depends in part on your goals. It also depends on time and resources.

Methods

This report was informed by discussions and interviews with:

- Child Care and Development Fund (CCDF) Lead Administrators
- child care cost researchers
- experts from the Office of Child Care (OCC)
- an expert from the National Center on Subsidy Innovation and Accountability

We reviewed OCC guidance, prior literature, and materials from webinars on cost analysis. We also reviewed narrow cost analyses conducted by states. A small group of experts within and outside OCC reviewed outlines and drafts of this report.

Approaches to Narrow Cost Analysis

Introduction

This report describes three common ways of doing a *narrow cost analysis*:

1. building a *cost model*
2. conducting a limited *cost survey*
3. using a cost model informed by a limited cost survey

We describe how to use each approach in your state or territory. We also provide state examples and expert advice. The appendix lists examples from states that used these approaches. We define italicized key terms in a glossary at the end of this report.

This report is informed by discussions and interviews with:

- CCDF Lead Administrators
- experienced child care and cost researchers
- experts from the Office of Child Care (OCC)
- an expert from the National Center on Subsidy Innovation and Accountability.²

² The report is informed by expert meetings on March 1, 2021, and September 14, 2021. The following experts were consulted during these meetings: **Woody Dover**, enterprise project management director, Georgia Department of Early Care and Learning; **Lynn Karoly**, PhD, senior economist, RAND Corporation; **Lorraine McKelvey**, PhD, associate professor, University of Arkansas for Medical Sciences in the Department of Family and Preventive Medicine; **Jeanie Mills**, senior trainer and technical assistance specialist, National Center for Child Care Subsidy Innovation and Accountability; **Lisa Brewer Walraven**, director, Office of Child Development and Care in the Michigan Department of Education; **Roberta Weber**, PhD, professor emeritus and research associate, Oregon State University; and from the Office of Child Care: **Meryl Barofsky**, senior child care program specialist; **Megan Campbell**, child care program specialist; **Francesca Longo**, child care program specialist; **Dawn Ramsburg**, division director of program operations; and **Andrew Williams**, division director of the planning, data, and policy division. Other participants in the expert meetings were the OPRE project officer, **Alysia Blandon**, and project staff including the authors, **Gretchen Kirby** from Mathematica, and **Teresa-Derrick-Mills** from Urban.

Three of these experts—Lorraine McKelvey, Jeanie Mills, and Roberta Weber—also attended additional smaller discussions with the authors and provided further feedback and input.

We reviewed OCC guidance, prior literature, and materials from webinars on cost analysis. We also reviewed narrow cost analyses conducted by states.



This is the second in a series on narrow cost analysis. **For more information on the definition and regulatory context for narrow cost analysis**, see *Defining Narrow Cost Analysis* (the first in this series). This also discusses child care costs and prices.

For more information on how to use a narrow cost analysis to inform payment rates, see *Using a Narrow Cost Analysis to Inform Payment Rates* (the third in this series)

Child Care and Development Fund (CCDF) Lead Agencies are required to consider cost information when setting *payment rates*. Many agencies meet this requirement by doing a *narrow cost analysis*.

A narrow cost analysis is a study of what it costs providers to deliver child care in a state or territory at two or more levels of quality:

- a base level of quality that meets health, safety, staffing, and quality requirements, and
- one or more higher levels of quality as defined by CCDF Lead Agencies

CCDF Lead Agencies can choose how to approach narrow cost analysis. Whatever methods CCDF Lead Agencies use, they need to:

- estimate costs by level of quality
- include relevant variation by, at a minimum, provider type, child care, or location
- analyze the gaps between estimated costs and payment rates, so the cost information can inform payment rate setting

Regulations Provide Flexibility in Methods

OCC's February 2018 Program Instruction, "Guidance on Alternative Methodologies and Cost Analyses for Purposes of Establishing Subsidy Payment Rates" describes requirements for narrow cost analysis

We also spoke with the following CCDF Lead Agency staff in January and February 2022, to learn more about their state's approaches to narrow cost analysis: **Julie Allison**, child care bureau chief, Iowa Department of Human Services; **Woody Dover**, enterprise project management director, Georgia Department of Early Care and Learning; **Wendy Hoogeveen**, child care program manager, Iowa Department of Human Services; **Rachel Machen**, project manager, Arkansas Division of Child Care and Early Childhood Education; **Laurie Possin**, program manager, Minnesota Department of Human Services; **Amanda Ward**, data and research analyst, Minnesota Department of Human Services; and **Lisa Brewer Walraven**, director, Office of Child Development and Care in the Michigan Department of Education.

(OCC 2018a). It states that you have flexibility in choosing a narrow cost analysis approach. (See the first brief in this series for more on this.) You do not need advance approval of the approach from the Administration for Children and Families (ACF). But no matter which methods you use, you must:

- analyze costs across basic and higher levels of quality, and
- include relevant variation by, at a minimum, provider type, child age, or location

You may use existing information and data to limit burden.

OCC lists several options for a narrow cost analysis in an attachment to the 2018 guidance (OCC 2018b). These options include (but are not limited to):

- developing a cost model using tools such as the Provider Cost of Quality Calculator (PCQC)
- doing a “small-scale cost survey or study” (OCC 2018b)

You have other options, too. For example, you can also use existing data. This could come from cost studies. It could also come from per-child funding in state contracts, prekindergarten grants, or Head Start grants.

In summer and fall of 2021 through early 2022, we reviewed narrow cost analyses done by some states. To find these states, we consulted with our expert advisors and reviewed lists of recent *market rate survey* reports and cost studies. We reviewed key aspects of these studies including the approach and key findings. But we did not screen or review these reports for quality. In the appendix, we describe 14 examples of narrow cost analyses. Of these:

- Four were cost models alone (without a cost survey).
- Six were cost surveys alone (without a cost model).
- Four were cost models done with a limited cost survey.

The rest of this report presents these three approaches. It ends with a look at what makes a good narrow cost analysis.

Cost Models

A cost model estimates how much it costs to provide child care services under a set of assumptions. You must build a cost model (or adapt an existing tool), that reflects the specific context of your state or

territory. To build your cost model, you must make decisions (or “assumptions”) about the features of a “typical” child care program in your state or territory. Assumptions might include:

- the total number and ages of children served
- staff-child ratios by age group
- teacher qualifications
- the length of the program day

These assumptions will help you figure out the amount of resources needed. These might include:

- teachers
- administrators
- classrooms
- materials and supplies
- transportation

For example, the length of the program day and the staff-child ratio for each age group can tell you how many teachers are needed for each age group.

You must also make assumptions about the *prices* of these resources. This includes making assumptions about the salaries and benefits of staff, the cost of rent and utilities, and other expenditures (Capito and Workman 2021; Workman and Jessen-Howard 2019). You should check your assumptions with providers and others familiar with child care in your state or territory.

Table 1 presents common costs you can include in your cost model. This table is adapted from Arkansas’s cost analysis report (McKelvey and Forsman 2019).

TABLE 1

Common Costs for Child Care Providers

Personnel costs	Non-personnel costs	
▪ wages/salaries ▪ mandatory benefits (such as unemployment, workers' compensation, and disability insurance) ▪ other benefits (such as health insurance and paid leave/sick time) ▪ payroll taxes (such as Social Security, Medicare, and other federal and state taxes)	▪ rent/lease ▪ utilities ▪ building insurance ▪ maintenance, repairs, and cleaning ▪ audits ▪ government fees/permit ▪ food and food preparation ▪ kitchen supplies ▪ transportation	▪ education supplies ▪ education equipment ▪ office supplies ▪ office equipment ▪ payroll/contract services ▪ credit card processing fees ▪ advertising ▪ postage ▪ miscellaneous

Source: Adapted from McKelvey, Lorraine, and Andrew Forsman, *Making Quality Ends Meet: 2019–2021 Cost Projections for AR Early Childhood Care & Education*, University of Arkansas for Medical Sciences, 2019.

Once developed, a cost model can be used for a narrow cost analysis and other purposes (see box 1).

BOX 1

Using a Cost Model for Narrow Cost Analysis and Other Purposes

You can use a cost model to meet the narrow cost analysis requirement of measuring how costs differ across levels of quality. One way to do this would be to build a model using information about providers that meet minimum licensing requirements. (It might include teacher qualifications and staff-to-child ratios.) Then, you can adjust assumptions in the model to look at other scenarios. For example, you can adjust the model to estimate what it costs providers to move from one level of quality to another.

Cost models can also tell you how policy changes would affect providers' costs. Once you have a cost model, you can use it to study the effects of proposed policy changes. For example, you can use cost models to see how:

- an increase in the minimum wage would affect provider costs
- a change to minimum licensing requirements would affect provider costs
- a change to provider requirements would affect costs at higher levels of quality

Some CCDF Lead Agencies have used cost models for a study that OCC calls an *alternative methodology*.³ This is a study that uses valid and reliable data to provide a sound basis for setting payment rates, using methods that have been preapproved by OCC. For a comparison of alternative methodology and narrow cost analysis, see “Defining Narrow Cost Analysis,” especially table 1. For examples of using cost models for an alternative methodology, see:

- *Modeling the Cost of Child Care in the District of Columbia* (District of Columbia Office of the State Superintendent of Education 2021)
- *Understanding the Cost of Quality Child Care in New Mexico* (Capito, Rodriguez-Duggan, and Workman 2021)

Tailoring a Cost Model to Your State or Territory

To build a cost model for narrow cost analysis, you must make and validate assumptions about:

- What resources are needed
- What amounts they are needed in, at a base and higher levels of quality

You can refer to existing quality standards for your state or territory. For example, you can identify key requirements in licensing regulations (at a base level of quality) and in QRIS and accreditation standards (at higher levels of quality). These can inform your assumptions about ratios and group sizes, professional development hours, and staff qualifications at different levels of quality. For more detailed information, you can talk with people who are familiar with how these standards are implemented. This might include coaches and licensing specialists.

You also must make assumptions about the prices of resources to form your cost model. Many available tools, such as the PCQC, include *default values* for the prices of key resources. These are estimates that are preset in the tool based on national and state data. For example, the PCQC has default values for staff salaries for each US state and territory. These are based on Bureau of Labor Statistics (BLS) data. The PCQC also includes defaults for other costs. These include insurance, facilities, and child assessment systems (NCECQA 2019). You can adjust these default values to better reflect

³ “Child Care and Development Fund (CCDF) Program,” 81 Fed. Reg. 67438 (Sep. 30, 2016) <https://www.federalregister.gov/documents/2016/09/30/2016-22986/child-care-and-development-fund-ccdf-program>. See also “Guidance on Alternative Methodologies and Cost Analyses for Purposes of Establishing Subsidy Payment Rates,” OCC.

your specific state or territory. To do this, you can use existing data about conditions in your state or territory and input from providers and other groups.

Using Existing Data About Your State or Territory

You can often use existing data to learn about provider characteristics and specific costs in your state or territory. You can then use this information to inform the assumptions for your cost model. Some options for existing data are listed below.

- **Publicly available data sources.** You can use public data sources such as data from the Bureau of Labor Statistics (BLS). For example, Arkansas used BLS Occupational and Employment Wage Statistics data to update staff wages in their cost model (McKelvey and Forsman 2019). Data sources such as BLS also include wage information for professions that require education, training, and levels of responsibility similar to that of child care. These include public prekindergarten and nursing.
- **One-time data collection efforts.** You may also be able to use information from prior data collection efforts in your area. For example, Vermont built a cost model with assumptions informed by a prior report on provider expenses (Vermont Department for Children and Families 2019). Georgia used information from an economic impact *survey*.⁴ Workforce surveys can also provide information on staff benefits. They can show how these vary across child age and provider quality (such as QRIS level). Information from one-time data collection can become less relevant over time. You may need to update these estimates before using them to inform cost model assumptions. For example, you may need to account for rising costs or adjust for inflation.
- **Administrative data.** You can use administrative data or program records in your state or territory. These can include:
 - » information from your licensing, QRIS, and Child Care Resource and Referral (CCR&R) systems (NCSIA 2019)
 - » Head Start Program Information Reports
 - » data you need to collect and submit as part of federal or state funding requirements (for example, stabilization grant applications)

⁴ Personal communication with Woody Dover, Georgia department of Early Care and Learning (January 26, 2022).

- » professional development and workforce registries, for staff qualifications and salary data

Administrative data may be able to provide information about the full landscape of providers. It is also easier to access. It may take less time and effort than collecting new data through provider focus groups or surveys. This data can also allow you to compare program features across a range of providers. For example, administrative data from your state or territory can show how program size and staff qualifications vary by quality levels and age groups.

Asking Providers about Their Costs

You should also ask providers about their costs to inform your model. You could conduct a cost survey (see the cost surveys section) or use provider focus groups and interviews. For example, you should ask providers if your model assumptions based on existing data seem reasonable to them. One approach is to convene focus groups or workgroups to review data and come to a consensus on model assumptions. You also can use focus groups and interviews to gather more cost information. You may find differences between estimates based on existing data and what providers report. In this case, you have to decide whether and how to use information reported by providers to update the model assumptions. For example, you could change the model assumption to reflect the average of what providers report. Estimates from your cost model will reflect costs for a “typical” child care program. It will not show the costs of providing care for any individual provider.

Given the cost of focus groups and interviews, you will want to think about which providers you speak with and how you structure these talks. One option is to conduct one-on-one interviews with a select group of providers that represent a greater whole. This group could represent a range of provider types, locations, ages served, and levels of quality (see Michigan example in box 2). Another option is to have a set of focus groups with similar providers. For example, you could have three groups:

- family child care providers
- providers operating in school-based settings
- independent nonprofit centers (see Arkansas example in box 2)

You may want to start your focus groups by talking about non-personnel costs. Researchers suggest that providers will be more comfortable talking about non-personnel costs. And starting with these costs will help build trust and rapport before moving on to personnel costs.

You may want to offer providers a token of appreciation (e.g., gift cards) or pay them for their time.

BOX 2

Examples of Using Interviews and Focus Groups to Test Out Model Assumptions with Providers

- Arkansas held a series of provider focus groups and one-on-one phone interviews with center-based and family child care providers. The aim was to learn about operation schedules, enrollment capacity, ratios, and personnel costs in different settings. The state updated the assumptions in their model based on this feedback (McKelvey and Chapin-Critz 2014).
- Michigan used data from three sources to inform the assumptions of the cost model. They used the state's market rate survey data, public data, and state administrative data. To refine these assumptions, the state interviewed 24 center-based and family child care providers from different regions. They gathered information about personnel and non-personnel costs and filled in the gaps in existing data sources (Burroughs et al. 2021).



For more tips on how to build and use models to set payment rates, see [Using Cost Estimation to Inform Child Care Policy](#) brief from P5 Fiscal Strategies. This brief outlines a four-stage approach to developing a cost model (Capito and Workman 2021).

For step-by-step guidance on building and using cost models, see the [Conducting a Child Care Cost of Quality Study](#) toolkit from the Center for American Progress (Workman and Jessen-Howard 2019).

Choosing a Tool to Build the Cost Model

There are tradeoffs you need to consider in choosing a tool to build your cost model. Each tool can lead to a different estimate. Tools also differ in how much they can be adjusted to your needs. Tools that are less customized are often easier to use. But their estimates may not fit the realities of your state or territory. Below, we describe three common tools. However, this is not an exhaustive list.

- **Provider Cost of Quality Calculator (PCQC).** The PCQC is widely used for narrow cost analysis. It is a tool from the Administration for Children and Families (ACF). It can estimate costs at different levels of quality (OCC n.d.). The PCQC can be used to estimate costs for center-based and family child care providers. It is based on assumptions about program structure (such as program size and age groups served) and the prices of common resources. The PCQC has default values that you can adjust. Cost analysis reports from Michigan and Minnesota describe how these states updated the default assumptions of the PCQC to reflect their state context (Burroughs et al. 2021; Minnesota Department of Human Services 2020).



For guidance on how the PCQC can be used to model changes in costs at different levels of quality, see [*Increasing Quality in Early Care and Education Programs: Effects on Expenses and Revenues*](#) (NCECQA 2015).

For guidance on using the PCQC to model how program characteristics relate to expenses of center-based and child care providers, see [*Early Care and Education Program Characteristics: Effects on Expenses and Revenues*](#) (NCECQA 2014).

- **Cost of Preschool Quality and Revenue Calculator (CPQ&R).** The CPQ&R is an Excel-based tool. It is available through the Center on Enhancing Early Learning Outcomes (CEELO n.d.). The CPQ&R allows users to estimate costs of high-quality preschool programs. The tool includes default quality assumptions based on National Institute for Early Education Research (NIEER) quality benchmarks. You can modify these assumptions to fit your state or territory. This tool can only estimate costs in school-based prekindergarten settings. It cannot be used for family child care providers or settings that serve younger children. Indiana used a modified version of the CPQ&R to build their cost model. They then expanded it to include more age groups, settings, and operating schedules (Early Learning Indiana 2021).
- **The National Center on Early Childhood Quality Assurance (NCECQA) and National Center on Subsidy Innovation and Accountability (NCSIA) Excel spreadsheet.** This file serves as a companion to the “Guidance on Estimating and Reporting the Cost of Care” (NCECQA and NCSIA 2018). The file includes default values and built-in calculations. These can help estimate per-child costs in centers by age group. NCECQA and NCSIA provide this file to CCDF Lead Agencies on request.

When choosing a tool, think about which tool fits your context and needs. If you work with university partners or contractors, you may want to ask if they have used any of these tools. Also keep in mind that centers and family child care providers work and incur costs in different ways. You will need to think about how to model the costs for family child care providers (see box 3).

You may also choose to develop a new spreadsheet-based model for your state or territory. You could use information on expenses and *revenues* from tools such as the PCQC as a base (Workman and Jessen-Howard 2019). Developing a custom tool requires more time and resources than using an existing tool. But it allows you to build a cost model that is tailored to your state or territory.

BOX 3

Estimating Costs for Family Child Care Providers

Family child care providers do not operate in the same way as center-based providers. For example, many family child care providers do not budget a salary for themselves as a program expense. Instead, what they earn depends on the gap between their revenues and expenses. It can be hard to estimate costs for using space within the home setting because circumstances vary between providers.

Below, we provide tips for using a cost model to estimate costs for family child care providers. These are based on recent guidance from P5 Fiscal Strategies (Capito and Workman 2021) and the Center for American Progress (Workman and Jessen-Howard 2019).

- **Build distinct cost models for family child care providers.** Tools such as the PCQC allow you to build separate cost models for center-based and family child care providers. These models can have their own cost categories and default assumptions.
- **Include all provider *compensation*.** Cost models need to include salary and any benefits for family child care providers and any other staff members. Family child care providers' salaries may be the gap between revenues and expenses. This means that their salaries may fluctuate when enrollment changes.
- **Consult with family child care providers.** Talk with family child care providers as you develop your model assumptions. You can talk with them during community meetings and events, such as family child care provider meetings. This can put less pressure on providers to find the time to speak with you.

Cost analysis reports from Arkansas, Michigan, and Minnesota show how these states used the PCQC to build cost models for center-based and family child care providers (Burroughs et al. 2021; McKelvey and Forsman 2019.; Minnesota Department of Human Services 2020).

Cost Surveys

A cost survey collects data about child care providers to calculate the costs of providing child care services. You can do a small-scale cost survey to inform your cost model, or you can do a larger-scale cost survey alone, without a cost model. A large-scale cost survey follows good research methods to achieve valid and reliable results. It collects information about costs from a large number of select providers. The more comprehensive your cost survey is, the more reliable and representative of the range of costs across providers it will be. However, a limited cost survey can help inform a cost model. For example, a survey might collect cost data from a small number of providers on a few categories, such as staff pay and facilities.

We first describe the key steps of doing a cost survey. A cost survey can meet the requirements of a narrow cost analysis if it:

- analyzes costs across levels of quality, and
- includes relevant variation by, at a minimum, provider type, child age, and location

Second, we describe limited cost surveys, which use less time and resources and still provide useful information. Limited cost surveys can also meet the requirements of a narrow cost analysis on their own. They can also be used to inform the assumptions of a cost model.

Overview of a Cost Survey

Collecting and analyzing provider costs through a large-scale cost survey is a lot of work. It involves more time and resources than collecting and analyzing provider price data through a market rate survey. You have to collect a lot of information to understand a provider's overall cost and then cost per child (or cost per child in a given age group).

A cost survey often collects information through a structured *questionnaire*. This is a full set of questions you use to ask providers about their costs. It might include asking providers to fill out a budget worksheet.

You can collect information about costs using the “ingredients method” (Levin and McEwan 2001). This involves itemizing both the quantities (or amounts) and prices of each resource, including resources that are provided in kind or with a discount. For example, Pennsylvania used in-person visits to collect data using the ingredients method (Sirinides and Collins 2020). When using the ingredients method, it is good to use local prices (rather than national prices) so that they reflect the actual costs providers face. It is also important in this approach to capture the quantities of resources that are not fully paid. This allows you to estimate full *economic costs*, rather than just *accounting costs* (see box 4).

BOX 4

Collecting Full Economic Costs

The goal of a cost survey is often to understand the economic cost, or total value of what is needed to provide child care in your state or territory. This includes:

- volunteer time
- subsidized rent

- the value of other resources received at a discount or free of charge

A cost survey may also collect information about accounting costs. These are what the provider pays to offer child care services (Karoly et al. 2021).

Capturing full economic costs requires asking more questions to complement the survey data. This can fill in gaps about resources that the provider does not pay for (or receives at a reduced price). Providers may not know the true value of the discounted or free resources they receive. If they are self-employed, they may not know the full value of the time they spend overseeing or providing child care services. The cost survey can include questions that capture:

- the number of hours of voluntary labor
- the discounted rent
- resources provided at a discount

Then, in the analysis of the survey data, you can assign values to those resources. You can use a comparable hourly rate for donated labor. You can use the market price per square foot of donated space.

Cost surveys often collect data to estimate the cost of care by child age group. The ideal approach collects cost data at the classroom level for resources that are specific to a given age group (such as infants or preschoolers). For resources that are shared across age groups (such as administrative staff), you can assign costs to specific child age groups in several ways. You could assign costs based on each age group's share of total enrollment or the share of space used by that age group.



For more information on estimating and reporting the per-child cost of care in centers by age group, see [Guidance on Estimating and Reporting the Costs of Child Care](#) (NCECQA and NCSIA 2018)

The quality of the information collected through a survey may vary across providers. It will be based on the detail and organization of their financial records. Providers vary in their business and financial knowledge. They also vary in the extent of record-keeping related to costs. You will need to be flexible in your approach. Be sure to provide time and support to providers as they gather information for the cost survey (Karoly and Walsh 2020; Lyskawa et al. 2020).

Key Steps in Doing a Cost Survey

One common approach to cost surveys combines the basic steps of survey data collection with a questionnaire focused on cost and related information. You can draw on your experience of collecting data for a market rate survey. But there are some differences:

- You are likely to collect data from a smaller group of providers for a cost survey.
- The questionnaire for a cost survey will be longer than what you use for a market rate survey.
- The cost survey focuses on provider costs rather than prices.

We briefly summarize the key steps in doing a cost survey below. However, the steps are not always done in this order.

1. DETERMINE THE TARGET POPULATION OF PROVIDERS.

First, you will need to decide which types of child care providers to include in the cost survey and where they will be located. This *target population* may be narrower than that of your market rate survey. The population of providers will depend on what you want to learn about costs, for what purpose, and how the information will be used.

2. BUILD A LIST OF ALL PROVIDERS IN THE TARGET POPULATION.

Second, you will need to build a list of all providers in the target population. This list is also known as a *sampling frame*. The list should include a current email address or phone number for each provider or director. You can often build the list from administrative records from licensing or CCDF eligible providers.

3. DEVELOP A PLAN FOR SELECTING A SAMPLE.

A sample is a group of providers selected from the full target population. A survey sampling expert can help you select a sample with the right number and types of providers to meet your needs.

4. DEVELOP THE COST SURVEY.

You may build on one or more surveys used in prior studies of costs in early care and education (Caronongan et al. 2016). You can also develop a new one to meet the needs of your project. This survey can take many forms: an online survey, a paper form, a telephone survey, a spreadsheet, or a fillable PDF form.

The survey needs to collect all of the following:

- basic information about the provider setting and program structure for a specified accounting year, including weeks of operation across the year and the hours of operation per day or week
- total enrollment at the site plus enrollment by child age group
- the number of classrooms by age group
- how classrooms are staffed and other features of each class
- the number and types of non-classroom program staff, such as administrators, food services workers, and transportation staff
- the square footage of the facility or of classrooms
- the quantities and prices of any other resources needed to deliver the program during that year (see table 1), including resources provided in kind (see box 4)

You will want different surveys for center-based and family child care providers for the same reason you want separate cost models (see box 3).

Tip: Conduct provider interviews to help you develop survey questions. It may be helpful to gather in-depth cost information from a small number of providers before you develop the cost survey. This can ensure the survey focuses on key categories of costs and the questions are clear to providers.



These existing studies and toolkits include examples of surveys that gather information about costs in ECE, see [Assessing the Implementation and Cost of High Quality Early Care and Education: A Review of Literature](#) (Caronongan et al. 2016) and [Conducting a Child Care Cost of Quality Study](#) (Workman and Jessen-Howard 2019).

For more information on best practices for developing and testing surveys of child care providers, see [Tips on Developing Surveys of Child Care Providers](#) (Sandstrom and Isaacs 2020).

5. PLAN PROVIDER OUTREACH AND RECRUITMENT.

Think about how you will reach out to providers. Think about what you will say to encourage them to complete the survey. You want to have a high *response rate* (the percentage of providers who answer the survey out of all you reach out to). This will help you feel confident that the costs represent the range in your target population. You will need to write outreach emails, letters, or scripts for phone calls to engage providers and invite them to take part in the survey. You can also work with provider groups or associations to encourage members to participate. Part of your outreach includes choosing the best

person at each site to complete the survey. This might be the director or a financial manager. You may want to offer payment, such as gift cards, for those who take part.

6. CARRY OUT THE SURVEY.

Follow your plan for selecting a sample to carry out the survey. Use the recruitment materials to reach out to providers. Ask them to complete the questionnaire. Reporting financial information is complex, so have technical support available to providers via email or phone. This can answer providers' questions in real time, which can help them provide high-quality, complete information. It can also help ease the burden on providers. You can also provide resources to help providers complete the cost survey. For example, Iowa developed YouTube videos that showed how to fill out the survey and answered common questions. Providers could also access a worksheet that they could complete before taking the survey. This helped ensure they had all of the needed information on hand.⁵ This type of support can help boost response rates, as providers may give up on the survey if it seems too hard.



For guidance on how to overcome common challenges in collecting data from child care providers, including efforts to gather information about costs, see [Challenges and Solutions to Conducting Intensive Studies in Early Care and Education Settings](#) (Lyskawa et al. 2020).

For comprehensive guidance on planning data collection, including planning surveys to collect new data, see [Designing Evaluations: 2012 Revision](#) (US Government Accountability Office 2012) and [The 2002 User-Friendly Handbook for Project Evaluation](#) (Frechtling 2002).

7. CLEAN AND ANALYZE THE DATA.

You should plan how you will analyze the data to estimate costs. For example, you might want to analyze costs per child or per child care hour for given age groups. This will allow you to compare costs across providers of different sizes and with different schedules for care.

As part of the analysis, you should clean the data and check for reporting errors. You may need to contact providers again if there is missing or inconsistent data.

Think about whether you have enough responses from different groups to analyze differences by provider characteristics. For example, it may be hard to collect enough survey responses to look at differences in costs by location. (See below for tips on estimating costs by location.)

⁵ Personal communication with Julie Allison and Wendy Hoogeveen, Iowa Department of Human Services (January 7, 2022).

8. REPORT ON THE FINDINGS.

The final step is to report the results of the survey. This includes findings about the average cost per child by age group, setting type, and so on. You also should report on:

- the survey effort (such as the overall response rates and response rates for key groups of providers)
- steps taken to account for providers who did not complete the survey
- any challenges with estimating costs

Tips for Doing More Limited Cost Surveys

Doing a large-scale cost survey can be time-consuming and costly for a CCDF Lead Agency. It is hard work for the providers. And it may not be useful if few providers complete the survey (that is, if there are low response rates). Below, we list other, less-involved options. These may be of use if you are doing a cost survey to inform a cost model or to compare to other information.

COLLECT DATA FROM A SMALLER NUMBER OF PROVIDERS.

Try to select providers that differ from each other. Then, you can learn about the range (or variation) of provider features and per child costs across provider types. With small numbers of providers (or small samples), you have to be careful how you use the information. Cost information from a small sample may not represent the larger population of interest. See Karoly and Walsh (2020) for an example of a cost study that collected data from a small number of select providers. These providers were sampled to capture variation in key provider characteristics. For examples of states that used smaller surveys to inform assumptions in their PCQC-based cost model, see the Delaware and Indiana examples in the appendix.

FOCUS ON THE RESOURCES THAT HAVE THE HIGHEST COSTS, TO CAPTURE MOST, BUT NOT ALL, COSTS.

A survey could focus on capturing major resource categories and not capture resources tied to smaller costs. (Major resource categories include staff, facilities, and food. Smaller costs include phone and photocopying expenses.) This “rough estimate” can be sufficient for how the cost data will be used (OCC 2018a). For example, Iowa used an online provider survey to gather cost and enrollment information that focused on four major resources:

- staff salaries and benefits

- supplies and materials
- facilities expenses
- outsourced services

These costs were selected because they are linked to licensing or registration requirements (Iowa Department of Human Services 2021).

COLLECT DATA ON MAJOR CATEGORIES OF COSTS.

One way to gather detailed cost information is to use the ingredients method. With this method, you itemize the amounts and prices of each resource. But such detailed data collection can be burdensome. Another option is to collect information on annual costs broken out by major categories. These might include classroom staff; administrative staff; and facility rent, utilities, and maintenance.

ADD SOME COST QUESTIONS TO YOUR EXISTING MARKET RATE SURVEY.

This approach may reduce survey costs, but it can have some drawbacks. For example, if you do not collect information about enrollment and structure, the cost data cannot be used to estimate costs per child (or costs per child by age). Also, asking about both cost and price data may overwhelm providers, who may not respond to the survey. This can damage the value of the market rate data. And, if only a few providers respond to the cost questions, the results will not be representative. For example, nearly half of providers in Missouri completed the state's market rate survey. But only 7 percent completed the optional cost of care form at the end of the main survey (Public Consulting Group 2018b). The appendix provides examples of CCDF Lead Agencies that added cost questions to the market rate survey, including Massachusetts, Missouri, and Utah.

Using a Cost Survey to Inform a Cost Model

Combining a *cost model* with a *cost survey* component can bring together the advantages of surveys and the flexibility of cost modeling. This approach can ground your estimates in actual cost data collected from a sample of providers in your state or territory. Bringing these two approaches together can require a lot of time and resources. You may want to conduct a limited survey. You might collect data from a small number of providers. Or you might only collect information on major cost drivers such as personnel expenses. Your survey should focus on asking for information that you cannot get from existing data. For example, you might ask about staff benefits and facilities costs. You can use the

information you gather to inform the cost model assumptions. This can help ensure the estimates reflect your state or territory's child care landscape.

As noted earlier, many state's cost modeling efforts included collecting some data from a small number of providers. This let them check and validate assumptions in the model (see box 2 in the above cost model section). However, some CCDF Lead Agencies have also used cost surveys to inform their cost models (see box 5). These surveys collected more information about provider expenses, revenues, and program structures to inform the assumptions of the cost model. We identified four states that used this approach in 2020–2021: Delaware, Indiana, Kansas, and Minnesota (see appendix).

BOX 5

Examples of Using Surveys for Narrow Cost Analysis

Some states used cost surveys as their narrow cost analysis:

- Iowa conducted an online survey. It collected information about enrollment and costs from 192 center-based providers and 234 family child care providers. The survey focused on enrollment and costs linked to meeting licensing or registration requirements. These included staff salaries and benefits (Iowa Department of Human Services 2021).
- Massachusetts and Missouri both added questions about cost to their market rate surveys. These surveys gathered information about major cost categories, including staff salaries and benefits, rent, programmatic expenses, and administrative expenses (Public Consulting Group 2018a; 2018b).

Other states used surveys to gather information about key resources and prices. They used the results to inform cost models:

- Delaware developed surveys for center-based and family child care providers. They asked about a wide range of cost categories, such as staffing, training, and facilities costs. The state collected data from 92 providers. This data informed assumptions about key resources and their prices in the cost model (Horrace and Parmeter 2021).
- Minnesota interviewed 28 providers. They asked for information about provider expenses and revenues, program structures, wages, and other costs. The state paired this with a provider survey. This collected cost-related data from 881 providers (Minnesota Department of Human Services 2020).

Some states have also collected information on costs without using a standard survey:

- Pennsylvania collected detailed information on costs through in-person visits to 30 providers. They used personal interviews, photos, and audio recordings to record key resources used to provide child care (Sirinides and Collins 2020).
- Louisiana gave budgeting worksheets to 28 providers. They then talked about the worksheets in focus groups (Louisiana Department of Education 2021).

What Approach Is Best for You?

You may wonder which approach will work best for you:

- a cost model with existing data

- a cost survey by itself
- a cost model with a cost survey
- another approach

Below and in table 2, we compare and contrast the three main approaches. In the appendix, we describe examples of states that have used each.

CHOOSING AN APPROACH DEPENDS IN PART ON YOUR GOALS.

The first step in planning a narrow cost analysis is thinking ahead. What questions do you have about costs in your state or territory? Different approaches for a narrow cost analysis can answer different questions. The clearer you are about what you want to know, the more useful the findings from your narrow cost analysis can be. See “Defining Narrow Cost Analysis” for examples of policy questions that a cost analysis can answer.

Think about your plans for using the data. Decide how precise the answers from the narrow cost analysis need to be. Do you need more precise answers to get a deep understanding of costs? You may want a cost survey that collects data from a large number of providers. Do you want to see how costs could change with future policy changes? You may want a cost model.

SELECTING AN APPROACH ALSO DEPENDS ON TIME AND RESOURCES.

A cost model often costs less than a cost survey if you use an existing tool to build the model. It also can be updated in future years. You can use existing data, such as state or administrative data, to create cost estimates that are tailored to your state or territory.

WEIGH THE STRENGTHS AND LIMITATIONS OF EACH APPROACH.

There is an important caveat about a cost model. It estimates costs based on how you describe a “typical” provider. The estimates will not capture the full range of providers’ experiences. Also, if the assumptions used in the model are not realistic, your results will be misleading. You will need to invest a lot of time and resources to collect and validate data from providers. This will ensure the cost model will accurately reflect the child care landscape in your state or territory.

A cost survey can take time and resources to complete. But it can provide a lot of information about the many ways providers operate. It can also provide detailed information about costs. Cost surveys can also show you how costs vary across providers. However, cost survey data requires careful design and intensive data collection. You need to design the survey to allow you to learn about costs of care by child

as well as costs by age of child, provider type, and other sources of variation. Often, states that use cost surveys do not get enough information to report costs per child.

Building a cost model that is informed by a cost survey can bring together the advantages of each approach. However, this will take more time and resources than building a cost model using existing data. You will first need to think about what information you need to gather and from which providers. Then you can decide if joining the cost model and cost survey approaches is feasible in your context.

TABLE 2

Comparing a Cost Model Alone, Cost Survey Alone, and Cost Model with a Survey Component

	Cost model alone	Cost survey alone	Cost model with survey component
What it does	Estimates costs for child care services, based on key information specified by the user, such as: - the total number of children served - facility size and features - number of groups and group size - adult-child ratio - teacher qualifications - number and qualifications of other provider staff Key information can be based on existing data.	Collects data about program operations and expenses from providers. Data is used to calculate costs across all resources used to deliver child care services.	Estimates costs for child care services using a cost model. Draws on data about program operations and expenses collected from a survey of providers. Data informs the assumptions in the cost model. The survey is likely more limited than a cost survey alone.
Strengths	- A dynamic financial tool that estimates how costs vary with different staffing configurations, quality level, and other scenarios. - Often less expensive than a cost survey if you use an existing tool. - Can show how costs may change when policies change. - Can be updated from year to year.	- Is based on actual experience of providers. - If done with rigorous methods, findings can represent providers across your state or territory. - Provides information about how costs vary from the average. - Also provides information about how programs are staffed and organized.	- Has the same strengths as a cost model alone (see first column). - Assumptions of the cost model are informed or confirmed by survey data from providers in your state or territory.

	Cost model alone	Cost survey alone	Cost model with survey component
Caveats	- Requires you make assumptions about key resources and the prices per resource. - Requires you to validate assumptions with existing data and by talking with providers or others. - Estimates based on a typical provider do not reflect the full range of experiences of providers. - Findings may be misleading if the model is flawed, based on poor quality data, or used inexpertly.	- Providers may have difficulty reporting information about costs. - Requires users to carefully collect data and use skillful analysis of data to be able to calculate costs per child. - Findings may be misleading if data collection is poorly designed or if providers cannot or will not answer cost questions.	- Providers may have difficulty reporting information about costs. - Estimates based on a typical provider do not reflect the full range of experience of providers. - Findings may be misleading if the model is flawed or is used inexpertly.

Source: Framework developed by authors.

As a CCDF Lead Agency, you have flexibility. You can use an approach other than the three shown in table 2. OCC lists several other options for a narrow cost analysis. You can use existing cost data from existing cost studies or per-child funding in state contracts, prekindergarten grants, or Head Start grants. You can also use simple or “back of the envelope” estimates of costs. For example, you can use salary or facility data to estimate costs (NCSIA 2019). You can also look at cost differentials for higher quality care. For example, you can calculate the percentage difference in pay for staff with higher qualifications or in higher quality settings (OCC 2018b). Further research is needed on these and other approaches.

What Makes for a Good Narrow Cost Analysis?

In this final section, we review the features of a “good” narrow cost analysis. By a “good” narrow cost analysis, we mean one that:

- reflects conditions in your state or territory, and
- produces information that is useful for payment rate setting, including information on how costs vary by:
 - » levels of quality including meeting basic health and safety needs

- » type of setting
- » child age
- » location

We conclude by reviewing tips for selecting a research partner with technical expertise.

Whether Results Can be Trusted

How strong and useful a cost model approach is will depend on the quality of the model's assumptions.

To improve your results:

- Customize the model assumptions to reflect your state or territory.
- Use state-specific assumptions about salaries and mandatory benefits (e.g., unemployment benefits).
- Talk with providers and ask them to verify assumptions. This is especially important for costs that change often (e.g., staff salaries and benefits).

The validity of a cost survey depends on similar benchmarks for rigor and statistical analysis as required for a market rate survey (NCSIA 2020). These include:

- Follow data collection procedures (laid out in the steps in this report) to gather information from a well-defined target population of providers that differ along key dimensions:
 - » ages served
 - » provider type
 - » location
 - » levels of quality (including basic health and safety needs)
- Get a high response rate across different types of providers so the results represent the providers in your state or territory.
- Ask enough information about costs and related information to generate an accurate cost per child.
- Ask questions in ways that allow providers to give reliable and accurate responses.

Analyzing Costs by Quality, Child Age, Provider Type, and Location

A narrow cost analysis must analyze costs by level of quality, beginning with base level costs (OCC 2018a). This is described in the OCC guidance and reviewed in “Defining Narrow Cost Analysis.” You also must include relevant variation by, at a minimum, provider type, child age, or location.

QUALITY

You can use licensing requirements to define base level quality (as long as they meet the basic CCDF health, safety, quality, and staffing requirements). You can also use a Quality Rating and Improvement System (QRIS) to define higher levels of quality. This is a common approach. For example, you may use licensing requirements and QRIS quality standards to determine cost model assumptions. If you conduct a cost survey, you might collect cost information from providers with different quality ratings. If you gather cost data from providers, think about whether some provider features might differ between higher and lower quality providers. For example, it may be hard to estimate costs by quality level if providers who offer higher- and lower-quality care operate on different schedules.

In the appendix, all of the cost model examples, most of the cost models with a survey component, and half of the cost surveys alone reported results by quality level.

CHILD AGE

Child age is a major driver of cost differences. This is due to different required staff-to-child ratios and group sizes across age groups.

About two-thirds of the analyses in the appendix considered variation in cost by age. Most of the cost model examples assumed a set mix of infants, preschool children, and school-age children in the typical provider. (They adjusted for providers of certain types, sizes, and qualities.) This mirrors the reality of many providers serving children of mixed ages. But it does not tell you how much more it costs to care for infants and toddlers than preschoolers. Another approach is to do separate cost estimates for different age groups. This was done in Louisiana and Indiana.

PROVIDER TYPE

A good narrow cost analysis examines costs by provider type. This factors in the large differences in key cost categories for center-based and family child care providers. States and territories using a cost model may need to build two cost models: one for center-based and one for family child care providers. States and territories doing a cost survey will need to adapt survey questions to make them accessible to family child care providers.

All but two of the analyses in the appendix looked at variation in cost by provider type. Most looked at center-based and family child care providers. Some also included group homes and “ministry-based” centers. Some looked at large, medium, and small centers.

LOCATION

You might also examine variation in costs based on location. This factors in different costs of providing care in different locations. It may take a lot of effort to gather this information. You may need a large sample of providers across different locations of your state or territory. To reduce the level of effort, you can use an incremental approach to understand variation in costs based on location. You could gather information to inform an initial statewide cost model. Or you could do a smaller-scale cost survey in one study and focus on variation in costs by location in the next. You may also be able to use administrative data and other secondary data sources. This can help you understand how certain resources or costs vary based on location. For example, you could adjust statewide estimates for cost of living differences across locations.

Only a few analyses summarized in the appendix considered variation by location. These mostly looked at differences between rural and urban areas.

ALIGNMENT WITH PAYMENT RATES

It is important to align the age groups, quality levels, and locations in your cost study with those used in your payment rates. For example, if payment rates vary across specific age groups, those same age groups should be used for your narrow cost analysis. If payment rates vary by provider location (such as across regions or in rural versus urban areas), you will want to look at how costs vary across those areas. You can then use your cost analysis to make decisions about setting payment rates in your state or territory.



If you want to compare your cost estimates to payment rates, you may need to do some calculations. You will need to convert your cost estimates to match subsidy payment categories in your state or territory. You may need to convert your cost estimates to hourly, weekly, or monthly per-child costs.

For more information on how to compare costs with payment rates, see *Using a Narrow Cost Analysis to Inform Payment Rates* (the final brief in this series).

Tips for Improving Cost Estimates

To calculate useful cost estimates, pay attention to the following provider features:

- **Ratios and group sizes.** Think about staff-child ratios and group sizes carefully. These drive personnel expenses, which make up the majority of provider costs (NCECQA and NCSIA 2018).
 - » For cost models, allow requirements for ratios and group sizes to vary across age groups. You can use tools such as the PCQC to set ratios and maximum group sizes by age group at different levels of quality (NCECQA 2019).
 - » For cost surveys, gather information on how staff-child ratios and group sizes vary across providers.
- **Operating schedule.** Costs vary for providers with different daily schedules (e.g., full-day or half-day) or yearly schedules (e.g., full-year or school-year only).
 - » For cost models, be clear about how often and how long providers care for children. This may differ by age group. For example, school-age children may only receive care part of the year and part of the day.
 - » For cost surveys, make sure you gather information about providers' operating schedules.
- **Enrollment efficiency.** To provide a complete picture of financial sustainability, think about the typical provider's *enrollment efficiency*. This is actual enrollment compared to staffed enrollment (NCECQA 2019). Providers with low enrollment efficiency (often below 85 percent) may not collect enough revenue to cover costs. You often can learn about licensed capacities in administrative data. However, you will likely have to turn to other sources. You can use provider interviews, focus groups, or surveys to understand providers' enrollment efficiency.

Choosing the Right Partner

You may want to work with partners who have technical expertise. This can help you conduct a good narrow cost analysis that meets your goals within available resources. It can be especially helpful the first time you do an analysis.

You may choose to work with partners who have local expertise and connections. For example, Arkansas and Iowa worked with local universities that understood the state context. This made it easier

to engage providers and other groups that gave input on the cost analysis.⁶ Partners with local connections may be able to encourage provider participation. This is particularly important for a survey.

It is also important to work with partners that have expertise using a particular cost model approach. For example, the Arkansas CCDF Lead Agency worked with a university partner that had expertise in cost modelling and qualitative research.⁷ Minnesota contracted with a vendor that helped develop cost models with the PCQC.⁸

Doing narrow cost analyses is still new and developing. Research partners may have local and methodological expertise. But they may need your help to fully understand the federal guidance and requirements for a narrow cost analysis.



For more guidance on working with partners to support research and evaluation services, including key steps for securing contract services, see [Procuring Research and Evaluation Services](#) (Derrick-Mills et al. 2020).

⁶ Personal communication with Julie Allison and Wendy Hoogeveen, Iowa Department of Human Services (January 7, 2022) and personal communication with Rachel Machen, Arkansas Department of Human Services (January 5, 2022).

⁷ Personal communication with Rachel Machen, Arkansas Department of Human Services (January 5, 2022).

⁸ Personal communication with Laurie Possin and Amanda Ward, Minnesota Department of Human Services (January 7, 2022).

Conclusion

In this report, we discuss approaches for doing a narrow cost analysis. We focus on three widely used approaches: using a cost model alone, doing a cost survey alone, and using a cost model informed by a cost survey. Options for a narrow cost analysis range in complexity. The most suitable option for your agency depends on your goals for the narrow cost analysis. You need to weigh how the information will be used and the time and resources available.

Different approaches can answer different questions about setting payment rates. In the third brief in this series, we will discuss how conducting a narrow cost analysis can inform payment rates.

Glossary

alternative methodology: a study that uses valid and reliable data to provide a sound basis for setting payment rates; promoting equal access; and supporting a basic level of health, safety, quality, and staffing. The method must be preapproved by OCC if it is to replace a market rate survey to inform payment rate setting. (If you use the alternative methodology in addition to the market rate survey, it does not need to be preapproved by OCC.) A cost-estimation model and cost survey are two types of alternative methods.

compensation: the total value of salaries and benefits for child care providers and staff. For family child care providers, this is often the difference between total revenues and total expenses.

cost: the value of the resources needed to provide child care services including, but not limited to, salaries, rent, and supplies. The two main types of costs are accounting and economic.

accounting cost: the total expenses paid by the child care provider to provide child care services. This includes personnel and nonpersonnel expenses.

economic cost: the total value of all resources required to provide child care services. This includes personnel and non-personnel resources. It also includes any resources provided in-kind (e.g., volunteer time, donated space).

cost model: a method that estimates how much it costs to provide child care services. To use this method, you must make decisions about some aspects of the child care programs you are modelling. These are the modeling assumptions. Some assumptions may be the total number of children served by age group, the staff-child ratios, and teacher qualifications. You will also need the cost or price of each resource required to provide child care services. Some examples are the salaries and benefits for staff, the rent, and so on.

We use the term cost models. Other common terms are cost calculators or cost-estimation models. The [Provider Cost of Quality Calculator \(PCQC\)](#) is an example of a cost model (OCC, n.d.). Cost models work best when you use state-specific data.

cost survey: a study that collects data from a sample of child care providers to calculate the costs required to provide child care services. This data can be analyzed in different ways to show the cost per program, or the cost per child per month, or per hour of care.

default values: the values (or amounts) assigned to variables in a tool. These values are used when a specific value is not assigned. Tools like the PCQC include default values related to personnel and nonpersonnel expenses. These are based on national and state data. They can be updated by the user.

enrollment efficiency: a provider's actual enrollment as a percentage of their licensed capacity. Increasing enrollment efficiency increases provider revenue. The child care industry standard is to keep enrollment at or above 85 percent of licensed capacity.

market rate survey: a study that collects data on the prices or fees that child care providers charge parents for care. A market rate survey may collect data from all providers in a given state or territory or from a select subgroup. It may also rely on current data from resource and referral agencies or other sources. With any of these methods, the approach must be statistically valid and reliable.

narrow cost analysis: a study of what it costs providers to deliver child care in your state or territory at two or more levels of quality:

- a base level of quality that meets health, safety, staffing, and quality requirements, and
- one or more higher levels of quality as defined by CCDF Lead Agencies

CCDF Lead Agencies can choose how to approach narrow cost analysis. Common methods include:

- cost models
- limited cost surveys
- cost models informed by a cost survey

Whatever methods you use, you will need to:

- estimate costs by level of quality
- include relevant variation by, at a minimum, provider type, child age, or location
- analyze the gaps between estimated costs and payment rates, so the cost information can inform payment rate setting

payment rates: the amount CCDF Lead Agencies pay child care providers for subsidized child care services. Also called reimbursement rates.

price: the tuition and/or fees child care providers charge families.

questionnaire: a series of questions for people to answer so you can gather information from them. A questionnaire is sometimes referred to as a survey instrument.

reliability/reliable: when a method gets the same results when repeated under the same conditions. For example, a survey is reliable if it collects similar data when you ask the same survey questions to two or more similar groups of individuals.

revenue: the money made from running a business. In child care programs, revenue may come from parent fees, subsidy payments, grants, and/or other sources.

sample: a set of people selected from a target population. A representative sample is a group that closely matches the characteristics of the full group from which it is drawn. A representative sample of child care providers may have the same ratio of center-based providers to family child care providers. This ensures the data from the sample can accurately reflect the perspectives of both groups.

sampling frame: a list of all providers in the target population. This list often comes from administrative records.

survey: a study that involves collecting data by asking a sample of people to respond to a set of questions.

target population: the group of people being studied, such as center-based child care directors or home-based child care providers in a state.

validity/valid: accuracy, or when a method results in correct measurements. Market rate survey findings are valid when they accurately measure the prices families pay for child care in the private market.

Appendix. State Examples of Narrow Cost Analysis

Table A-1 describes state examples of the approaches described above:

- cost models alone (without a survey component)
- cost surveys alone (without a cost model component)
- cost models with a survey component

(Note that the “cost surveys alone” category includes one study that used cost worksheets and one that gathered information through in-person interviews. The other four used traditional surveys).

We provide an overview of the approach each state used. This includes whether they gathered information directly from providers. We also describe how each state considered variation in costs by:

- quality level
- age group
- provider type
- location

We also include links to public reports, where available.

A narrow cost analysis must:

- analyze costs by level of quality, beginning with base level costs
- include relevant variation by, at a minimum, provider type, child age, or location

Not all the examples below meet these requirements. Some early reports show variation in costs by some, but not all, of the features required for narrow cost analysis. We collected the list of reports below by consulting with our expert advisors and reviewing lists of recent market rate survey reports and cost studies. We excluded a few reports that did not report any cost information. Otherwise, we did not screen or review these reports for quality. Reports that may be weak in some areas may have strengths in other areas.

TABLE A-1

State Examples of Cost Analysis Using Cost Model, Cost Survey, and Cost Model with a Survey Component

State	Report shows costs by: Approach	Quality	Age Group	Provider Type	Location	Use of Cost Information
Cost model alone (without a survey component)						
Arkansas (2019)^a	Cost model informed by administrative data. Checked with program administrators in focus groups and individual interviews.	QRIS rating and state pre-K	Assumed specified age mix that varied by provider type, size, quality	Center-based and family child care providers	Urban and rural providers	Estimated annual total costs and compared to annual total revenues to examine profitability, calculated break-even rates.
Louisiana (2020)^b	Cost model informed by data on costs and expenditures based on interviews with 8 providers.	Minimum licensing requirements and quality centers	Estimated costs by age group	No	No	Estimated annual per-child costs with and without COVID-19 requirements. Compared costs with tuition rates and reimbursement rates.
Michigan (2021)^c	Cost model informed by secondary data and interviews with 24 providers. Used the PCQC.	QRIS rating	Assumed specified age mix	Center-based and family child care providers	No	Estimated share of overall operating expenses accounted for by personnel costs. Did not report a total or per-child cost estimate.
Vermont (2019)	Cost model based on assumptions from a prior state report (Blue Ribbon Commission report). Vetted with 4 providers.	QRIS rating	Assumed specified age mix and estimated costs by age group	Center-based and family child care providers	No	Estimated annual total costs and weekly total costs. Compared weekly costs to weekly average market rate.
Cost survey alone (without model component)						

State	Report shows costs by: Approach	Quality	Age Group	Provider Type	Location	Use of Cost Information
Iowa (2020)	Online survey. Collected information about enrollment and costs from 192 center-based providers and 234 family child care providers.	QRIS rating	Compared costs by age group	Center-based and family child care providers	Urban and rural counties	Reported annual per-child cost and per-child per-day costs.
Louisiana (2021)	Held 6 virtual focus groups with 28 providers. Asked focus group participants to complete a budgeting worksheet. 18 providers completed the worksheet.	No	No	No	No	Did not report a total or per-child cost estimate. Compared expense categories to determine key cost drivers.
Massachusetts (2020)	Optional form included in the Market Rate Survey. Completed by 214 family providers and 104 center-based providers.	No	No	Center-based and family child care providers	No	Did not report a total or per-child cost estimate. Compared expense categories to determine key cost drivers.
Missouri (2018)	Optional form included in the Market Rate Survey. Completed by 49 center-based providers, 46 family homes, and four group homes.	No	No	Center-based, family child care, and group home providers.	No	Did not report a total or per-child cost estimate. Compared categories of spending to determine key cost drivers.

State	Report shows costs by: Approach	Quality	Age Group	Provider Type	Location	Use of Cost Information
Pennsylvania (2020)	Conducted in-person visits with 30 licensed providers. Documented key resources used to deliver child care through interviews, photos, and audio recordings. Created item database and identified market price of each item.	QRIS rating	Compared infant costs to other children for subsample of providers	Center-based, family child care, group/small center	Compare d personnel and real estate costs by county and per-child costs by rural and urban locale.	Reported per-child cost estimate and key cost drivers.
Utah (2021)	Added questions about staff-child ratios and other program features to the market rate survey. Completed by 741 licensed center and family providers and residential certificate providers.	Legal-standard and high-quality ratios	Compared personnel costs by age group	Center-based and family child care providers	No	Reported per-child personnel cost estimate.
Cost model with a survey component						
Delaware (2021)	Cost model informed by survey data from 92 centers and family care providers; used the PCQC.	QRIS rating	No	Center-based and family child care providers	By county	Estimated annual total and annual per-child costs. Did not compare costs with tuition rates, reimbursement rates, or revenues.
Indiana (2021) ^d	Cost model informed by survey data from 40 providers; used the CPQ&R.	QRIS rating	Estimated costs by age group	Center-based, ministry-based, and family child care providers	No	Estimated average weekly costs and compared with payment rates by provider type, quality level, and age group.

State	Report shows costs by: Approach	Quality	Age Group	Provider Type	Location	Use of Cost Information
Kansas (2021)	Cost model informed by survey data collected as part of the market rate survey; used the PCQC.	No	No	Large, medium, and small centers; family child care providers	No	Estimated total annual costs by provider type. Did not compare costs with tuition rates, reimbursement rates, or revenues.
Minnesota (2020)	Cost model informed by secondary data, an advisory panel workshop, interviews with 20 providers, and survey data from 881 centers and family child care providers. Used the PCQC.	QRIS rating	Assumed specified age mix that varied by provider type and estimated costs by age group	Centers and family child care providers	Greater Minnesota (a non-metropolitan areas), small metro areas, large metro areas	Estimated annual total costs and compared with revenues, separately by quality rating. Estimated annual per-child costs and compared with maximum reimbursement rates, separately by provider type, age group, and geographic region.

Source: Data compiled by authors.

Notes:^a An earlier Arkansas report from 2014 provides more information about the development of the state's cost model.

^b The report does not provide a definition of "quality center." See also Louisiana (2021) for the results of the state's narrow cost analysis.

^c An earlier Michigan report from 2017 also used the PCQC.

^d A public URL for this report is not available.

References

- Burroughs, Robb, Nathan Burroughs, Colleen Graber, and Dirk Zuschlag. 2021. *Michigan's Child Care Market Rates: An Analysis of Costs for Quality Child Care for the Child Development and Care Subsidy Program*. Lansing, MI: Public Policy Associates, Inc.
- Capito, Jeanna, and Simon Workman. 2021. *Using Cost Estimation to Inform Child Care Policy*. Illinois: Prenatal to Five Fiscal Strategies.
- Capito, Jeanna, Jessica Rodriguez-Duggan, and Simon Workman. 2021. *Understanding the cost of quality child care in New Mexico: A cost estimation model to inform subsidy rate setting*. Illinois: Prenatal to Five Fiscal Strategies.
- Caronongan, Pia, Gretchen Kirby, Kimberly Boller, Emily Modlin, and Julia Lyskawa. 2016. "Assessing the Implementation and Cost of High Quality Early Care and Education: A Review of Literature." OPRE Report 2016-31. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, US Department of Health and Human Services.
- CEELO (Center on Enhancing Early Learning Outcomes). n.d. *Cost of Preschool Quality and Revenue Calculator*. New Brunswick, NJ: Center on Enhancing Early Learning Outcomes. Accessed October 27, 2022. <http://ceelo.org/cost-of-preschool-quality-tool/>
- Derrick-Mills, Teresa, Travis Reginal, and Julia Isaacs. 2020. *Procuring Research and Evaluation Services: A Guide for CCDF Lead Agencies and Researchers*. OPRE Report 2020-89. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, US Department of Health and Human Services.
- Early Learning Indiana. 2021. *Indiana Early Childhood Education Cost Study*. Indianapolis, Indiana: Early Learning Indiana.
- Frechtling, Joy. 2002. *The 2002 User-Friendly Handbook for Project Evaluation*. Arlington, VA: National Science Foundation.
- Horrace, William, and Christopher Parmeter. 2021. *2021 Delaware Cost of Care Study: Preliminary Report*. New Castle, DE: Delaware Department of Health and Social Services, Division of Social Services.
- Iowa Department of Human Services. 2021. *2020 Market Rate Survey Report*. Des Moines, IA: Iowa Department of Human Services.
- Karoly, Lynn, Jill Cannon, Celia Gomez, and Anamarie Whitaker. 2021. *Understanding the Cost to Deliver High-Quality Publicly Funded Pre-Kindergarten Programs*. Santa Monica, CA: RAND Corporation.
- Karoly, Lynn, and Stephanie Walsh. 2020. *Estimating the Cost of Quality Early Childhood Care and Education in Oklahoma*. Santa Monica, CA: RAND Corporation.
- Levin, Henry M., and Patrick McEwan. 2001. *Cost-effectiveness Analysis: Methods and Applications*, Sage Publishing.
- Louisiana Department of Education. 2021. *2020 Market Rate Survey*. Baton Rouge, LA: Office of Early Childhood Operations, Louisiana Department of Education.
- Lyskawa, Julia, Gretchen Kirby, Pia Caronongan, Annalee Kelly, and Andrew Burwick. 2020. *Challenges and Solutions to Conducting Intensive Studies in Early Care and Education Settings*. OPRE Report #2020-96. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, US Department of Health and Human Services.
- McKelvey, Lorraine, and Melanie Chapin-Critz. 2014. *Making Quality Ends Meet: UAMS Examines 2014 Arkansas Early Childhood Program Operation Costs*. Little Rock: AR: University of Arkansas for Medical Sciences.
- McKelvey, Lorraine, and Andrew Forsman. 2019. *Making Quality Ends Meet: 2019-2021 Cost Projections for AR Early Childhood Care & Education*. Little Rock, AR: University of Arkansas for Medical Sciences.

- Minnesota Department of Human Services. 2020. *Minnesota Cost Modeling Report*. Saint Paul, MN: Minnesota Department of Human Services.
- NCECQA (National Center on Early Childhood Quality Assurance). 2014. *Early Care and Education Program Characteristics: Effects on Expenses and Revenues*. Washington, DC: HHS, ACF, Office of Head Start, OCC, Health Resources and Services Administration, NCECQA.
- NCECQA (National Center on Early Childhood Quality Assurance). 2015. *Increasing Quality in Early Care and Education Programs: Effects on Expenses and Revenues*. Washington, DC: HHS, ACF, Office of Head Start, OCC, Health Resources and Services Administration, NCECQA.
- NCECQA (National Center on Early Childhood Quality Assurance). 2019. *User Guide: Provider Cost of Quality Calculator*. Washington, DC: HHS, ACF, Office of Head Start, OCC, Health Resources and Services Administration, NCECQA.
- NCECQA (National Center on Early Childhood Quality Assurance) and NCSIA (National Center on Subsidy Innovation and Accountability). 2018. *Guidance on Estimating and Reporting the Costs of Child Care*. Washington, DC: HHS, ACF, Office of Head Start, OCC, Health Resources and Services Administration, NCECQA, NCSIA.
- NCSIA (National Center on Subsidy Innovation and Accountability). 2019. *Rate Setting: Do You Have the Right Data for the Task?*. Washington, DC: HHS, ACF, Office of Head Start, OCC, Health Resources and Services Administration, NCSIA.
- NCSIA (National Center on Subsidy Innovation and Accountability). 2020. *Ensuring a Statistically Valid and Reliable Market Rate Survey: A Checklist*. Washington, DC: HHS, ACF, Office of Head Start, OCC, Health Resources and Services Administration, NCSIA.
- OCC (Office of Child Care). n.d. *Provider Cost of Quality Calculator*. Washington, DC: HHS, ACF, OCC. Accessed October 27, 2022, <https://www.ecequalitycalculator.com/Login.aspx>
- OCC (Office of Child Care). 2018a. *Guidance on Alternative Methodologies and Cost Analyses for Purposes of Establishing Subsidy Payment Rates: Program Instruction CCDF-ACF-PI-2018-04*. Washington, DC: HHS, ACF, OCC.
- OCC (Office of Child Care). 2018b. *List of Potential Options for Narrow Cost Analysis: CCDF-ACF-PI-2018 -01 Attachment*. Washington, DC: HHS, ACF, OCC.
- Public Consulting Group. 2018a. *Commonwealth of Massachusetts 2018 Cost of Care Form: Final Report*. Boston, MA: Public Consulting Group.
- Public Consulting Group. 2018b. *Missouri Department of Social Services, Children's Division 2018 Child Care Market Survey Report*. Boston, MA: Public Consulting Group.
- Sandstrom, Heather, and Julia B. Isaacs. 2020. *Tips on Developing Surveys of Child Care Providers*. OPRE Report #2020-114. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, US Department of Health and Human Services.
- Sirinides, Philip M., and Gregory J. Collins. 2020. *The Cost of Child Care in Pennsylvania*. Harrisburg, PA: Penn State Harrisburg Institute of State and Regional Affairs.
- US Government Accountability Office. 2012. *Designing Evaluations: 2012 Revision*. Washington, DC: US Government Accountability Office.
- Vermont Department for Children and Families. 2019. *2019 Vermont Child Care Market Rate Survey and Cost of Care Report*. Vermont Department for Children and Families, Child and Family Division. Waterbury, VT: Vermont Department for Children and Families Child Development Division.
- Workman, Simon, and Steven Jessen-Howard. 2019. *Conducting a Child Care Cost of Quality Study: A Toolkit for States and Communities*. Washington, DC: Center for American Progress.

About the Authors

Katie Gonzalez is a researcher at Mathematica. Her research focuses on early childhood policies and programs, including studies of how to measure, improve, and finance quality in early care and education.

Pia Caronongan is a senior researcher at Mathematica. Her research focuses on federal and state efforts to support and improve early care and education (ECE) access and quality. She collaborates with clients and stakeholders to design and conduct rigorous evaluations of early childhood initiatives and in-depth examinations of the systems that support ECE programs.

Julia B. Isaacs, a senior fellow at the Urban Institute, is an expert in child and family policy with wide-ranging knowledge of government programs and budgets. She directs research on early childhood education and is coprincipal investigator for Urban's *Kids' Share* analyses of public spending on children.

Peter Willenborg is a research analyst in the Center on Labor, Human Services, and Population at the Urban Institute. His research involves quantitative and qualitative methodologies and examines programs and policies that support the well-being of low-income children and families.

Lynn A. Karoly is a senior economist at the RAND Corporation and a professor at the Pardee RAND Graduate School. Much of her recent research has focused on early childhood programs with studies on the use, quality, and impact of early care and education (ECE) programs; professional development for the ECE workforce; and ECE program costs and financing.

STATEMENT OF INDEPENDENCE

The Urban Institute strives to meet the highest standards of integrity and quality in its research and analyses and in the evidence-based policy recommendations offered by its researchers and experts. We believe that operating consistent with the values of independence, rigor, and transparency is essential to maintaining those standards. As an organization, the Urban Institute does not take positions on issues, but it does empower and support its experts in sharing their own evidence-based views and policy recommendations that have been shaped by scholarship. Funders do not determine our research findings or the insights and recommendations of our experts. Urban scholars and experts are expected to be objective and follow the evidence wherever it may lead.

ABOUT THE CHILD CARE RESEARCH AND EVALUATION CAPACITY BUILDING CENTER

This report is a product of the Child Care Research and Evaluation Capacity Building Center. The center aims to assess and build the research and evaluation capacities of state, territory, and tribal CCDF Lead Agencies. It develops resources and activities to support CCDF Lead Agencies in using research and evaluation for decisionmaking. The center is run by the Urban Institute in partnership with Mathematica with funding from the US Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research, and Evaluation. More information on the Center is available at <https://www.urban.org/policy-centers/center-labor-human-services-and-population/projects/building-child-care-research-capacity>.



500 L'Enfant Plaza SW
Washington, DC 20024

www.urban.org