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Early Childhood Research Brief

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Challenges and Solutions to Conducting Intensive Studies in Early Care and Education Settings

Collecting data from center-based early care and education (ECE) settings poses unique challenges. Center directors and teaching staff have limited ability to participate in data collection activities because of time pressures and the immediacy of issues that arise in providing care to young children. Centers also vary widely in their size, funding, staffing and organizational structures, and quality, so instruments and methods for collecting data must be flexible enough to capture variation and be appropriate for a variety of settings.

The Assessing the Implementation and Cost of High Quality Early Care and Education (ECE-ICHQ) project, funded by the Office of Planning, Research, and Evaluation (OPRE) in the Administration for Children and Families, recruited and collected data from ECE centers as part of a five-year measures development project. This brief presents lessons learned from the ECE-ICHQ project that could prove useful in addressing challenges when conducting qualitative research, cost analysis, and self-reported data collection with staff in center-based settings.

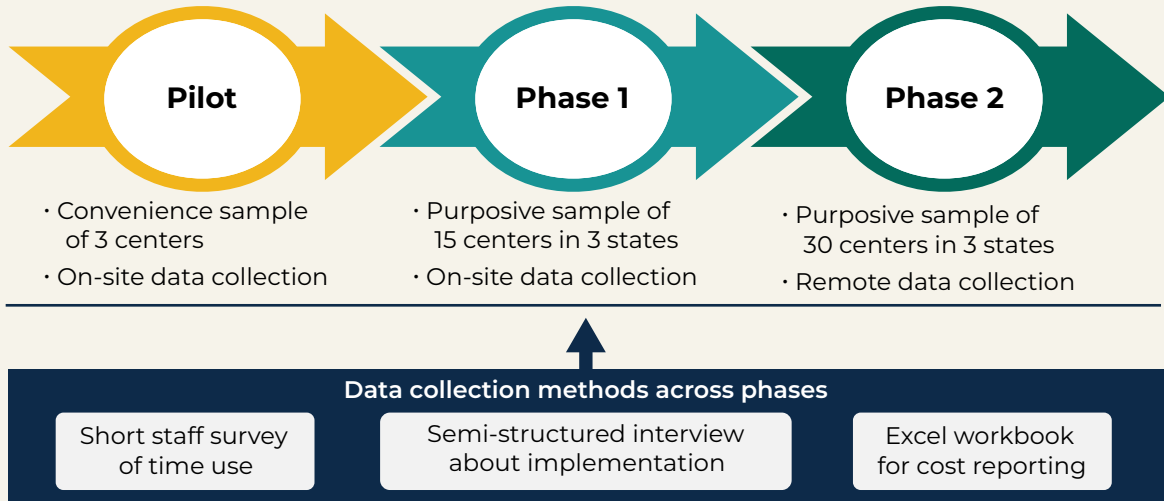## ECE-ICHQ: A multicase study approach

The goal of the ECE-ICHQ study is to create an instrument to measure the implementation and costs of providing quality services at the center level for ECE programs serving children from birth to age 5. To inform measures development, ECE-ICHQ carried out a multicase study that included (1) a qualitative study of the implementation of key functions of center-based ECE providers, and (2) a quantitative analysis of center costs and time use of staff. Data collection in each center was time intensive and spanned multiple respondents. The multicase study was conducted in phases, which offered the opportunity to refine recruitment and data collection processes and produce lessons that might prove useful for other studies (Exhibit 1).

Successful approaches to conducting intensive studies in ECE settings:

- Build large lists of centers from multiple publicly available data sources and focus on a few selection criteria.
- Begin with a large pool of centers and set parameters on the number and type of contacts to move through the sample and achieve recruitment targets quickly.
- Offer centers a service or benefit that aligns with the level of effort they need to expend to participate.
- Adapt data collection methods to address the constraints on time and availability of information that respondents in ECE centers face.
- Develop data collection methods and tools that are comprehensive, yet flexible to account for variation among centers.
- Establish clear lines of communication within the data collection team and with the center staff for multipronged or longer-term data collection.

Exhibit 1. Overview of the ECE-ICHQ multicase study

Pilot
- Convenience sample of 3 centers
- On-site data collection

Phase 1
- Purposive sample of 15 centers in 3 states
- On-site data collection

Phase 2
- Purposive sample of 30 centers in 3 states
- Remote data collection

Data collection methods across phases

| Short staff survey of time use | Semi-structured interview about implementation | Excel workbook for cost reporting |

Recruiting ECE centers

Recruiting ECE centers for research requires a strategic approach to selecting and contacting centers, as well as a compelling message to encourage them to participate. For ECE-ICHQ, the recruitment approach sought to achieve variation in centers on several characteristics to effectively support measures development. Findings from this experience suggest strategies that might help alleviate common challenges in identifying and recruiting ECE centers. Below we outline several challenges that might arise in recruiting centers and possible solutions.

Challenge: Lack of available information to efficiently create a list of centers to recruit.

ECE-ICHQ required a range of center types and characteristics to support measures development. We used the criteria shown in Exhibit 2 to achieve variation in center characteristics. Selection criteria will vary across studies based on study goals, but the lessons learned through ECE-ICHQ are likely to be applicable regardless of a study's specific selection criteria. In Phase 1 of the study, the project team worked with administrators in select states to build relatively small, but targeted center recruitment lists from their

administrative data. This was a time-consuming effort for state administrators. These lists sorted centers by the different selection categories based on all seven criteria shown in Exhibit 2. However, during recruiting calls, we often learned that centers did not fit the criteria we expected (due to a change in funding mix or quality rating level, for example). To ensure that we achieved variation on each selection criteria, we had to request additional lists of centers from the state administrators, which placed a burden on their time.

Exhibit 2. Selection criteria

Primary selection criteria
- Quality Rating and Improvement System rating level
- Funding mix
- Head Start or community based

Secondary selection criteria
- Ages of children served
- Size (number of children served)
- Profit status
- Embedded in larger organization

For Phase 2 of data collection, we needed to recruit a much larger sample of centers. However, essential data on center characteristics were not uniformly available through a centralized source and the project team did not want to burden state administrators with additional data requests. Some centers have an online presence, but often they do not provide accurate contact information or information on funding (such as participation in publicly funded prekindergarten or preschool programs, or in a child care subsidy program).

Solution: Build large lists from multiple sources and focus on a few selection criteria.

Building large lists of centers and using few selection criteria, when possible, can decrease the time and cost of identifying and recruiting ECE centers. For Phase 2 we built large lists of centers from publicly available data and used the three primary criteria shown in Exhibit 2. This helped us reach recruitment targets more quickly. We consulted several sources to construct the lists of centers, including state licensing and subsidy information, QRIS participation lists, and listings of Head Start programs from the Early Childhood Learning and Knowledge Center. To achieve variation on the secondary selection criteria, we monitored our recruitment efforts to track which centers fit each criterion and adjusted our recruitment approach as needed to target certain criteria. Linking information from across public websites allowed us to build large lists of centers to contact and successfully identify the composition of centers that achieved the variation in characteristics needed to support the study goals.

Challenge: Reaching a decision maker within centers and obtaining a decision on study participation takes a lot of time and effort.

To recruit centers into any research study, it is necessary to first reach anyone at the center and then reach a decision maker (such as a center director or executive director) who can decide about participating in the study, both of which are challenging. In the early phase of the study, we could not reach anyone in one-quarter of the centers. For the rest of the centers, it took five telephone contact attempts, on average, to reach someone. The next hurdle is reach-

ing a decision maker. We could not reach a decision maker in about 20 percent of the centers (in both phases) in which we made some initial contact.

Solution: Begin with a large pool of centers and set parameters on the number and type of contacts to move through the list quickly.

The early phase of the study taught us three lessons that other studies may find useful: (1) it took an average of seven total contacts to get a center to agree to participate in the study, (2) it took a long time to make these contacts and obtain a decision about study participation, and (3) it took attempted contacts with about 10 centers for every center successfully recruited into the study. Given that the research team could not affect when or if someone at a center would answer the phone or influence when we would reach the decision maker, our solution had to come from things we could control. This led us to develop a large list of centers from which to recruit that we could move through quickly when we could not reach a decisionmaker.

Using this experience, we built center lists that were at least 10 times the target size for our total sample for the later phase, and we made two key changes to the recruitment approach. First, we sent a mass mailing to center email addresses and physical addresses to invite centers to participate. This mailing went far beyond the number of centers needed to reach the 10:1 recruitment ratio. Although a very small portion of centers contacted us as a result of

On average, it took
5 attempts
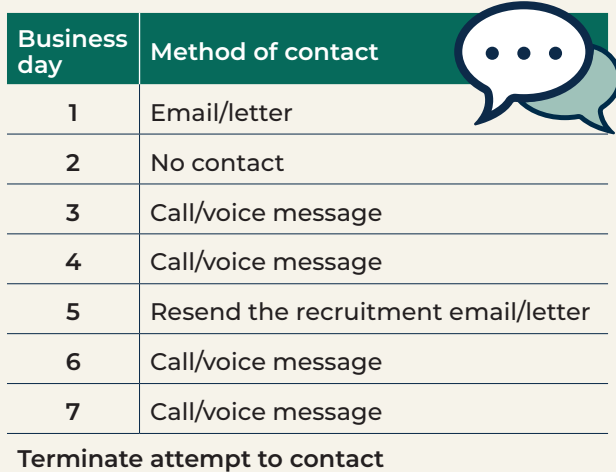to reach anyone at
a center.

On average, it took **7 total contacts** to get the center to agree to participate.

We needed to contact **9 to 10 centers** to recruit **1** into the study.

this mailing, it made a big impact on the recruitment targets. Nine centers that responded to this mailing met the selection criteria and successfully completed data collection, representing nearly one-third of the total sample.

Second, we used a contact protocol (Exhibit 3) that specified the methods and timing of outreach to move through nonresponsive centers quickly. This protocol limited contact attempts to six over seven business days. By using the protocol, we recruited the full sample more quickly and with fewer contact attempts than in the prior phase. For other studies, in-person recruiting may be another solution, but this was not a cost effective strategy for ECE-ICHQ.

Exhibit 3. Center contact protocol

Business day	Method of contact
1	Email/letter
2	No contact
3	Call/voice message
4	Call/voice message
5	Resend the recruitment email/letter
6	Call/voice message
7	Call/voice message
Terminate attempt to contact	

Challenge: ECE centers often function in time- and resource-constrained environments and find it difficult to participate in studies.

In any study, individuals or entities must be motivated to participate. We proposed ECE-ICHQ to decision makers in centers by characterizing their participation as essential to creating a tool that would inform them, as well as policymakers, of how to make the most of resources to support quality care and children's healthy development. This work was not associated with a specific program or funding

source that could motivate centers to participate (in the way that Head Start programs might choose to participate in the Head Start Family and Child Experiences Survey, for example). The study did not obtain an endorsement letter from any particular program or initiative. Because the information was needed for measures development, we also did not yet have concrete information to promise centers in return for participating. In addition, the data collection was time intensive. Although we limited the data collection burden on teaching staff and clearly communicated expectations for participation, many centers still refused to participate due to concerns about time constraints and staff burden.

Solution: Offer centers a service or benefit that aligns with the level of effort they need to expend to participate.

To motivate centers to complete data collection and to offset the costs of participating, we offered each center a small token of appreciation, initially set at $100. Centers thought this amount was not enough, given the time investment necessary. The project was able to increase the payment to $350 to better offset costs associated with study participation. This amount was attractive to some center directors, but it was not always enough to offset the time commitment for participating. A few centers incurred additional costs to support the data collection (such as having to pay an accountant or bookkeeper to complete the cost workbook). Centers might find studies of a specific service or quality improvement activity more attractive because they can offer ready data to inform practice or a tangible benefit to staff development or children's services. Other studies might be able to consider incentives, beyond a financial payment, that could support the centers' work and motivate them to participate.

Collecting data in ECE Centers

Data collection for ECE-ICHQ included (1) interviews to obtain information on how centers support activities that can lead to quality (implementation data), (2) Excel cost workbooks and follow-up interviews to obtain information on how centers use their resources (cost data), and (3) a survey to understand how staff

use their time in ways that can support quality (time-use data). The data collection approach evolved through each phase of the study based on lessons learned. While data collection for ECE-ICHQ was time intensive, it was necessary to collect the information we needed for this measures development project. However, this level of commitment from center staff is not unique. Most studies require collecting a lot of data from staff with limited time to devote to research.

Challenge: ECE staff have limited time for data collection activities.

Center staff have limited time to participate in—or prepare for—data collection activities. In intensive data collection, limiting respondent burden can be challenging.

Solution: Adapt data collection methods to address the constraints on time and availability of information that respondents in ECE centers face.

Data collection methods and tools should be streamlined for efficiency in content and methods to best use center staff time. Helpful methods that we used in ECE-ICHQ included the following:

In implementation data collection, ask for targeted, objective information that respondents can readily and reliably provide with little preparation or follow-up, and can provide remotely (if possible). The preferred approach to implementation research includes

Guiding questions for ECE-ICHQ data collection

Implementation Data Collection
- What does a center do to provide quality ECE?
- How do they do it?

Cost and Time-Use Data Collection
- What are a center's total costs?
- How does a center allocate resources across key functions?
- How do staff use their time to provide quality ECE?

interviewing multiple respondents on site to triangulate information. Collecting implementation data successfully in ECE settings requires a different approach. Centers often have limited space to accommodate researchers; in addition, center staff have little time to spend preparing for data collection or to devote to a long interview in one sitting. We refined the approach so that respondents could answer most interview questions without having to prepare in advance, reference other documents, or consult with other staff. Collecting data remotely, either through telephone interviews or electronic data collection tools, was preferable to center staff, allowing them to schedule time for the data collection that best suited their schedule.

In cost data collection, develop an approach that accommodates ECE centers with varying capacity to collect and report information. A rigorous cost analysis requires detailed information on the types and value of personnel and nonpersonnel costs a center incurs. ECE centers vary widely in the level of sophistication of their recordkeeping systems and, in turn, the type and detail of cost information they have available. We had to strike a balance between the specificity needed for a rigorous cost analysis and the data that centers can reasonably provide in a realistic time frame. We identified core categories of cost data essential to our analysis, such as staff compensation, facilities costs, supplies and materials, investments in staff training and education, and overhead or indirect costs. We prioritized collecting data on the core categories, and we were more flexible about collecting cost information outside the core categories.

In administering surveys, provide options for survey completion to achieve high response rates quickly. Staff in ECE centers might not always prefer online or electronic surveys. We provided codes to administrators and all teaching staff to help them access a short (15-minute) online survey at any time, including outside of working hours. We also offered hard copies of the survey if requested. We offered center staff a small token of appreciation ($10) for completing the survey. Teaching staff, in particular, preferred the paper survey because they could complete it in sections throughout the day during breaks. Staff did

not always have access to computers or have blocks of uninterrupted time to sit down and complete an electronic survey. When given the option of a paper or electronic survey, 71 percent of center staff who responded to the survey completed it on paper. We achieved an overall response rate of 89 percent when offering center staff more than one method to complete the survey and particularly high response rates for centers (nearly 100 percent) when our field staff distributed and collected surveys on the same day.

Challenge: Ensuring data collection and analysis approaches are appropriate for a range of ECE centers.

Centers vary in their understanding of, and terminology related to, such topics as coaching, assessment, curriculum, and staff roles. There is also variation in centers' organizational structures that could affect costs, such as overhead rates for centers that are part of a larger organization.

Solution: Develop data collection methods and tools that are comprehensive, yet flexible to account for variation among centers.

For the ECE-ICHQ study, we needed to develop data collection tools that would collect a large amount of data accurately and efficiently, while also capturing a range of practices and contexts across centers. We used a semi-structured interview approach to give us flexibility in collecting implementation data. To collect cost data, we defined resource categories broadly so centers could provide data on the categories that were relevant to their operations yet would support consistency in analysis.

Challenge: Collecting data from multiple respondents over a long time can cause dropoff in participation before data collection is complete.

For ECE-ICHQ, the length of the data collection period—along with the need to coordinate among multiple data collectors and multiple respondents—created a challenge for the data collection team. In most centers, one person was the primary respondent

71 percent of time-use surveys were completed on paper

for both the implementation and cost data collection. We collected time-use survey data from select administrators and all teaching staff in each center. In addition, data collection occurred over an extended period. Collecting cost data required frequent, sustained contact: in the later phase, we contacted each center, on average, about 15 times over 69 days. Because of center availability and scheduling constraints, there often were several days or weeks between the first and final implementation interviews for a center. The average time between the first and final implementation interviews was approximately 20 days.

Solution: Establish clear lines of communication within the data collection team and with the center staff for multipronged or longer-term data collection.

ECE-ICHQ required a structured system and communication protocol for how, when, and by whom data would be collected. We built rapport with center staff and ensured site liaisons (who were also the recruiters) served as the main point of contact throughout data collection. Liaisons were central to our process and remained a consistent contact for each center throughout data collection. Given the breadth of data collection, we trained our research staff to focus on either qualitative interviews or cost data collection, and we trained field staff to administer time-use surveys. This enabled staff to specialize in one area of data collection and become the primary point of contact for a particular center and a particular type of data collection. We also staggered data collection, first collecting implementation data, then cost data, and then time-use data,

which required site liaisons and data collectors to communicate with one another about the status of each stage of data collection. Exhibit 4 illustrates the strategy that proved successful for ECE-ICHQ.

Multipronged data collection offers the opportunity to use data from one component to confirm or clarify data from another component. The data collectors for different components can share information and learn from one another, improving the efficiency and accuracy of data collection. For example, researchers could sometimes clarify or confirm incomplete or unclear cost data for a center by cross-checking that center's implementation data. Without clear lines of communication between data collectors and respondents, however, the benefits of multipronged data collection cannot be fully realized.

Exhibit 4. Coordinating data collection among researchers and respondents

A range of **center staff** participated in data collection:
- Center directors
- Educational program managers or coordinators
- Teaching staff
- Accounting/finance staff

Site liaisons/recruiters:
- Served as the primary point of contact
- Scheduled data collection interviews
- Sent reminders
- Processed incentives

Data collectors were introduced to center staff by the site liaisons and focused on one data collection component:
- Implementation
- Cost
- Time use

Conclusion

Conducting intensive research in ECE settings in general presents many challenges; collecting data in low-resource, potentially low-quality settings presents even greater ones. At the same time, there is a great need to study quality improvements in centers that serve children from low-income settings, especially those outside of Head Start and publicly funded pre-kindergarten or preschool. The lessons learned through the phased approach to data collection in ECE-ICHQ can provide points for consideration in planning future research activities across different ECE settings.

About the Project

Evidence suggests that high quality early care and education can benefit young children, particularly children from low-income families.[1] This has led to commitments at the federal and state levels to improve the quality of ECE programs. Policymakers, administrators, and other stakeholders must weigh competing demands and limited resources for program improvement but they lack the information needed to target funds to improve ECE quality. OPRE sponsored the ECE-ICHQ project to create an instrument that will measure implementation and costs of providing ECE services at centers for children from birth to age 5. The project will produce measures to examine how differences in what a center does and how resources are used influence quality. Products will include an ECE-ICHQ instrument with the full complement of data collection tools—implementation interview protocol, cost workbook, and time use survey—and a User's Manual to guide data collection and analysis to produce the measures.

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Endnote

[1] Caronongan, P., G. Kirby, K. Boller, E. Modlin, and J. Lyskawa. "Assessing the Implementation and Cost of High Quality Early Care and Education: A Review of Literature." OPRE report 2016-31. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation, 2016.

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