

RESEARCH HIGHLIGHT

Analyzing Access with Child Care and Early Education Data

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Key Highlights

- ▶ Applying a multi-dimensional definition of access to the analysis and interpretation of child care and early education (CCEE) data can provide a more holistic picture of families' needs, preferences, and constraints in accessing CCEE for their children.
- ▶ Local, state, and federal CCEE datasets may be used, either singly or in combination, to examine and track progress toward improving equitable access to CCEE.

Overview

Data-informed policy can support leaders in promoting equitable access to CCEE in a way that reflect the needs, preferences, and constraints of families. Using already available data, CCEE leaders and their teams can examine access to CCEE in a multi-dimensional way by capturing whether the available CCEE options require only **reasonable effort for families** to access, are **affordable**, **support child development**, and **meet parents' needs** (see Figure 1).^a Access to CCEE should also consider **equity**, or the ability of CCEE programs to serve families who may face systemic barriers in securing services. This product identifies potential data sources for examining CCEE access and strategies for layering datasets to answer key questions.

^a For more information on this access definition, refer to the Access Guidebook or a summary provided in a related research highlight, *Defining and Measuring Access to Child Care and Early Education with Families in Mind*.



Information in this publication is drawn from two sources:

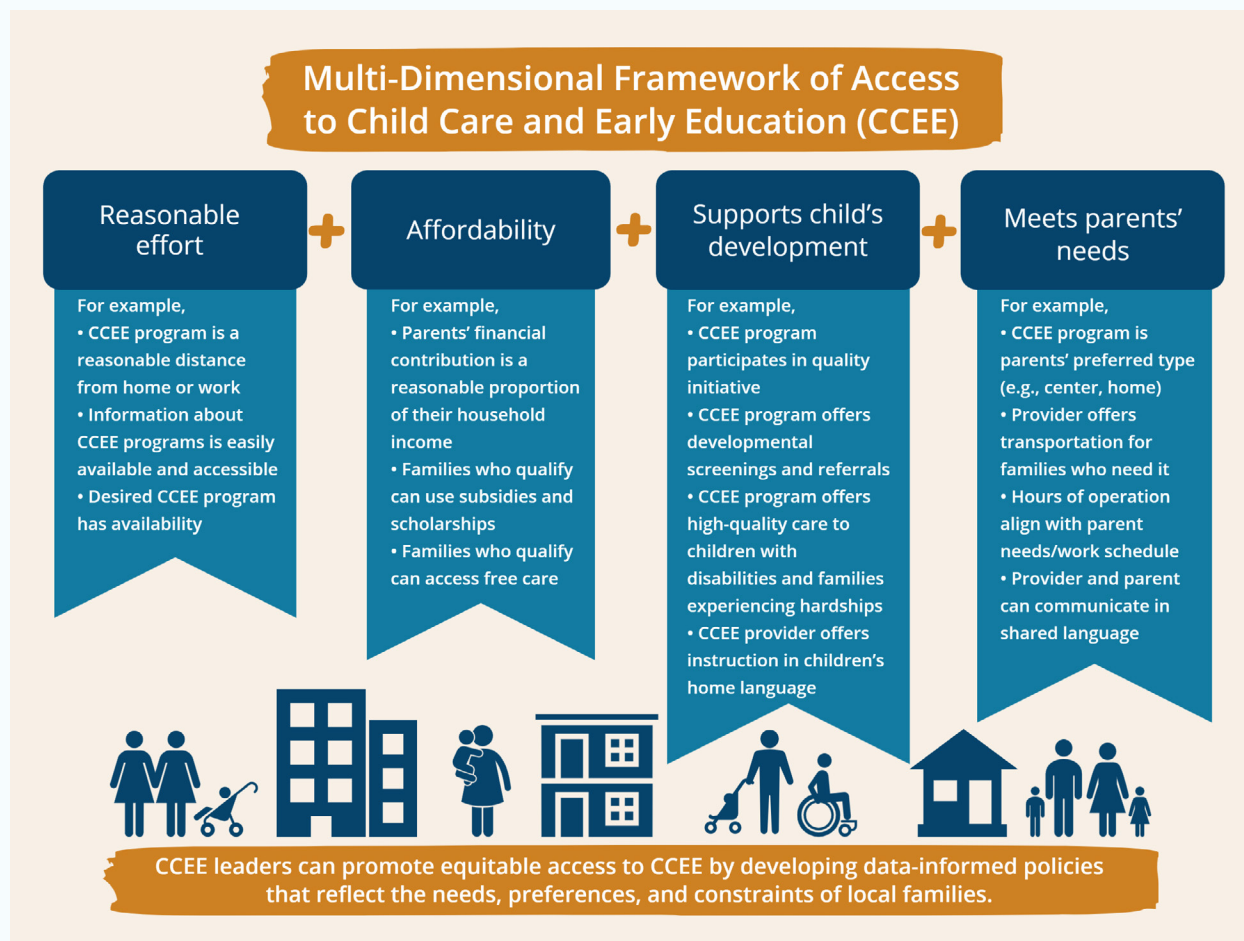
[Defining and Measuring Access to Early Care and Education: A Guidebook for Policymakers and Researchers](#)

This report details the four dimensions of the family-centered access definition. The report also describes data sources and potential indicators for each dimension.

[Defining and Measuring Access to Child Care and Early Education with Families in Mind](#)

This research highlight summarizes the multi-dimensional definition of CCEE access and identifies how CCEE leaders can apply the definition to examine CCEE access.

Figure 1. A multi-dimensional definition of child care and early education access that is centered on families



What Data Can be Used to Examine CCEE Access?

CCEE leaders and partners may use existing datasets to examine and track progress toward improving equitable access to CCEE. Two types of data can help with this work:

1. **State-specific data** collected by a state agency or body
2. **National data** collected by federal agencies or bodies (which may sometimes be analyzed in smaller geographic units, like at the city, county, or state level)

Data from state agencies or bodies. State and local CCEE agencies often maintain databases that provide information on the availability, affordability, characteristics, and quality of CCEE. Data regarding the characteristics of CCEE is helpful in determining how closely aligned the supply is to the needs of families in a state or local area. Some states or localities may have databases reflecting families' experiences searching for and using CCEE, which can speak to families' needs and preferences on multiple dimensions. For example, a state or locality may have existing databases like the following, although specifics of the database likely vary by location:

- Child care licensing systems, providing information on the characteristics of the supply of licensed child care slots in an area, including operational characteristics of providers.
- Child care resource and referral (CCR&R) networks, providing information on the availability of CCEE slots, prices families pay for CCEE, and CCEE provider characteristics in an area.
- Quality Rating and Improvement Systems (QRIS), providing information about CCEE providers (including quality standards and provider ratings) enrolled in the QRIS program.
- Pre-K through grade 12 administrative data, providing enrollment, demographic, and facility characteristics related to pre-K through secondary schooling in an area.
- Child Care and Development Fund (CCDF) programming, providing information about CCDF subsidy use and demographic information for families and CCEE providers engaged in the program.
- CCEE workforce registries, providing information about CCEE characteristics, including qualifications, professional development activities, and demographic characteristics.
- Child care market rate surveys, providing information about prices charged and costs paid by families.
- Cost estimation models or cost studies, providing information on cost of care for at least a subset of child care settings.
- Surveys of providers or families with young children, providing information about CCEE programs that is often not available through other administrative sources. For instance, surveyed families may describe their experiences with the affordability and availability of CCEE in their local area, their preferences in selecting CCEE, or their knowledge of CCEE programs and supports.

Data from federal agencies or national collection efforts. In addition to state administrative data, CCEE leaders may be able to link or supplement information with nationally-collected data. These data, which can sometimes be analyzed in smaller geographic units, help to provide a more robust picture of CCEE access within a larger community or national context. Some data sources include:

- The [Head Start Program Information Report](#) (PIR), which provides annual information about Head Start programs at the national, state, county, and city level. Data include child and family demographics (e.g., race and ethnicity of children served, primary language of families served), program enrollment, teacher qualifications and salaries, and program services such as transportation to and from classes or mental health services. This report also includes information about Early Head Start, Migrant and Seasonal Head Start, and American Indian and Alaska Native Head Start programs.
- The [U.S. Census Bureau](#) provides several data sources, like the [American Community Survey](#) (ACS), that details population and housing information, or the [Current Population Survey](#) (CPS) that contains information about the nation's labor force. The ACS is available in one-year and five-year aggregate estimates; the five-year estimates are available at the national, state, county, city, zip code, and census tract level. CPS data are available at the state level and for the 12 largest metropolitan statistical areas. Both sources allow estimates of the number of young children living in households and parents' employment, which may help in calculating the demand for ECE in geographic areas.
- The 2012 and 2019 [National Survey of Early Care and Education](#) (NSECE) is a nationally-representative survey of households with young children, as well as center and home-based providers and ECE workforce members. Though the data are primarily at the national level, the survey includes information on multiple dimensions of CCEE access, including reports of cost families pay for care, information on families' social and economic characteristics that may

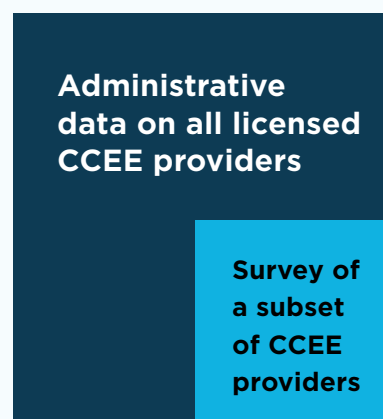
influence their CCEE options, and provider characteristics that may help meet parents needs and/or support child development, such as ages served, and participation in quality improvement initiatives. This [report](#) details how researchers have used the NSECE to examine CCEE access and can serve as an example for possible in-state analyses of data to examine access.

How Can Datasets be Layered to Answer Questions About CCEE Access?

Each CCEE dataset has a focused purpose and contains specific data elements. Combining multiple datasets may be beneficial to create a fuller picture of CCEE access. Here are three examples of how CCEE leaders and partners may consider layering datasets:

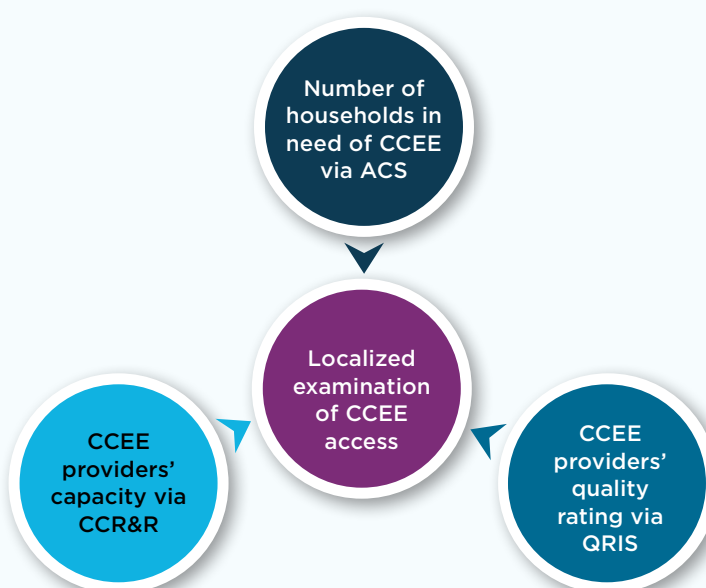
Example 1. One way to layer CCEE datasets is to collect additional information from a subset of a larger sample (Figure 2). For example, a state may be interested in expanding high-quality care for infants and toddlers in certain areas of the state. They could first use state administrative data to identify locations of programs that are not currently serving infants and toddlers. They could then survey the directors of those CCEE programs to find out if they would be interested in serving infants and toddlers, and what supports they would need to expand their services. CCEE leaders may also examine other administrative data about the programs interested in expanding—such as whether programs participate in QRIS, accept subsidies or scholarships, programs’ hours of operation, and programs’ size—to help them understand whether the programs are likely to match what families need, want, and can use. In the spirit of the access framework, this effort could help improve families’ access to affordable, high-quality care that better supports parents’ and children’s needs.

Figure 2. Gather additional information from a subset of a larger sample



Example 2. As shown in Figure 3, CCEE leaders and partners may also connect information from different data sources to gain additional information about a population included in all datasets to help understand access and identify opportunities to improve access to affordable care that supports children’s development and meets parents’ needs. For example, a state administrator may use ACS reports of household composition and employment status to estimate the number of young children in need of CCEE within a geographic area. They may then use a CCR&R dataset to identify the licensed capacity (and possible availability of slots) of CCEE providers located in the same geographic area. Finally, a QRIS dataset can provide information on the quality rating of those identified CCEE providers. By linking

Figure 3. Connect information from multiple datasets



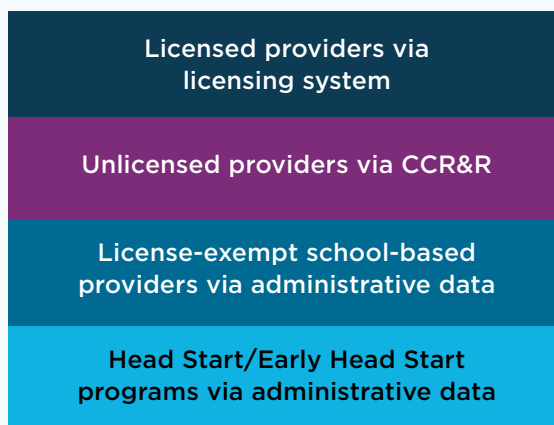
these three datasets, the administrator can identify whether the availability of slots in high-quality CCEE providers (as determined by the QRIS and CCR&R datasets) adequately meets households' demand for CCEE (as estimated using ACS data) within a local area. This triangulated information may be helpful for planning future activities and helping them report on progress, such as for the Quality Progress Report, which details how CCDF quality funds were expended. Additional variables offered in these datasets (e.g., household income, households' primary language; advertised price of care; provision of subsidized care or care in a language other than English) may be beneficial in further examining access from an equity perspective. The administrator may use these contextual variables to consider how access to high-quality CCEE may be limited by affordability, parents' needs, or services needed to support child development.

When combining information across datasets, it is important to identify the variables needed to accurately match individuals and/or entities across the datasets. For example, a program identifier may be necessary to accurately connect provider information reported in the CCR&R dataset with information on the same provider provided in the QRIS dataset. Further, all information should be available at the same geographic unit (e.g., city, zip code, census tract).

Example 3. CCEE leaders and partners may find it useful to combine cases or records from multiple datasets to obtain a more complete picture of the options families have in selecting care for their children, and whether those options reflect increased access across multiple dimensions (Figure 4). For example, a CCEE organization interested in identifying the total number of CCEE providers in their city may start with a list of licensed providers reported by the state's CCEE licensing system. To make their list of providers more comprehensive, they could add unlicensed providers reported in a CCR&R database, license-exempt public-school-based providers reported in a pre-K through grade 12 administrative dataset, and Head Start/Early Head Start programs through an administrative dataset. Combining the datasets allows for a more accurate estimate of the number of CCEE providers in a city than any one dataset alone.

Understanding variations in the providers may illuminate the sectors in which families have higher or lower access to affordable care that meets their needs or preferences. However, when adding cases from different datasets or multiple waves of data collection, it is important to consider if individuals and/or entities may be listed multiple times and whether the data included with each record are comparable across data sources.

Figure 4. Append similar information from multiple data sources



Conclusion

Measuring access is a complex task especially when using a multi-dimensional definition of access. Understanding access may require selecting and using local, state, and federal data that address various dimensions of access. The types of information collected, the frequency of collection, and agency rules for using CCEE data may vary widely by agency or locality. These differences may complicate the ability to use data from multiple sources. Before engaging in analyses like these, CCEE leaders and partners should carefully review the data sources they plan to use, including ensuring that the data variables from different datasets are defined similarly (e.g., infants are children under 12 months) and determining whether the data are appropriate for answering their key research questions. A resource series, [Supporting the Use of Administrative Data in Early Care and Education Research](#), provides useful information about how administrative data may be used to address policy-relevant CCEE research questions. [The Child Care Research and Evaluation](#)

[Capacity Building Center](#) also includes resources to support the use of research among CCEE leaders. The examples in this highlight serve to show how useful multiple compatible data sources can be in understanding the CCEE landscape. That is, multiple pieces of data, when used together, can help CCEE leaders develop a more accurate picture of families' access to the care they need, want, and can use for their children.

References

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Suggested Citation

Gebhart, T & Paschall, K. (2023). *Analyzing access with child care and early education data*. OPRE Report #2023-040. Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Acknowledgements

Analyzing Access with Child Care and Early Education Data was produced through the Child Care and Early Education Research and Policy Analysis (CCEEPRA) project funded by the Office of Planning, Research, and Evaluation (OPRE) in the Administration for Children and Families (ACF) in the U.S. Department of Health and Human Services. The authors wish to thank Ivelisse Martinez-Beck, Tracy Carter Clopet, Shannon Warren, Meg Bredeson, Kelly Maxwell, and Jennifer Johnson for their feedback and helpful comments on the draft. We also wish to thank Audrey Franchett for developing the Access infographic.

