

Measuring Pathways to High Quality Early Care and Education

High quality early care and education (ECE) should support children’s development of the social, emotional, language, and cognitive skills they need to enter kindergarten, where they continue their learning and healthy development. High quality ECE also supports equity, helping close the achievement gap for children in households with low incomes.

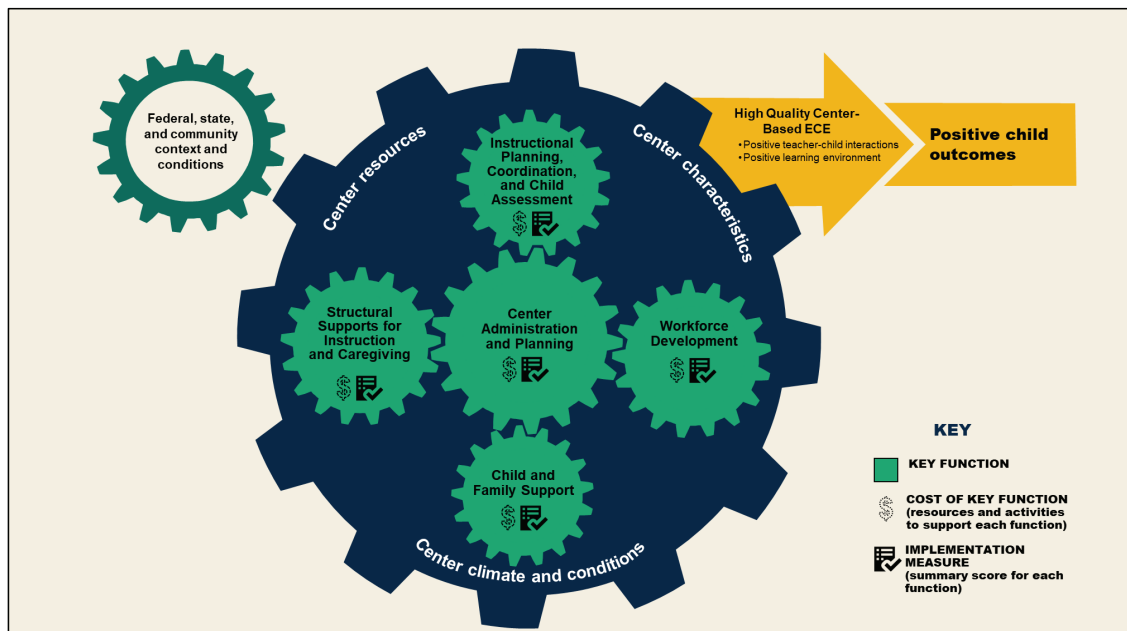
Researchers, federal and state policy leaders and administrators, and center directors all seek to understand what drives high quality ECE. The **Assessing the Implementation and Cost of High Quality Early Care and Education**, or **ICHQ** (pronounced I-check) project, led by Mathematica and funded by the Office of Planning, Research, and Evaluation (OPRE) in the Administration for Children and Families, is developing center-level implemen-

tation and cost measures to inform ways to achieve high quality in ECE centers that serve children from birth to age 5 (not yet in kindergarten).

A conceptual framework for developing measures of implementation and cost

Mathematica’s project team, together with OPRE and research and practice experts, developed the conceptual framework to guide our approach for measuring pathways to quality and improved outcomes for children in center-based care. Our ICHQ literature review completed in 2016 informs the framework. We recently revised the framework based on additional findings from data collected as part of a multi-case study.






Conceptual Framework Guiding ICHQ Project Measures Development



The ICHQ conceptual framework lays out five key functions, or areas, of ECE center operations that contribute to high quality care and better outcomes for children. Each of the key functions is defined by a specific set of activities and practices that allows us to measure implementation and costs for each function distinctly. The table below shows the key functions and examples of their related activities or practices.

All ECE centers (including community-based centers and Head Start centers) carry out the key functions to varying degrees to provide services to young children and their families. Findings from the literature review and discussions with experts suggest that the way a center carries out these key functions and uses resources to support them can influence the quality of a center’s services.

Five key functions

Key functions of center operations	Example activities
 Center Administration and Planning	<ul style="list-style-type: none"> • Planning and goal setting • Managing center finances • Managing and maintaining center operations
 Instructional Planning, Coordination, and Child Assessment	<ul style="list-style-type: none"> • Planning curriculum, activities, and lessons • Preparing, conducting, and sharing child assessments
 Structural Supports for Instruction and Caregiving	<ul style="list-style-type: none"> • Classroom ratios and group sizes • Staff qualifications
 Child and Family Support	<ul style="list-style-type: none"> • Identifying and assessing needs, or providing support services for children and families (beyond the care, learning, and development needs of children)
 Workforce Development	<ul style="list-style-type: none"> • Staff development, recruitment, hiring, and evaluation • Coaching, mentoring, and technical assistance

Mathematica’s project team set out to develop measures of implementation and cost for each of the key functions in the framework. **Implementation** refers to the combination of structural features and adopted practices that support the key function, and how staff carry out these practices. **Cost** refers to the value of the resources devoted to supporting each key function, including how staff use their time. Other elements of the framework—center characteristics and resources, and the context in which a center operates—can affect what centers do and how they use resources.

Center characteristics and resources. Center characteristics and resources are important to measure because they contribute to decisions that affect the implementation and cost of the key functions. Center characteristics include the ages of children served, profit status, whether a center is independent or embedded in a larger organization or chain, funding

mix, and number of children served. Center resources also comprise funding sources and donated space, labor, and materials.

Context and conditions. Federal, state, and community contexts and conditions drive center-level decisions about services and how to use resources. Capturing information about context and conditions serves two purposes. First, it helps adjust for differences in the costs of doing business in different geographic areas and markets, as reflected in wages and facilities costs. Second, some contextual information is important for interpreting patterns in the measures and ensuring applicability in a variety of contexts. For example, states have different licensing requirements that can set different floors for quality. The availability of professional development or quality improvement supports within a state or locality can also influence how a center supports quality.

Next steps

Using the conceptual framework, Mathematica is producing measures of implementation and costs to identify ways ECE centers can achieve quality. [A methods paper](#) describes how we developed draft measures using data from 30 ECE centers, and a series of research briefs defines the measures and summarizes preliminary results about how well they are working. Subsequent products will describe findings from a 2021 field test in which we

are testing and validating the measures in a purposive sample of 80 centers in four states. A planned ICHQ User's Guide will include the full complement of data collection tools—implementation interview protocol, cost workbook, and staff time-use survey—and guidance for producing the measures from the collected data and instructions for interpreting and using the measures. For more information, and to access project-related products, please visit the [OPRE project web page](#).



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