INTRODUCTION

By the time they are nine months old, infants in homes with few resources score lower on assessments of cognitive development and language than their peers in homes with more resources.¹ These early gaps widen as children get older, leading to major differences in school readiness depending on family income, race or ethnicity, and the primary home language.

High quality early care and education benefit young children and may especially help children whose families have low incomes. The benefits include short-term improvements in children’s readiness for school and their well-being, which take the form of enhanced social skills, fewer behavior problems, and increased language, reading, and math skills. Longitudinal studies demonstrate that the benefits can last into adulthood, leading children to pursue more years of education and achieve higher earnings.² Equity in access to high quality early care and education can be a pathway to narrowing these early gaps in school readiness and the long-term gaps in college and career outcomes for children from different demographic backgrounds.³

Parents use early care and education (ECE) settings to provide safe stimulating environments for their children, particularly when parents are working or in school.

POLICY CHALLENGES

High quality early care and education (ECE) enhances children’s well-being and decreases their risk of being poor as adults.

- The cost of ECE in California is prohibitively high for families living in poverty, who can find it difficult to access the few high quality programs that are available.
- Children in poverty are more likely to be in lower quality ECE settings than children from middle-income families are, even though some evidence suggests that high quality has a bigger impact for children living in poverty.
- Subsidies give parents access to care and support for employment in the short term and can be a path out of poverty for families who use them and find care that meets their needs. Yet participation rates remain low, particularly for Hispanics and Asians, perhaps because of a family’s unwillingness to apply or reapply for a subsidy, a parent’s inability to pay the required monthly fees, or a provider’s unwillingness to accept the subsidy rate.
- In most low-income communities, the scarcity of slots in high quality ECE settings limits access to this important support for parents’ employment and threatens the second path ECE offers out of poverty: investment in developing children’s human capital.
- The systems that support ECE quality (for example, career ladders and in-service training for educators) also require investment to sustain and scale quality services.
Cost-benefit analyses reveal that the public benefits of using high quality ECE outweigh the costs because both children and families contribute more to their home and society as a result. But the supply of high quality care is limited, and the costs of both providing and purchasing it are high. This is particularly true of care for infants and toddlers, which is expensive and has become scarce in many places around the country. When paired with a living-wage job, access to high quality ECE for the families who need it most, however, has the potential to help lift them out of poverty and put children on a path to positive outcomes in school and life.

ECE has a few distinguishing features:

- **Center-based versus home-based programs.** Center-based ECE programs include Head Start and center-based Early Head Start, public preschool/pre-kindergarten programs, and community-based child care centers. Home-based settings include a family, friend, or neighbor, or a larger home-based program closer in size and service to a center with multiple staff.

- **Licensed versus license-exempt settings.** Most states require all centers and the larger home-based providers (depending on the age and number of children and staff) to be licensed. The licensing process typically involves meeting minimum requirements for ensuring children’s health and safety as well as passing unscheduled, in-person inspections. License-exempt providers may include small home-based care providers (who care for their own children and one other unrelated child, for example) or a grandparent who is regularly caring for a grandchild. Some states have higher licensing standards than others.

- **Other factors.** Many other features of care influence cost, convenience for parents, and, in some cases, program quality and children’s outcomes. These include whether the program is full-day or half-day and full-year or part-year. Some states and municipalities offer universal programs, like the New York City pre-kindergarten program for all 3- and 4-year-olds, and others offer programs that focus on children with the greatest need. Some programs require all teachers to have a bachelor’s degree in early education, and others do not.

The quality of care may be influenced not only by the type of program parents choose, but also by existing standards for program quality; federal, state, and local regulations and guidelines; and market factors (affecting the supply of and demand for ECE). Yet it can be challenging to define the quality of ECE and help parents consider the tradeoffs they face as they decide which type of care to use. Definitions of high quality ECE services usually focus on both structural quality—or the features of the caregiving environment that can be improved through regulations—and process quality, or the processes adults use when they interact with children. Aspects of structural quality include group size and adult-to-child ratio, the staff’s education and credentials, whether they have completed training on a curriculum, and leadership and administrative practices. Examples of process quality include the availability and use of a diverse set of children’s books, the tone of adults’ interactions with children (whether they are warm and nurturing or harsh and punitive), and whether there is a positive environment for instruction. Federal, state, and local laws, as well as specific program standards and guidelines focus on different dimensions of quality and can function as tools to measure these dimensions as part of a state licensing review and in Quality Rating and Improvement Systems (QRIS). In addition, programs might seek accreditation by outside review bodies as
a way to distinguish themselves from other nearby programs. Parents are often unaware of what to look for in a program and might not be willing or able to pay more for a higher quality setting.

This memo discusses (1) access to ECE programs and (2) the importance of quality as a factor in keeping parents and children out of poverty or in lifting them out of poverty. As shown in the theory of change (Exhibit 1), child care subsidies are a primary strategy for giving families access to ECE and that investments in improving quality and expanding the number of slots in high quality programs are primary strategies for enhancing quality. After reviewing the theory of change, the memo describes the current policy and program landscape, the evidence behind different approaches to expanding quality ECE, and considerations for formulating policy recommendations in the future.

THEORY OF CHANGE

The theory of change (Exhibit 1) illustrates how quality ECE can develop human capital by offering families a direct route to a higher level of self-sufficiency. The process begins by:

1. Providing subsidies to help people access ECE and to support parents’ employment and education as pathways toward self-sufficiency and out of poverty.

2. Increasing the supply of high quality ECE by expanding programs, improving their reach, and enhancing their quality to improve children’s school readiness and support their transition to successful long-term academic achievement and employment. Examples include expanding and enhancing the quality and reach of the California Preschool Program, Head Start/Early Head Start, and Educare.

3. Investing in the overall infrastructure and continuous quality improvement of ECE in order to support and sustain high quality experiences for children and families. These investments include workforce training and support, as well as incentives for providers to enhance quality and serve families with low incomes.

These three inputs—funded and implemented by agencies and partners at many levels—could lift some families out of poverty in the short term and put children on a long-term course toward self-sufficiency that keeps them from entering adulthood in a state of poverty that could persist throughout their lives.
The diverse set of initiatives focused on improving access to high quality ECE includes funding specific types of care for families who meet certain income guidelines—or in some cases, care for all families—and investing in the systems and infrastructure that support quality (for example, workforce, data systems, and QRIS that make consumers aware of what quality looks like) (examples of inputs shown above). Investments in these interventions and solutions are potential pathways toward parental self-sufficiency in the medium-term. In the long-term, these investments can lift families out of poverty and ultimately lessen the risk of poverty for children by developing their human capital.  

Although child care subsidies (sometimes called vouchers) are one way to support families as parents work and go to school (a primary reason for the use of ECE), many families and child care providers do not know these subsidies are available. As show in the outputs column, increasing the awareness of (1) the availability of subsidies and (2) the importance of quality early care and education would lead to short-term outcomes including more parents working or in school as well as less household chaos and stress. These outcomes may, in turn, lead to more parental self-sufficiency as a result of higher labor force participation and higher rates of graduation (medium-term outcomes). This pathway to increased self-sufficiency is the first way in which increasing access to and the use of subsidies for high quality ECE can lead families out of poverty in the long term (potentially within five years).

The pathway out of poverty through an increase in the supply of high quality ECE and in the quality of the ECE system is also posited to stimulate children’s development and give them the skills and experience necessary to be successful in school and life, though these outcomes may not be observed until young
children achieve milestones associated with formal school settings and young adulthood (for example, grades, high school diplomas, and jobs). Policies and investments that make more high quality ECE slots available to children from low-income families may affect short-term outcomes, such as reducing family chaos and stress, in the same way that subsidies do. In turn, expanded access to subsidies and a larger supply of high quality ECE may build children’s skills in ways that improve the home environment. For instance, their improved social and communication skills may actually help reduce stress at home and improve the parent-child relationship, reinforcing a positive cycle of feelings for both children and parents. Together, all of these benefits may add to the direct effect of the positive early care environment on child development outcomes in the short term and improved kindergarten readiness in the medium term. Such outcomes may, in turn, improve other indicators of medium-term academic success, such as third-grade literacy and reading achievement. Both short- and medium-term outcomes can then influence long-term outcomes such as college/career readiness and workforce participation. The ultimate goal of the path is to decrease the risk of children entering poverty over the longest term (20 to 30 years).

Finally, access to and the expansion of the supply of high quality programs requires investments in the infrastructure that supports the ECE system, such as Continuous Quality Improvement (CQI), QRIS, and other similar approaches. These approaches include providing high quality professional development for the early childhood workforce and developing systems that not only coordinate and streamline access to services for families but also relieve the burden on them as they seek services and move toward self-sufficiency.

CURRENT POLICES AND PROGRAMS

Nationwide, low- and middle-income families access fewer ECE services, use less center-based care, and use a greater share of income for the services they use than higher-income families do. For parents of children from birth to age 5, the proportion using any type of ECE and the proportion using center-based ECE both increase with income (Exhibit 2). Home-based ECE is more commonly used by parents with low incomes. Research suggests that this setting, on average, does not offer the same quality learning experiences that center-based care does.
A number of factors that could potentially limit families’ access to ECE. For example, inflexible or nonstandard working hours, living in a rural area or a child care “desert,” and local providers who are dissatisfied with the subsidy reimbursement rates. However, this memo addresses the issue of cost and how subsidies can reduce the burden. In California, the cost of licensed center-based care was higher than the estimated national average, ranging from an average of $10,000 annually for preschool to $15,000 for infant care (2016 estimates). Licensed home-based care averaged $8,800 to $9,400 (for preschool and infant care, respectively; Exhibit 3).\textsuperscript{12} In San Francisco, recent annual estimates for full-time, home-based infant care and center-based infant care are as high as $21,000 and $29,000, respectively.\textsuperscript{13} Although there is no definitive source for or approach to computing a current national average cost of child care, Child Care Aware’s estimates provide a national average of about $8,700 for center-based preschool and $11,000 for center-based infant care.
Exhibit 3. Average annual cost of ECE: California, San Francisco, and United States (in dollars)

<table>
<thead>
<tr>
<th></th>
<th>Center-based preschool</th>
<th>Center-based infant care</th>
<th>Licensed home-based preschool</th>
<th>Licensed home-based infant care</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>10,000</td>
<td>15,000</td>
<td>8,800</td>
<td>9,400</td>
</tr>
<tr>
<td>San Francisco</td>
<td>22,500</td>
<td>29,000</td>
<td>20,400</td>
<td>20,800</td>
</tr>
<tr>
<td>United States</td>
<td>8,700</td>
<td>11,000</td>
<td>7,800</td>
<td>8,700</td>
</tr>
</tbody>
</table>


A. Expanding access through child care subsidies

Since 1990, the federal Child Care Development Fund (CCDF) has been administered through the Child Care and Development Block Grant (CCDBG) Act. It provides resources to states that allow low-income parents with children from birth to age 13 to work or attend education or training programs. Parents can use the subsidy to pay for care in a variety of settings (centers, family child care homes, and in their own home by a family member) depending on state requirements. States can provide vouchers (sometimes referred to as certificates) directly to parents that they can use to pay for care, or states can contract directly with providers for slots that families who are eligible for the subsidy can apply for and use. The latter are often referred to as contracted slots. In California, CalWORKs and the Alternative Payment Program are categorized as vouchers, and the other programs under Title 5, including the California Preschool Program, are contracted slots.

Before the CCDBG Act of 2014 was passed, the value of the voucher or contracted slot was usually determined by a “market rate survey or study” conducted by states every two years that set the cost per type of care in a given area. Based on federal and state guidelines, the “reimbursement rate” for each voucher and contracted slot was a percentage of that market rate (the federal recommendation was to set it at the 75th percentile). This meant that the reimbursement rate was less than providers—particularly center-based providers—were able to get from private pay families. As a result, centers often put a cap on the number of subsidized slots they made available, or they charged families using subsidies a fee to cover the gap between the reimbursement rate and their costs. Under the 2014 legislation, states are encouraged to include “alternate methodologies” for computing the cost of care, including the cost of higher quality care. This is meant to close gaps between the market rate survey findings and the true cost of providing high quality care. Under these guidelines, there is incentive for providers to accept vouchers or increase the number of contracted slots.14

At the national level, about 1.5 to 1.8 million children, on average, received a child care subsidy every month from 1998 through 2013.15 In 2014 and 2015, the number of children receiving subsidies was at an all-time low (1.4 million). Public programs providing ECE subsidies are designed to lessen disparities in
ECE access for low-income families and for families of diverse backgrounds, but far fewer children are served than are eligible. Only 15 percent of eligible children nationwide received child care subsidies in 2011–2012. In California, of the estimated 1.5 million children eligible for subsidies in 2015, only 218,000 (14.7 percent) received a subsidy for full-time care. In addition, there were large disparities in subsidy use by race and ethnicity. For example, of the almost 1 million Latino children eligible for subsidies, only 11 percent were enrolled in the subsidy program, and only 8 percent of non-Latino Asian children were enrolled. This compares with rates of 32 percent for non-Latino black children and 18 percent of non-Latino white children.

A variety of factors could affect CCDF participation rates, including knowledge about the program on the part of families and providers, a family’s willingness to apply or reapply, a family’s ability to pay the monthly fees, a provider’s willingness to accept the subsidy rate, and the instability of enrollment associated with some families on subsidies.

State subsidy administrative systems, and behavioral interventions within these systems, may improve access to ECE. For example, Maryland changed from a local, public system for administering child care subsidies to a private, centralized system. The goal was to promote more stable child care arrangements by un-linking the child care subsidy program from other social programs that may have had shorter eligibility periods. States have also tested behavioral interventions in how subsidies are handled administratively in order to reduce “churning.” For example, giving detailed information to parents about how to show they are meeting their work requirements to maintain their eligibility, along with providing appointment reminders, increased parents’ attendance at appointments and on-time renewals.

Innovation and improvement in the subsidy system can potentially increase access to high quality ECE. To simplify grants and reduce burden, some states and localities are coordinating diverse funding streams such that ECE providers receive one grant for families qualifying for support. For example, New York City’s EarlyLearn NYC combines funding from CCDF, Head Start, New York State’s Universal Pre-kindergarten program, and a city tax levy to fund grants to ECE providers. In turn, EarlyLearn NYC sets consistent standards for enrollment, hours of operation, quality, and family support services across these programs.

In February 2018, Congress passed a budget agreement that included a historic funding increase of $5.8 billion for child care with provisions that encourage states to invest in both expansion of access to ECE and

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**STATE SUBSIDY PROGRAMS**

1. **Vouchers**
   (CalWORKs, Alternative Payment Program)

2. **Contracts**
   (General Child Care, Migrant Child Care, California State Preschool Program, Severely Handicapped Program, California Community Colleges, Family Child Care Education Home Networks)
quality improvement. Estimates suggest that 230,000 more children could be served (Adams 2018). Federal and state leaders and other stakeholders are sharing ideas for how states can take advantage of this opportunity to expand access to subsidies and attend to quality at the same time.

B. Increasing the supply of high quality ECE

There are three ways to increase the supply of high quality ECE: (1) expand existing programs and provide more slots for children than there are now, (2) improve the quality of existing settings, and (3) open new high quality ECE programs. In this section, we review the leading programs now operating nationally and in California, describe their participation rates, and summarize the unmet needs of families as well as opportunities for increasing supply and improving quality.

Expand existing programs

**Head Start and Early Head Start.** Delivered in about 1,700 community agencies throughout the United States, Head Start and Early Head Start serve about 1 million children per year. Head Start provides preschool education and supportive services to families, primarily on a nine-month schedule in a classroom-based setting. Early Head Start provides year-round services (primarily home visiting, center-based, or some of both) for low-income pregnant women and families of children from birth to age 3 for the purpose of supporting children’s healthy development and strengthening family and community partnerships.

Community-based organizations or other institutions such as school districts can apply to serve as Head Start grantees. As such, they operate under the Head Start Program and Performance Standards and under additional rules and guidance from the federal government. The standards prescribe certain aspects of program operations, including targets for teacher education and training requirements, teacher-to-child ratios, and frequency of home visits (in Early Head Start), but allow for local design and flexibility in others (for example, selecting a curriculum is left to grantees).

Head Start and Early Head Start focus on children and parents from the same family. In addition to educating children, they typically provide parenting education, services that promote families’ self-sufficiency, and resources and referrals to community providers to meet families’ needs in a range of areas, such as transportation, housing, and health care. The federal government spent $9.2 billion on Head Start and Early Head Start in 2017, with the money going to grants to communities, administration through 10 regional offices, Migrant and Seasonal Head Start programs, the American Indian and Alaska Native programs, and support for a technical assistance system.

Although it is meant to be a program that functions at scale, Head Start served fewer than 32 percent of eligible 3- and 4-year-old children in 2015–2016, and in 2014–2015, Early Head Start served fewer than 3 percent of eligible children. In 2014–2015, Head Start programs in California served about 90,000 children, and Early Head Start programs served about 19,000 (total funded enrollment was 108,421).

Some states also used their own funds to support Head Start and Early Head Start slots.
**Early Head Start-Child Care Partnerships.** In 2014, Congress added funding to the Office of Head Start’s budget to support the development of the Early Head Start-Child Care Partnerships (EHS-CCP) program and EHS expansion grants for two purposes: (1) to allow new and existing grantees to partner with community-based child care providers to expand the number of community-based services for infants and toddlers and (2) to increase families’ access to high quality services. The aim of the program is to help Early Head Start and community child care programs learn together as they strive to meet the Head Start Program and Performance Standards and expand the number of high quality slots available to low-income families with infants and toddlers.

As of January 2017, 275 grantees partnered with more than 1,400 child care centers and 1,000 family child care homes to serve an additional 32,000 infants and toddlers. These entities included grants the Administration for Children and Families (ACF) awarded to communities in the Migrant and Seasonal Head Start program and in the American Indian and Alaska Native programs. Some states are testing innovative policies designed to accommodate parents’ needs, including extending eligibility for subsidies for a year.

The California Department of Education is a state EHS-CCP grantee funded to serve 240 infants and toddlers in northern California. There are 35 other EHS-CCP grantees in the state that are working with community-based providers to serve more families with infants and toddlers.

**Educare.** Educare is a year-round Early Head Start/Head Start enhancement model that leverages private, community, and federal funding to create state-of-the-art ECE centers to serve families with children from birth through age 5. There are 20 Educare programs around the country, 2 of which are in California. Designed to serve as a hub for innovative practices focused on closing the achievement gap, Educare centers provide services that meet high standards of quality. Requirements for teacher education and for teacher-to-child ratios are higher in Educare than in Early Head Start, for example, and they focus on the use of data for quality improvement. A network of researchers and local evaluation partners supports program improvement and ongoing implementation studies across all of the sites, and an impact evaluation in five of the sites is providing evidence of Educare’s impacts on quality and children’s outcomes.

Educare’s approach is grounded in four key evidence-based practices. These include data use, coaching and ongoing professional development, high quality interactions, and robust family partnerships. As a result, costs are higher than the typical rate paid via subsidized care in the relevant area, with an average of about $18,000 per child and a range of $14,500 to $24,000 in the five impact evaluation sites.

**State preschool programs.** In the 1970s and 1980s, as states and local education agencies considered options for how to best prepare children from low-income families for elementary school, they developed
preschool or pre-kindergarten programs for 4-year-olds modeled after Head Start. As of 2017, just over 1.5 million 4-year-olds were enrolled in 42 state preschool programs across the country. On average, states enrolled 33 percent of their 4-year-olds and 5 percent of 3-year-olds in state and local preschool programs in 2017. The costs of these programs averaged about $5,000 per year, but ranged widely (from seven states whose programs cost less than $3,000 per year to New Jersey’s cost of $12,000).

The California State Preschool Program began in 1965 for children who were at risk for abuse, neglect, or involvement in the child welfare system. In 2008, the state consolidated multiple programs under the umbrella of the California State Preschool Program. As of 2016, California served about 136,000 3- and 4-year-old children with part- (29 percent) and full-day (71 percent) services. Eligibility requirements include need demonstrated by income (for example, income at or below 70 percent of the state median) and other requirements. Funding in 2016 was about $980 million.

Increase the quality of existing programs

Whether public or private, licensed or license-exempt, ECE programs have the overarching goal of providing safe, stimulating experiences for children and ultimately enhancing their development. As policymakers and program operators work to ensure and enhance quality, they generally look to the research literature and quality experts for guidance on how to define and measure quality.

Defining and measuring quality. Focusing on quality improvement necessitates defining and measuring quality. As discussed earlier in this memo, ECE quality is often thought of in terms of structural quality (for example, teacher education and training, group size, ratio) and process quality (teacher-child interactions). Some aspects of quality—and structural quality in particular—can be measured through administrative records, ECE program reports, or checklists completed during licensing visits. Other aspects of structural and process quality are typically measured through observation. Two of the most commonly used measures of quality in ECE settings include a suite of measures referred to as the Environmental Rating Scales (ERS) and the Classroom Assessment Scoring System (CLASS). In Exhibit 4, we summarize some of the evidence for the associations between these quality measures and child outcomes.
SUMMARY OF THE EVIDENCE FOR ASSOCIATIONS BETWEEN STRUCTURAL AND PROCESS QUALITY MEASURES AND CHILDREN’S OUTCOMES

Based on the evidence from six comprehensive research reviews and a meta-analysis conducted in 2014–2015, Exhibit 4 summarizes the leading measures of early childhood quality and the evidence for their associations with children’s outcomes and other measures of quality. Of the nine structural quality measures reviewed, four of them—group size and adult-to-child ratio, staff education and credentials, environment and materials, and training and professional development—have evidence of associations with both teacher-child interactions and children’s outcomes in at least some studies. Although curriculum has been shown to be associated with children’s outcomes, the reviews did not describe any studies that examined associations between curriculum and the quality of teacher-child interactions. The authors concluded that three features—staff compensation and benefits, assessment and evaluation, and leadership and administrative practices—had a limited evidence base because they had not been tested by the end of the review in 2015. These areas remain of interest as potential contributors to quality and outcomes, and some are now being studied.

Most of the evidence of the association between specific program quality features, measures of observed program quality, and child outcomes is correlational. Few studies address the combined effects of structural quality features. There is at least some evidence that specific program features may not on their own be enough to support quality and children’s outcomes, but they may be essential for facilitating quality.

Exhibit 4. Summary of associations between structural and global process measures of early childhood education programs, observed teacher-child interactions, and children’s outcomes

<table>
<thead>
<tr>
<th>Structural quality measures</th>
<th>Associated with child outcomes</th>
<th>Associated with observed teacher-child interactions</th>
<th>Global process quality measures</th>
<th>Associated with child outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group size and adult-to-child ratio</td>
<td>X(^a)</td>
<td>X(^a)</td>
<td>Environment Rating Scales (ERS)(^b)</td>
<td>X(^a)</td>
</tr>
<tr>
<td>Staff education and credentials</td>
<td>X(^a)</td>
<td>X(^a)</td>
<td>Classroom Assessment Scoring System (CLASS)(^c)</td>
<td>X(^a)</td>
</tr>
<tr>
<td>Staff compensation and benefits</td>
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<td></td>
<td></td>
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<tr>
<td>Physical environment and materials</td>
<td>X(^a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training and professional development</td>
<td>X(^a)</td>
<td></td>
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<td></td>
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<tr>
<td>Curriculum</td>
<td>X(^a)</td>
<td></td>
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<tr>
<td>Assessment and evaluation</td>
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<tr>
<td>Leadership and administrative practices</td>
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</tbody>
</table>

Source: This table is from a federal government report by Caronongan et al. 2016\(^{39}\) and is based on a literature review conducted from December 2014 through February 2015.

Note: This table summarizes levels of evidence for each quality element based on association with outcomes and practices as reported in reviewed literature. In the first two columns, cells marked with an "X" indicate there was evidence of an association, and blank cells indicate no evidence of an association.

\(^a\) Some null findings also were reported.

\(^b\) There are four versions of the Environment Rating Scales suitable for different age groups. Here we list the current edition of each: the Infant/Toddler Environment Rating Scale, third edition (ITERS-3);\(^{40}\) the Early Childhood Environment Rating Scale, third edition (ECERS-3);\(^{41}\) the Family and Child Care Environment Rating Scale, revised edition;\(^{42}\) and the School-Age Care Environment Rating Scale, updated edition. Here we summarize findings from the ITERS-3 and ECERS-3.

\(^c\) There are four versions of the Classroom Assessment Scoring System (CLASS): the Infant Version, Toddler Version, Pre-kindergarten Version, and Secondary. Here we summarize findings from the Pre-kindergarten and Toddler versions.\(^{43,44}\)
Quality improvement approaches. Several state and local systems operate to both ensure that there are minimal quality standards across ECE programs and support quality improvement. In addition, many quality monitoring and improvement systems have been in operation for decades but have recently been revamped in an effort to respond to greater interest in quality improvement. In particular, updated approaches to “CQI 2.0” and “QRIS 2.0” may help support both access and quality in a way that will lead to a reduction in poverty for children and families.

Approach #1: Licensing. Over the years, policymakers and other stakeholders have put in place a set of supports for ensuring that ECE meets a “floor” of quality. All 50 states and the District of Columbia operate their own licensing systems focused on ensuring the health and safety of children in centers and home-based settings. State standards vary widely, and licensing standards have become stricter in some states, creating a higher floor and improving safety. Most types of ECE programs are licensed and thus governed by standards, but there are exceptions, including smaller, family-friend-and-neighbor care settings (see Exhibit 5 on page 14).

Over the past 10 years, the issue of ensuring quality child care in license-exempt settings has moved in and out of the policy spotlight. On the one hand, most states have allowed parents to use subsidies for license-exempt care and placed few requirements on the recipients of those funds (for example, attending even basic training sessions on children’s health and safety). On the other hand, the majority of license-exempt providers view themselves as a source of help for parents (who are often their own daughters, sons, or neighbors), not as child care providers and business owners.
Approach #2: Continuous quality improvement. Traditional approaches to CQI include the use of data at the program level for tracking progress on quality and outcome measures over time. In the past, outside technical assistance providers or evaluators would often provide the data and lead the effort to apply the information to quality improvement plans. As implemented today, a much more participatory version of CQI makes programs, frontline staff, and the early learning system the priority, with a dual focus on helping staff learn how to do CQI and test strategies in their early childhood settings. An outside expert consultant may facilitate group meetings and planning at the beginning of the CQI process but would soon work with program leaders to have staff lead the CQI activities. ACF and other federal agencies are working with states and local grantees to try new approaches to CQI. This may involve cross-site and cross-grantee learning, rapid cycle learning, and a deeper appreciation of the role of leadership and an organization’s climate in retaining staff and maintaining quality.

An example of innovative CQI approaches includes a project recently funded by ACF that involves cross-site learning and is based on an approach developed in the health care and manufacturing fields: the Breakthrough Series Collaborative. Using this CQI approach, child care centers in Boston are working together to test evidence-based approaches to improving the quality of teachers’ supports for children’s social-emotional learning.50 By gathering data on key elements of the approach, reviewing it within and across centers, and meeting regularly for learning sessions, the learning collaborative is working to improve quality while testing a new approach to CQI that may inform systems change for Head Start and community-based child care.
Another innovative approach to quality improvement is in California. As part of the Early Learning Lab project in Oakland, Mathematica (with funding from the David and Lucile Packard Foundation) is working with school districts on innovation and improvement, focusing on ECE topics of interest to the school district grantees. The Lab facilitates the learning process and provides support for reviewing data. In this way, the Lab and its partners focus on improving ECE quality and provide the tools for the districts to use the learning process in the future.

Approach #3: Quality rating and improvement systems. In the late 1990s in Oklahoma and Colorado, ECE and business leaders developed the idea of Quality Rating Systems as a way to rate community-based programs that served children who received subsidized care. In addition, the ratings were designed not only to help parents choose a program but also to motivate child care businesses to increase their quality (Mitchell 2005). The early rating systems were generally tied to tiered reimbursement programs. States paid higher subsidy rates for care in settings with higher ratings, especially those that achieved national accreditation. As a market-driven approach, the systems incorporated incentives for providers to participate, including funding for reaching higher levels of quality and additional resources to support professional development.

As quality ratings in ECE were adopted across states in the early 2000s, the emphasis on CQI also grew. This led to an expansion of the systems to include not only static quality ratings but aspects of improvement as well, resulting in a name change to Quality Rating and Improvement Systems, or QRIS. Many states funded coaches or technical assistance providers to help programs work on their quality improvement plans and make progress on increasing their ratings.

In addition, QRIS are designed to reward licensed centers and home-based providers for achieving higher quality ratings. State policymakers and stakeholders define quality as well as strategies to potentially improve it, such as providing access to a quality improvement coach or a financial incentive that can be used for staff development. The strategies help centers and home-based settings increase their QRIS rating as defined by the standards and measures developed by state policymakers and stakeholders. QRIS are usually built on licensing requirements; simply by having a license, a setting enters the QRIS at the lowest level (for example, a rating of 1 out of 5 in a state with a 5-point scale). Many states also define attaining the highest level of quality in their QRIS as attaining a standard from another system. For example, many states assign the highest rating to programs that are accredited by national organizations such as the National Association for the Education of Young Children and to Head Start programs (because they must meet the Head Start standards).

The number of QRIS increased from 9 in 2004 to 23 in 2010 just before the launch of the Race to the Top Early Learning Challenge (RTT-ELC), which incentivized states to develop what the U.S. Department of Education termed a Tiered Quality Rating and Improvement System. As of 2018, more than 40 states have such a system.
California’s 16-county consortium successfully completed its Round 1 RTT-ELC grant and QRIS validation study. The counties had some local control of aspects of implementation and measurement. State and county leaders are currently revisiting key details that may affect quality standards and quality improvement strategies.\(^{54}\)

QRIS focuses on all licensed early childhood settings, which in many states include Head Start/Early Head Start, state preschool programs, and the full range of community-based settings. It therefore excludes license-exempt settings and the providers, families, and children who use them. As a result, QRIS has the potential to perpetuate inequity because those settings lack access to the same kinds of quality improvement resources available through CQI and QRIS efforts.

**Approach #4: Other quality improvements.** Other resources for supporting and increasing program quality include federal, state, and local staff training and technical assistance systems, as well as coaching supports for early childhood educators. Additional activities that may enhance quality include implementing an evidence-based curriculum and providing coordinated services that meet family needs.

These approaches demonstrate promise for quality improvement:

1. *Trained and professionalized staff supported by coaches.* Coaching of trained, professionalized early childhood educators by professional coaches or teacher-mentors is associated with an improvement in classroom quality measures and in some cases, with enhanced outcomes for children.\(^{55}\)

2. *Evidence-based curriculum and staff training.* Implementing an evidence-based curriculum is associated with better classroom quality and outcomes for children. This is particularly the case when the curriculum, training, measures of classroom quality, and children’s outcome measures are aligned. For example, there is mounting evidence that a preschool math curriculum had an impact on math skills.\(^{56}\)

3. *Coordinated services that meet family needs.* Parents with limited time and resources have more success accessing and using available services if requirements are clear and stable and services are coordinated (one application meets the requirements for a number of programs, and services are co-located). In addition, services that meet parents unique needs are more likely to be utilized; examples include a child care center in which staff speak the same language as the family or a family home setting that is open until 9 p.m.

**Open new high quality ECE programs**

Another strategy for increasing the supply of high quality ECE is opening new high quality programs designed to meet family needs. States and communities could analyze needs based on projected birth expectancy and family mobility data, and they could work with policymakers and funders to plan to meet current and future ECE needs. Policymakers and community stakeholders could work together to determine how to incentivize providers to enter and stay in the child care market where they are needed the most.
Key considerations related to opening new programs include:

- **Providing grants for start-up costs.** Starting up a new program is costly, and organizations require support to cover those costs. They may include costs for equipment, various required inspections, and for hiring and training staff.

- **Encouraging the use of shared services.** When smaller centers share administrative services, they can offset costs that may seem too high to overcome on their own (such as payroll and human resources).

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**KEY FINDINGS FROM EXISTING RESEARCH**

Evidence for the paths out of poverty depicted in Exhibit 1 (the theory of change) comes from research on (1) subsidy use and programs to promote parents’ self-sufficiency and (2) comprehensive early childhood and family strengthening programs that had longitudinal impact evaluations and began in the 1970s through the 1990s. In addition, there have been more recent impact evaluations of specific ECE programs (some state pre-kindergarten programs, specific curricula, and professional development strategies), but many important policies have been studied only with less rigorous methods (for example, QRIS validation studies under RTT-ELC were mostly descriptive). This section highlights key findings on the effects of subsidies and quality.

**Evidence of effects of child care subsidy use**

Subsidies are hypothesized to improve the use of ECE by families with low incomes, thereby increasing rates of employment among parents and improving school readiness outcomes among children. Research suggests that subsidies do have a positive effect on parents’ employment, but there is limited rigorous research on how they affect children’s school readiness or other outcomes. Subsidies do help mothers work, as shown by several studies of the relationship between child care subsidies and employment for mothers with low incomes.⁵⁷ For children’s outcomes, a few studies actually suggest a negative relationship between subsidy receipt and children’s cognitive and behavioral outcomes, but most study designs are not rigorous.⁵⁸ A study of the expansion of child care subsidies in Quebec compared with the rest of Canada found that the former had negative effects on children’s cognitive outcomes, probably because children were in home-based care that may have been of poor quality.⁵⁹ Because children who receive subsidies differ from those who do not, it is difficult to determine the effects of child care subsidies without more rigorous research.

**Evidence for improved outcomes from high quality ECE programs or the expansion of existing programs**

Research shows that ECE can promote healthy development for children from birth to age 3. Most of the evidence comes from randomized controlled trials conducted between 1970 and the late 1990s. In a systematic evidence review of ECE for children from birth to age 3, Mathematica identified only four programs for which there was rigorous evidence of favorable effects on children’s language, cognitive, and/or social emotional or behavioral development: Abecedarian, Early Head Start, Infant Health and Development Program, and Parent-Child Development Centers.⁶⁰ The most consistent favorable impacts
were for children’s cognitive development, whereas impacts on physical health were mixed. In addition, short-term outcomes were more consistently favorable than those measured one year after completing the program.

A more recent impact evaluation, conducted in California and Arizona, focused on the Program for Infant/Toddler Caregivers, which was an intensive 18-month professional development and coaching intervention for teachers of infants and toddlers in centers (92 in this study) and home-based child care settings (152). There were no impacts 6 and 24 months after random assignment, either on program quality or on children’s outcomes.61

Longitudinal descriptive studies of infant/toddler programs, such as the Early Head Start Family and Child Experiences Survey (conducted from 2009 through 2012), offer a picture of program quality. In that study, ITERS-R and CLASS-Toddler scores were in the moderate quality range. 62 Although the children in these studies approached national norms on vocabulary assessments by age 3, they were still short of the norms, on average. In addition, the picture of their social-emotional well-being was mixed.63

**Early Head Start Child Care Partnerships.** To date, just one national descriptive study of EHS-CCP provides information about the extent of the partnerships, the number of participating providers, the number of children reached, and the nature of the partnerships.64 However, no rigorous national study of impacts is planned, nor is there any indication of rigorous local evaluations in the offing.

**Educare.** A recent randomized controlled trial of Educare found positive impacts on children’s language development and on parent-reported behavior problems when children were 12 to 34 months old. Educare had impacts on classroom quality (as measured by the CLASS) and on language development outcomes for children after they spent one year in the program.65 A follow-up of the same group is underway, but the sample is small, threatening the ongoing rigor of the evaluation and the potential for follow-up.

Ongoing descriptive studies and CQI efforts at local Educare sites take place regularly and serve as exemplary models for other programs. Program quality and children’s outcomes are consistently rated higher than those of the average Early Head Start and Head Start programs.66 These model programs, although higher in cost than other public ECE programs, seem to provide high quality services and achieves outcomes that are larger in the short term than those achieved by Early Head Start and Head Start alone.

**State and district preschool programs, including Head Start.** The evidence shows that state and district preschool/pre-kindergarten programs have a positive impact on children’s cognitive development at the end of the school year. A recent review of 12 pre-kindergarten programs found positive effects on at least one measure of school readiness at program exit.67 A meta-analysis of 84 pre-kindergarten evaluations concluded that the average effect on language, literacy, and mathematics soon after the programs ended was equivalent to about one-fifth to one-third of a year of learning.68 The Head Start Impact Study also found a modest impact on cognitive outcomes in the short term.69
Evidence for effects on children’s social-emotional skills is generally favorable but not as robust or consistent as evidence on academic outcomes. For example, an evaluation of Boston’s pre-kindergarten program showed favorable effects on executive function and emotional regulation, and an evaluation of Tulsa’s program also showed favorable effects on social-emotional outcomes, but an evaluation of Georgia’s program did not find effects on teacher-reported social skills and problem behaviors.

There is less evidence that ECE programs favorably impact children’s physical health. The national randomized controlled trial of Head Start found small favorable impacts on some health indicators—including the receipt of dental care, having health insurance, and parent reports of children’s health—at some points in the study but not in others. A recent study of short-term health outcomes for children in New York City’s universal pre-kindergarten program found increases in screening for infectious diseases, diagnosis of asthma and vision problems, and treatment for hearing and vision problems. However, there were no effects on many other health outcomes, such as injuries or diagnosis of infectious diseases.

Some studies indicate that there are longer-term effects of ECE, but few of the studies are rigorous. Rigorous research on the long-term effects of the Perry Preschool program found positive impacts: lower arrest rates, higher rates of high school graduation, and higher levels of employment and earnings, but the program took place in the 1960s, a very different context. A review of more recent pre-kindergarten programs found that six of eight programs reported some favorable impacts on cognitive achievement beyond kindergarten entry, but the impacts are smaller than the short-term effects, and these studies are generally less rigorous. In addition, two programs reported that initial favorable effects were not sustained into elementary school. However, many children in the comparison groups of these studies were in other center-based ECE.

ECE may help to address disparities in children’s achievement because children from families with low incomes, dual language learners, and Hispanic children have been found to benefit more from ECE. In a review of 13 high quality studies of pre-kindergarten that examined differences in effects across subgroups, 8 studies reported statistically significantly larger effects for children in low-income families. Studies have also found larger benefits for dual language learners and Hispanic children.

Home-based programs. There is less evidence that home-based programs produce the expected school readiness outcomes. Two ways to enhance quality include establishing staffed family child care networks and helping programs to create social supports among family, friend, and neighbor providers through which programs can access resources for children.

Evidence for rising quality in the early childhood education system

CQI. Evidence is emerging on the effectiveness of a group of CQI frameworks, which include Breakthrough Series Collaboratives for enhancing quality and movement toward improved supportive adult ECE behavior with children in classroom- and home-based settings. Although few studies in the social services and education areas have looked at the impact of CQI on targeted outcomes, two studies in the field of ECE are promising. A quasi-experimental study of the Un Buen Comienzo (UBC) Learning
Collaborative—part of a prekindergarten project in Chile to improve children’s vocabulary, oral comprehension, and writing—found that children in classrooms receiving the UBC intervention plus CQI have better language outcomes than children in classrooms that received only the intervention.\textsuperscript{84} The Collaborative to Support Trauma-Informed Practice in Early Care and Education, a descriptive study of a small network of six urban child care centers and one public school in Boston, found evidence of improvements in staff practices and knowledge, as well as in classroom practices (Douglass 2015).\textsuperscript{85} A new study, also in Boston, will pilot the Breakthrough Series in Head Start and child care with a focus on children’s social-emotional learning.

**QRIS.** Studies of QRIS focus on whether higher QRIS ratings relate to higher levels of independently observed quality or better child outcomes. State validation studies conducted as part of the RTT-ELC paint a mixed picture.\textsuperscript{86} One synthesis across 10 states found associations between QRIS ratings and observed quality, but in the 7 states in which child outcomes were measured, findings were inconsistent. There was not a clear pattern of associations between the quality ratings and child outcomes within or across states, and most associations tested were not significant.\textsuperscript{87} Non-experimental methods were used in these studies because it was not possible to conduct a rigorous impact evaluation.

**Other quality improvements**

1. **Trained and professionalized staff supported by coaches.** Coaching in a random assignment QRIS pilot study intended to deliver up to two hours of in-classroom support per week to teachers and home-based providers had a large impact on observed environment quality in just six months. Sites were offered a financial incentive to participate. Impacts were particularly large on the quality of interactions between the adults and the children (measured by the ERS).\textsuperscript{88} Unfortunately, the study did not include a follow-up to assess child outcomes.

2. **Evidence-based curriculum and staff training.** Although there are not many ECE curricula, evidence continues to build for some of them, and research is pointing to the conditions under which they are more and less effective. Findings from the recent study of the Building Blocks curriculum in New York City identify the importance of understanding what is happening in classrooms that are not receiving the study curriculum. Despite the fact that a large proportion of the children in the control group received more math instruction than expected, Building Blocks had impacts in the short term and in kindergarten.\textsuperscript{89} The team will be following the children into third grade.

3. **Coordinated services that meet family needs.** Families make it clear when they are happy with the services they receive. Studies of family engagement in services, of innovations to increase participation, and ways to streamline enrollment and eligibility processes all provide information that is important to creating and maintaining a system that meets the needs of families and children.
CONSIDERATIONS FOR FORMULATING RECOMMENDATIONS

From this review of ECE policy and practice, we recommend that California consider the following when developing recommendations:

- **Continue to emphasize efforts to improve access to high quality ECE.** There is inequity in children’s access to high quality ECE that could be addressed by increasing access to child care subsidies, increasing the supply of existing high quality programs, and developing new high quality programs.

- **Consider framing inequity in access to high quality ECE as an economic justice issue.**

- **Consider identifying how the new CCDBG dollars could be used to make high quality ECE more affordable and accessible.** With new funds, there is an opportunity for the dollars to be used to challenge state, county, and local leaders to use new and creative ways to reach underserved.

- **Consider developing flexible parental leave policies to address gaps in early child care.** Programs that encourage parental leave could result in better outcomes for children, families, employers, and the state.

- **Identify the barriers that are keeping families from applying for and using child care subsidies.** This may be an information problem (parents are not oriented to the availability of the benefit), a follow-through problem (parents know about the benefit, but the burden is high relative to the benefit), or a recertification problem (cycles for confirming eligibility are too frequent). Consider examining and evaluating what families who use the subsidy like about the system and what is working well to inform this discussion. Consider what existing platforms and programs could be used to enhance ECE access, quality, and systems. All of the components are there, but the question remains as to how to organize them in a way that is coherent, easy to use, and effective.

Questions

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ENDNOTES


A separate memo focuses on two-generation programs, but Head Start and Early Head Start are discussed here because they are traditionally considered premier early childhood programs.


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36 This may mask access issues caused by geographic clustering of children and families in need. Specific counties or school districts may not offer preschool services to all children and therefore the enrollment rates for higher need children may be lower.


52 Kirby, Gretchen, Pia Caronongan, Andrea Mraz Esposito, Lauren Murphy, Megan Shoji, Patricia Del Grosso, … Lisa Dragoset. “Progress and Challenges in Developing Tiered Quality Rating and Improvement Systems (TQRIS) in the Round 1 Race to the Top-Early Learning Challenge (RTT-ELC) States.” Washington, DC: Mathematica Policy Research, November


Includes one national program (Head Start); 11 state-funded programs (Arkansas, Georgia, Michigan, New Jersey, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, West Virginia, and Washington); and three district-level programs (Boston, Chicago, and Tulsa, Oklahoma). Karoly, Lynn A., and Anamarie Auger. “Informing investments in preschool quality and access in Cincinnati.” Santa Monica, CA: RAND, 2016.


77 Effects were found for reading and mathematics achievement through 3rd, 4th, and 5th grades (Michigan, New Jersey, North Carolina, Washington, and Tulsa [for one cohort of children]), and as late as 8th grade for one program (Chicago Child Parent Centers); Karoly, Lynn A., and Anamarie Auger. “Informing Investments in Preschool Quality and Access in Cincinnati.” Santa Monica, CA: RAND, 2016.

78 In Tennessee, an experimental study of the state pre-kindergarten program found that children who were randomly assigned to pre-kindergarten performed worse on some developmental measures in 1st grade compared with children in the control group (Lipsey et al., 2013). The Head Start Impact Study did not show an advantage of Head Start participation by the end of kindergarten, 1st grade, and 3rd grade. (Lipsey, Hofer, Dong, Farran, and Bilbrey, 2013; HHS, 2010)


81 In the Tulsa pre-kindergarten program, effects for Hispanic DLL students were larger than effects for Hispanic students who came from homes where English was the primary spoken language (Gormley, 2008). In the National Head Start Impact Study, effects on language and school performance at the end of kindergarten were larger for DLL students than for their native English-speaking counterparts; Gormley, William T. “The Effects of Oklahoma's Pre-K Program on Hispanic Children.” *Social Science Quarterly*, vol. 89, no. 4, pp. 916-936, 2008; U.S. Department of Health and Human Services. “Head Start Impact Study: Final Report.” Washington, DC: Administration for Children and Families, 2010.


