

Assessing Quality in Connecticut's Early Childhood System

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Every child deserves a strong start in life: children need to enter kindergarten healthy, happy, and eager to learn. That requires high-quality care early in life: research shows that early childhood represents a window of explosive learning that can set the course for a lifetime.

Providing quality care for young children benefits parents, children, childcare workers, and the state economy. In the first issue brief in this series, we estimated that if all young children who need child care were in high-quality settings, the state would gain \$13.4 billion in long-term returns. In this second brief, we delve deeper into the question of what is meant by “high-quality” settings. We review the literature analyzing the components of high-quality early care and education (ECE), assess the extent to which Connecticut’s center-based early care programs meet those standards,¹ and make recommendations for how Connecticut can continue expanding both quality and access.

Key Conclusions

- The best models for early care and education show significant enduring benefits in children’s test scores, graduation rates, employment, earnings, and other areas.
- High-quality early care and education has two key components: responsive classroom experiences *plus* wrap-around supports to meet the needs of the whole child and the family.
- Although most ECE programs in Connecticut do not include rigorous wrap-around supports, our state’s early childhood system as a whole includes those supports.
- Connecticut’s NAEYC-accredited ECE programs are roughly comparable to the best available models and bring an estimated \$2.3 billion in long-term returns to the state.
- Despite recent efforts to improve the quality of care, increasing *access* to care remains a significant challenge, especially for low-income families.

Recommendations to Improve Quality and Access

1. Preserve funding for wrap-around service programs for early childhood.
2. Continue current Office of Early Childhood quality improvement efforts, with greater involvement of parents and ECE providers.
3. Prioritize access to care for low-income families.

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Early Care is a Critical State Priority

In this section, we examine the importance of the early years, the role played by early care and education programs, and the role of the state in ensuring access for vulnerable children to quality programming.

The Importance of Early Childhood Supports

For children, the first few years constitute a critical time. The early years of a child's life – particularly the first two years – constitute a period of explosive brain development as children interact with the people and things in their surroundings, building critical neural connections faster than at any other point in life.² The most enriching environments for young children are highly interactive, with adults supporting a call-and-response (or “serve and return”) dialogue³ even with infants: a newborn smiles and a grandmother laughs, a one-year-old babbles and a sibling responds, a toddler asks a hundred questions and a parent provides a hundred answers. The experiences of early life are irreplaceable: a child left in a crib with little attention for the first year cannot fully “catch up” the following year.⁴ This narrow window for optimal development therefore represents an opportunity of critical importance.

As a result, it is critical to ensure that all children receive the assessments, interventions, and supports that they need. Given that not all families are experts in early childhood development, communities benefit from systems of professional support, whether in the form of pediatricians, social workers, early care and education providers, or home visiting professionals. Through these wrap-around supports, the needs of children and families can be identified and addressed early. These early interventions are less expensive and more effective: for example, early interventions for respiratory symptoms in preschoolers can reduce children's later incidence of asthma.⁵ Supportive wrap-around early care and education therefore bring lifelong benefits in children's physical, emotional, and cognitive development.⁶

Beyond systems of professional support, families face other disparities in the care they can provide for their children. Many families understand as well as any expert the things their children need but do not have the resources to provide for them: the constant interaction upon which early development depends is not always possible, particularly if all adults in a household are working. Safe public parks or places to walk are not available in many neighborhoods. The nutritious foods, new books, and age-appropriate toys from which a child would benefit remain out of reach to many families. For these reasons, coordinated state and local supports for the



**Trusenya Onofrio and Anthony
(age 3)**

“Through [our child care center's work with our whole family], my husband and I saw our son transform into a child that could control his tantrums and decreased his challenging behaviors, which greatly improved his speech and use of words more regularly - by using his voice to express what he needs and wants.”

families of young children are critical to ensure that children’s developmental needs are met.

Adults, too, derive critical benefits from support while they raise young children. Every new parent knows that raising a child is difficult;⁷ the early years bring sleepless nights and constant tests of patience, the stress of worrying about the baby, and vexing questions about optimal parenting. Once children are old enough to attend kindergarten, public education serves the dual purpose of stimulating children’s learning and providing a safe place for children to be for thirty or more hours per week. The relative lack of public provisions in the earlier years continues to reflect an outdated vision of the workforce in which most mothers were expected to stay home.⁸

In reality, as of 2015, fewer than three in ten Connecticut children under five lived in households in which a parent was not working.⁹ With the rare exception in which there are two parents in the household and their work schedules are staggered, most working families need some sort of child care arrangement. For some families, a nonparent relative can help watch one or more children at no cost, but free family child care is a luxury that many families lack. Moreover, child care by untrained family members does not always provide the benefits of professional early care and education.¹⁰

The most visible state support for families is therefore the provision of child care and preschool for families who cannot afford it. Early care and education enables children to grow and learn with other kids under the direction of trained educators; of equal importance, it frees parents to enter the workforce to support their families. Parents’ ability to work often hinges upon the availability of the *right* child care: specifically, care that is affordable, local, and available at the hours (and in the language) that a family needs.¹¹ State support is particularly critical for working families who are unable to afford child care on their own. Among families with children under five, over a quarter of all working parents and over half of single working parents qualify for child care subsidies due to low income.¹²

Access to early care and education can also provide the entry point to the wrap-around services described above: ECE providers are often the first to identify unmet needs and connect families to other critical lifelines, like breastfeeding support, diapers, developmental experts, family peer groups, and home



**Tracey Madden-Hennessy,
YWCA New Britain**

“More than 40 percent of the parents in our program utilize [the state child care subsidy] Care 4 Kids. For our infant/toddler program, most families need Care 4 Kids to make the cost affordable....Families using Care 4 Kids in our programs are disproportionately single moms and their children. In some local neighborhoods, the rate of single-parent households is more than four times that of the state rate, and in several neighborhoods, the rate of poverty for those families is 75-100 percent.”

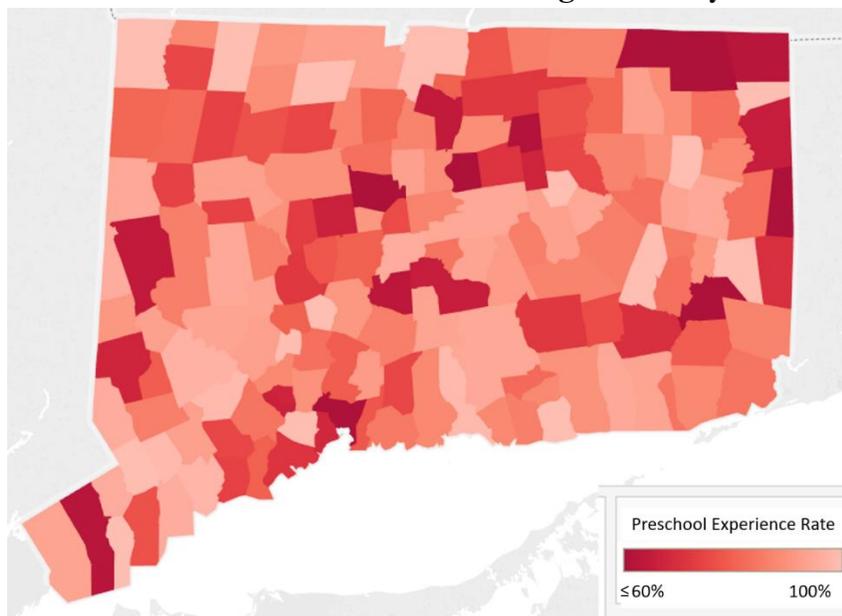
visiting programs.¹³ Differences in access to quality ECE programming early in life thus have the potential to either ameliorate or deepen lifelong disparities across racial and economic lines in kindergarten and beyond.¹⁴

Disparities in Access

Academic outcomes in Connecticut show critical need for effective, early intervention. Despite our state’s relatively high graduation rate and test scores overall, Connecticut’s education achievement gaps by race and income are among the widest in the nation. By fourth grade, Connecticut public school students overall achieve math scores on par with the national average. However, the gap between the math scores of Connecticut students who qualify for free and reduced price meals (FRPM) and those who don’t is among the widest in the country.¹⁵ Furthermore, disparities in academic achievement extend far beyond elementary schools: low-income students graduate high school at 20% lower rates.¹⁶ Without a high school education, residents are less likely to be employed or to earn a living wage.¹⁷

Unfortunately, many families lack access to *any* early care, let alone high-quality care that meets their needs. At the beginning of the 2015-2016 school year, 80 percent of kindergarteners in the state had attended preschool at some point. In District Reference Group A—our wealthiest school districts, such as Darien and Westport—virtually all (97 percent) students had attended preschool. By contrast, in District Reference Group I—our poorest school districts (all of which are large and urban), such as New Haven and Hartford—fewer than a quarter (73 percent) of students had attended preschool for even a single day.¹⁸ (See Figure 1 for district-by-district attendance.) For infant and toddler care, municipal data is not readily available, but statewide data shows that the number of slots for children aged birth to two meets only a fraction of the potential need.¹⁹

Figure 1. Rates of Preschool Attendance for Kindergarteners by District (2015-2016)



Source: CT Voices analysis of SDE data

Child poverty in Connecticut is highly concentrated among families of color,²⁰ meaning that it is children of color who are left behind. Moreover, residential segregation has contributed to a concentration of poverty, especially in urban core communities.²¹ Concentrated poverty within neighborhoods and municipalities compounds risk factors for children, especially when local schools and services cannot meet the community's needs.²² Put another way, these disparities show that we are too often failing when it comes to supporting the healthy development and educational achievement of children of color across the state. Ensuring access to quality early care and education is critical to achieving a more equitable future for children growing up in our state.

Early Care Works: High-Quality Models

Having established the importance of early care in the section above, here we explore what makes a high-quality early care program.

Decades of research show that prioritizing education for our youngest children does indeed help address some of the inequalities outlined above: high-quality care increases children's later chances of finishing school, finding jobs, staying healthy, and avoiding crime.²³ Longitudinal, prospective, randomized control trial studies of three programs offering high-quality early care and education—the Perry Preschool Project, Abecedarian Project, and CARE, hereby abbreviated collectively as the *flagship models* – show lifelong benefits in and outside of the classroom.

Analysis of the **Perry Preschool Project**, a preschool setting that encouraged active learning through problem-solving and reflection, found persistent lifelong benefits. Initial gains in IQ scores

“...high-quality preschool programs for young children living in poverty contribute to their intellectual and social development in childhood and their school success, economic performance, and reduced commission of crime in adulthood. This study confirms that these findings extend not only to young adults, but also to adults in midlife. It confirms that the long-term effects are lifetime effects.”

- Lawrence J. Schweinhart, *The High/Scope Perry Preschool Study Through Age 40 (2004)*

faded away, but lifelong benefits for female graduates of the program included better high school GPAs and higher rates of employment; males were less likely to be arrested or classified as mentally impaired.²⁴ These benefits conveyed a lifetime return of \$8.60 for every dollar invested in the program.²⁵

Similar research on the **Abecedarian Project** and **Carolina Approach to Responsive Education (CARE)** early care programs found that, compared to their counterparts who did not attend, female attendees were less likely to be arrested, more likely to graduate college, and more likely to be employed; male attendees had lower blood pressure, were less likely to use drugs, and earned between \$19,000 and \$24,000 more per year.²⁶ The researchers estimated that the Abecedarian and CARE programs generated \$7.30 in individual and social benefits for every \$1 invested.²⁷

Subsequent research has found that lower-quality programs have lesser impacts on children's outcomes. All three flagship models described above used research-based curricula, highly educated teachers, and wrap-around family supports. Conversely, in 2015, a study of Tennessee's state preschool program that found that attendees fared no better than their peers on third-grade standardized tests provoked deep concern among early care advocates —until a separate study found that only 15 percent of observed state preschools were considered high-quality on a nationally accepted rating scale.^{28,29} Similarly, studies of the federal Head Start program, which provides early care to more than one million children across the country, find its short-term impact to be smaller than that of the Perry Preschool, Abecedarian, or CARE programs.^{30, 31}

Flagship Models

Perry Preschool: Half-day preschool education and home visiting for 3- and 4-year-old African American children in poverty. Forty years of follow-up revealed improvements in educational, health, criminal activity, and economic outcomes.

Abecedarian: Five years of child care and other supports for low-income, at-risk infants. Thirty years of follow-up revealed improvements in IQ, educational attainment, employment, and health outcomes. Children's teenage mothers also showed improvements in education, employment, and reliance on social assistance.

Carolina Approach to Responsive Education: Five years of child care, home visiting, and early elementary supports for low-income at-risk infants modeled after the Abecedarian Project. Twenty years of follow-up revealed similar educational, vocational, and health gains.

Still, other research has found that early care and education programs can improve children's educational outcomes even without the resources of quality programs like Perry Preschool. Analysis of a national survey found that after accounting for a variety of socioeconomic factors, children in center-based care performed better on tests of reading and mathematics than peers who did not receive care.³²

In our own state, research shows that some of our programs are quite successful: the Early Childhood Regression Discontinuity Study (a 2016 report for the Connecticut General Assembly) found that on average, the state-sponsored preschool School Readiness program improved attendees' early literacy and numeracy skills,³³ with effects 75 percent larger than the average achievement effects of successful K-12 educational interventions. This study also found that on

average, School Readiness programs in Connecticut had a level of performance that was close to the effectiveness of the highest quality programs (such as the Perry Preschool and Abecedarian programs).³⁴

What Constitutes Quality

In this section, we examine major tenets of the three flagship models that showed the greatest successes for young children: Perry Preschool, Abecedarian, and CARE. In the next section, we examine the same aspects of some of the best Connecticut programs.

Data from the Office of Early Childhood show remarkable success for Connecticut's School Readiness programming. The authors of Connecticut's study did not draw conclusions as to what makes School Readiness so effective, or how other programs might meet similar levels of quality. To consider quality, then, we look to the flagship models.

The successes of the three flagship programs are of critical importance to researchers given the high-need populations served. These programs were dedicated to recruiting low-income children, primarily from very poor African American neighborhoods, often with other risk factors including low maternal education. All three studies evaluated children over many years on measures beyond academic testing, including high school graduation rates, earnings, employment, and avoidance of crime – and *all three found significant positive results in these non-academic measures*. Given the OEC's emphasis on helping the most vulnerable communities and families access quality early care,³⁵ it is important to identify factors that contributed to the success of the flagship programs with at-risk young children.

Perry Preschool, Abecedarian, and CARE were uniquely successful in combining the core programming of early care and education with wrap-around supports to meet the full needs of a developing child. In the classroom, these models emphasized significant teacher-child interaction, responsiveness, play-based activities with underlying educational goals, and low child-teacher ratios. Wrap-around supports, meanwhile, included some or all of nutritional help, medical support, home visiting, and follow-up care during early elementary years. In other words, **in addition to core curricular rigor emphasizing teacher-child interactions and play, the most successful, longitudinally tested early care and education models prioritized ensuring that children's needs in and outside the classroom were met despite risk factors at home**. After all, a child who comes to school hungry, anxious, or in need of medical care is not fully available to learn.

It is important to consider why the Tennessee and Head Start studies did not achieve the same results as the flagship studies. In Tennessee, external observations of classrooms showed that students spent too much of the day on routine activities like meals or transitions and whole-group activities, rather than small groups or center activities. Assessment of the program also noted that teachers had few professional development opportunities and little oversight.³⁶ In response, Tennessee is now utilizing federal Preschool Development Grant funds to investigate the benefits of different wrap-around supports and programming policies to improve program quality.³⁷ And though the Head Start study found smaller effects for preschool programming than the flagship models, critics have noted that Head Start quality varies greatly between centers, with some having better-qualified teachers, smaller child-teacher ratios, and classrooms offering more early literacy and math activities than others.^{38, 39}

SOME KEY WRAP-AROUND SUPPORTS

- Home visiting
- Parent training
- Assessments and referrals
- Food and diaper banks
- Health and mental health supports

We also note that both the Tennessee and Head Start studies used only academic success as metrics of ECE effectiveness. Naturally, academics are a primary goal of the education system, but children’s development into successful adults is shaped by numerous other factors that begin at birth, such as physical health, emotional control, and social skills. Given that children are growing in many ways beyond early literacy and numeracy in the first years of life, it is critical that a quality early childhood system address *all* areas of development for true long-term gains. Studies that have examined only academic gains may fail to capture some of the most significant benefits of early care and education.

Quality in Early Care and Education Programs in Connecticut

In this section, we compare some of Connecticut’s ECE programming to the flagship models to identify markers of quality.

In the last section, we established that the highest quality models for early care and education combine developmentally-informed, instructional quality (small groups, child-teacher interactions, play-based learning) with wrap-around supports) to meet the needs of the whole child. Less successful studies like Tennessee and Head Start highlight the importance of continual quality assessment and improvement to ensure the best outcomes. In this section, we examine to what extent any of Connecticut’s early care programs reach similar levels of quality, including the School Readiness programs assessed in the Regression Discontinuity study.

Though few early care programs in Connecticut are able to provide wrap-around supports themselves, Connecticut benefits from a diverse early childhood system in which interconnected programs work together to meet the needs of young children and families. Data – including reports from Connecticut Voices for Children⁴⁰ – and advocates have made clear that the system is not

currently equipped to meet the *quantity* of need in Connecticut.⁴¹ However, in examining *quality* in light of the state’s wrap-around services and externally-accredited programs, we contend that **when programs and services coordinate well together, Connecticut’s early childhood system as a whole has the ability to provide wrap-around care to supplement classroom learning.**

Vital Wrap-Around Programs

Connecticut’s early care system is a mixed-delivery model: a combination of public and private providers serve children aged birth to five in a variety of centers, schools, churches, and homes. Most are licensed, though several hundred are exempt; some programs have attained accreditation through one or more accrediting agencies, while many others operate under their own standards for improvement. Provider training and compensation, program hours, languages spoken, and wrap-around supports vary considerably across programs. The diverse variety of programs helps to meet varying family needs, including nighttime and weekend care, programs in languages other than English, and different kinds of curricula.

A wide variety of wrap-around programs for families complement this mixed delivery model. Connecticut’s early childhood system relies on a network of assessments, referrals, child development support, and family support programs to deliver nurturing environments. These supports may be provided by municipalities, the OEC or other departments, or through private providers, but all interface with one another to meet the needs of families. Although the early childhood system involves many moving parts, high-quality programs *do* exist to support the whole child and family. (For an index of some of Connecticut’s state-funded programs, see the glossary at the end of this report.)

This system is not perfect: service coordination is not always smooth, some programs are geographically limited, and service agencies are not always fully aware of other available programs. Despite these flaws, we contend that **when programs are well-coordinated, families in Connecticut can access similar wrap-around services to those in the flagship models of early care and education.**

We provide an example of one hypothetical family’s experience below:

After Mr. West decided to return to work after caring for his son as a toddler, he called the 2-1-1 child care line to identify a child care center in the family’s neighborhood. Due to their low income, the West family qualified for a Care 4 Kids subsidy, which helped them afford a nearby high-quality child day care program. Within a few months, the teacher made note of some behavioral concerns and recommended that the Wests consult the Help Me Grow info-line for a developmental screening. Based on screening results, Help Me Grow connected the Wests with providers who could support both the family and the child, including Birth to Three. After an assessment, a team from Birth to Three helps to diagnose the child with autism spectrum disorder, provide referrals to developmental specialists, and coach the family to meet more of their son’s needs at home. At age five, the West child enters a local public school in a mainstream classroom with an Individualized Education Plan (IEP) in place.

Externally Accredited Programs

To compare the quality of classroom experiences with those of the flagship models, we looked at externally accredited programs. Not all programs pursue accreditation, and although different accreditation standards vary, all bring elevated standards for criteria such as health and safety, nutrition, child-teacher ratios, and observed child-teacher interactions. As of 2016, accredited programs comprised 31 percent of infant and toddler slots and 42 percent of preschool slots.

Of those, more than three-quarters of accredited slots were accredited through the National Association for the Education of Young Children (NAEYC),⁴² which is often considered the gold standard for early care and education. Notably, School Readiness programs – the programs that brought high academic gains in the Connecticut study – and Child Day Care centers are required to achieve NAEYC accreditation or Head Start approval within three years.⁴³ Through the *Thrive!* Program, the OEC also provides support for programs pursuing NAEYC accreditation.⁴⁴ Given the prevalence of NAEYC accreditation in Connecticut, particularly in state-funded programs, we focus on NAEYC standards in this brief.

Pursuit of NAEYC accreditation is an extensive process requiring documentation of credentialed teachers, ongoing self-study, low child-teacher ratios, and external observation during site visits by NAEYC officials. Though programs' curricula may vary – in fact, the Office of Early Childhood latest quality standards indicate that curricula indeed *should* vary based on the needs of individual children⁴⁵ – external evaluators assess interactions to ensure that children have high-quality interactions with teachers, small group time, and guided play.⁴⁶ As an additional benefit, because centers often work with the Office of Early Childhood in their pursuit of accreditation, NAEYC-accredited centers are likely to be more familiar with other services, increasing the likelihood of referrals and cooperation with other agencies.

In Figure 2, below, we compare the standards for Perry Preschool, Abecedarian, and CARE with NAEYC-accredited programs in Connecticut (combined with some of Connecticut's wrap-around services). From this comparison, **we find that, when combined with wrap-around services, Connecticut's NAEYC-accredited programs may bring a level of quality similar to the high-quality programs studied in the Perry Preschool, CARE, and Abecedarian studies.**

Figure 2. Comparing Features of Flagship Models and NAEYC-Accredited Centers in Connecticut

	Perry Preschool	Abecedarian	CARE	NAEYC Accredited Centers within Connecticut Early Childhood System
General description	Center-based preschool	Center-based infant-toddler care and preschool	Center-based infant-toddler care and preschool + home visits OR just home visits	Variety of types of private and state-supported infant-toddler and preschool care; various other child development and family support
Child Ages	3's and 4's	0 to 5	0 to 5	birth to five (mostly preschoolers)
Program Duration	School year	Full year	Full year	<i>Varies</i>
Program Hours	2.5 hours	Full day	Full day	<i>Varies</i>
Care delivery type	Center-based + home visits	Center-based	Center-based + home visits	Mix of center-based, school-based, and family child care
Target group	Children with low socioeconomic status and low maternal IQ	Low-income children at risk of delays, mostly African American	"At-risk children," mostly African American	Varies; state support prioritizes low-income families, low-income towns
Teacher training	B.A., certification in elementary, early childhood, and special education	B.A. and either M.A. in education or demonstrated competencies as teachers	B.A. and either M.A. in education or demonstrated competencies as teachers	75% of lead teachers have at least a Child Development Associate's; Connecticut as a whole moving towards universal bachelor's degree in state-funded centers
Curriculum	High/Scope curriculum model – supports self-initiated learning,	The Abecedarian Approach: Language Priority, Conversational	The Abecedarian Approach: Language Priority, Conversational	<i>Varies</i>

	small- and large-group learning	Reading, Enriched Caregiving, and “LearningGames”	Reading, Enriched Caregiving, and “LearningGames”	
Child-teacher ratio (birth to two)	N/A	3:1	3:1	3:1 or 4:1 (depends on group size)
Child-teacher ratio (twos)	N/A	4:1	4:1	4:1 (Connecticut limitation)
Child-teacher ratio (preschool)	6:1	6:1	6:1	6:1 or 10:1 (depends on group size)
Medical	none	Basic medical care by staff pediatricians and nurses on-site	Basic medical care by staff pediatricians and nurses on-site	Licensed centers employ health consultants. <i>State medical supports:</i> Medicaid program; Healthy Start for enrollment assistance; Help Me Grow for identifying developmental needs; Birth to Three
Home visiting	1.5 hour biweekly to mother and child	2 - 3 visits per month for infants and toddlers; 1 - 2 visits per month for preschoolers	2 - 3 visits per month for infants and toddlers; 1 - 2 visits per month for preschoolers	<i>State home visiting supports:</i> Birth to Three, Early Head Start, Minding the Baby, Nurse Family Partnership, Child First, Early Childhood Consultation Partnership, Nurturing Families Network, Parents as Teachers, Family Resource Centers
Follow-up Care	N/A	Half received three years of year-round support with home visits by a teacher	All received three years of year-round support with home visits by a teacher	<i>State support:</i> school-based services in K-12; home visiting programs described above

Implications

Given four pieces of evidence:

1. Short-term academic gains in Connecticut School Readiness programs do approach the effectiveness of the flagship models;
2. The existence of wrap-around supports similar to those provided in the flagship models;
3. Connecticut's high rate of NAEYC accreditation; and
4. Standards of NAEYC accreditation – the most common form of accreditation pursued in ECE programs and that required of School Readiness and Child Day Care programs – have similar quality expectations as the flagship models; and

We conclude that the long-term benefits from NAEYC-accredited programs in Connecticut may approach the long-term benefits of the flagship programs. Based on our calculations in the first brief in this series, **we estimate that NAEYC-accredited programs alone bring an estimated \$2.3 billion in long-term returns to the state. If all families who need child care in the state could access programs of similar quality, the state would gain \$13.4 billion in long-term returns.** Maximizing quality and access should therefore be of critical importance to our state as we look to our state's future.

Other Quality Considerations in Connecticut

In this section, we briefly mention other elements of quality that should be considered.

Family Child Care

In this brief, we examined highly successful center-based care in and outside of Connecticut. However, family child care constitutes an essential piece of Connecticut's early care: just over half of all licensed child care facilities in our state are family child care providers, and most infant and toddler care is provided through family child care. Although family child care is not always highly regarded, like centers, family child care providers are subject to licensing and quality standards by the state (though some of these standards, like child-teacher ratios, are different from those for center-based care). Although it is not the focus of this brief, Connecticut has a promising model for quality: in 2015, it was found that providers who worked with All Our Kin scored more than 50% higher on the Family Child Care Environmental Rating Scale-Revised (FCCERS-R) quality rating scales (used to assess family child care providers) than other providers.⁴⁷

Quality Improvement Efforts by the Office of Early Childhood

Early childhood providers receive a wide variety of supports and quality assurance through the Office of Early Childhood, including scholarships, ongoing professional development and technical assistance, and licensing. The Office of Early Childhood is moving to increase quality across the board. One of the first improvements after the advent of the OEC in 2013 was an increase in the frequency of state inspections.⁴⁸ More recently, the OEC has worked to support programs in pursuing accreditations,⁴⁹ worked to propagate the Early Learning and Development Standards (ELDS),⁵⁰ strengthened programs in conjunction with other state agencies,⁵¹ devised a Core Knowledge and Competencies framework for early care professionals,⁵² and developed a pilot model for a statewide Quality Recognition and Improvement System (QRIS).⁵³

Teacher Training and Compensation

Research shows that teachers with bachelor's degrees or higher run higher quality classrooms, including richer language environments and more responsive teacher-child interactions.⁵⁴ As part of broader quality improvement efforts, Connecticut is working towards a universal bachelor's degree requirement for lead teachers and directors in state-funded centers. However, numerous barriers reduce individuals' ability to attain degrees, including education costs, required time commitment, low compensation even after attaining degrees, and limited available educational pathways.

Compensation may constitute the most significant barrier: in our previous brief, we noted that the 29,000 ECE providers in the state of Connecticut earn an average of just \$14,700 per year.⁵⁵ For most teachers, a salary at this level is not enough to raise a family or return to school. Moreover, after attaining a bachelor's degree, many ECE providers are qualified to teach in public elementary schools, where they can expect to earn at least twice as much. Low teacher compensation undoubtedly has impacts upon the quality of care.

Innovative Model: the Preschool Development Grant

Through the federal Preschool Development Grant, Connecticut is piloting a program to combine high-quality, accredited classroom instruction with built-in wrap-around services, much like the flagship models. Quality considerations include hiring teachers with relevant bachelor's degrees, ongoing professional development, full-day instruction, and salaries comparable to those of local K-12 teachers.⁵⁶ Because of these high standards, the program uses \$12.5 million in federal funding to serve about 700 children. The Preschool Development Grant offers both a model for high-quality, comprehensive programming and a reminder of the high cost of quality care.

Persistent quality limitations in Connecticut

Although we deem Connecticut's NAEYC-accredited centers to meet high quality standards, the majority of infant/toddler and preschool slots exist within programs that are licensed by the OEC but not accredited by external agencies. Programs of all kinds can deliver excellent care. However, without the same quality controls and standards found within NAEYC and other accreditation agencies, we cannot expect the highest returns from all non-accredited programs. Some structural factors also impact the quality of the whole early childhood system, including disjointed funding streams, inequitable geographic distribution of programs, and looming budget cuts. Moreover, unlike the all-inclusive flagship models, Connecticut's different programs and supports are not centrally coordinated, thus requiring families to navigate different referrals, schedules, and program requirements. All of these factors must be addressed systematically to address quality for all programs.

Recommendations

Given the enduring limitations described above, in this section we consider how Connecticut can continue expanding both quality and access.

Preserve funding for wrap-around service programs for early childhood

Many of the vital wrap-around services that we consider paramount to a quality system are housed within OEC budget line items that often face threats of funding cuts or elimination during lean budget years.⁵⁷ Over recent years, smaller line items have faced greater risk, perhaps in part because they have

smaller constituencies and advocates than large programs like School Readiness and Child Day Care centers. **However, maintaining wrap-around programs is critical to ensuring high-quality early care and education.** Without services like home visiting, developmental assessments, and family literacy supports, Connecticut's entire early childhood system will be weaker.

Continue quality improvement efforts, with greater involvement of parents and ECE providers

In the last section, we described some of the Office of Early Childhood's efforts to improve quality, such as through facilitating accreditation, early learning standards, and heightened teacher credentials. Although new initiatives and requirements pose very real challenges for some providers, these quality improvement efforts are critical to elevate all early care programs to standards that bring the highest benefits to children and families. That said, quality improvement in ECE should always be inclusive of ECE providers and the families who seek and utilize child care to ensure that evolving standards reflect the priorities of families and feasibility for providers.

Prioritize access to care for low-income families

Even as the Office of Early Childhood invests in quality improvement efforts, budget cuts threaten access for the most vulnerable families. Heightened federal quality standards without accompanying budget increases led to the closure of the Care 4 Kids child care subsidy program in late 2016 to almost all new families. Although the state budget process for Fiscal Years 2018 and 2019 is still in process, Care 4 Kids is not predicted to reopen until mid-Fiscal Year 2019.⁵⁸ Without access to Care 4 Kids, young families in 49 percent of Connecticut towns have no local state-funded early care programming at all.⁵⁹

Moreover, many state-funded programs (particularly School Readiness and Child Day Care centers) depend on Care 4 Kids as a significant source of funding:⁶⁰ without Care 4 Kids, other key sources of early care for low-income families are destabilized as well. **Improving quality is critical, but high-quality programs bring no benefits to the children and families who can't afford them.** In the search for higher quality across the board, our state must not sacrifice access and equity.

Conclusion

In our last brief, we quantified some of the statewide economic benefits of early care and education. Decades of longitudinal study of three flagship models for early care and education programs illustrate lifelong benefits for participants that extend far beyond the classroom to higher education, employment, earnings, and health outcomes. When Connecticut's wrap-around services are integrated with the most rigorously evaluated, accredited programs, the quality of care approaches that of the best, proven models, bringing an estimated \$2.3 billion in long-term returns to the state. Many other programs without the same accreditation may be of a similar caliber, but overall Connecticut's early care programs have mixed quality. Continued efforts to improve both quality and access will bring enduring benefits to families, children, and our state economy.

Glossary: State- and Federally-Funded Early Childhood Programs

This list does not represent an exhaustive catalog of state- and federally-funded early childhood programs. To recommend adding a program to this list, contact report author Nicole Updegrave at nupdegrave@ctvoices.org.

Early Care and Education (ECE) Programs

School Readiness (Priority and Competitive)

provides center-based preschool spaces in school districts with high levels of poverty.

Child Day Care Centers are state-funded centers with

preschool and infant/toddler spaces that serve children with family income below

Head Start is a federal program that provides preschool programming to children below the poverty line. (See “Quality Improvement Efforts” for the state’s role in Head Start.)

Early Head Start is a federal program that provides infant/toddler programming to children below the poverty line. (See “Quality Improvement Efforts” for the state’s role in Head Start.)

Care 4 Kids is a state childcare subsidy for low-income families, teen parents, and TANF recipients to access infant/toddler care, preschool, and school-aged after school care.

Smart Start is a state investment in expanding preschools in public schools that serve areas of high need.

Public school provisions include preschool classrooms within charter and magnet schools; programs for children receiving special education through the Individuals with Disabilities Education Act (IDEA), and other local public school preschool provisions.

Key
Programs eliminated last year
Programs with proposed cuts this year
Programs proposed for elimination this year

Wrap-Around Supports

Birth to Three provides early intervention services for infants and toddlers with disabilities and to their families. The program is a federal entitlement under the Individuals with Disabilities Education Act (IDEA).

Child Development Infoline is the main access point for families seeking to access Birth to Three, Help Me Grow, special education preschool, or other supports.

Children’s Trust Fund

~~Help Me Grow provides developmental questionnaires to identify at-risk children and connect their families with the community-based services they need to address concerns early.~~

~~Family Empowerment Programs included eight support programs serving parents and families dealing with serious issues that put children at risk for abuse and neglect.~~

~~Family School Connection provided home visiting and other supports for the families of chronically absent or truant children and children with academic or behavioral problems.~~

The Nurturing Families Network identifies and supports at-risk families through home visiting, telephone support, service referrals, parenting education, and family support groups.

~~Healthy Start connect low income pregnant women and their young children with health care referrals, Medicaid enrollment assistance, safety information, and other services.~~

The Positive Parenting Program (Triple P) offers parenting classes and resources.

The Stranger You Know is a training dedicated to preventing childhood sexual abuse.

Family Development Training is a program that teaches various service providers to empower families rather than solely reacting to crises.

Early Childhood Consulting Partnership represents an evidence-based OEC-DCF collaboration to bring mental health consultation to early care and education centers.

The Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program is a federal program that supports home visiting and other services in high-risk communities.

2-1-1 Child Care is the state's child care resource and referral agency, which assists families in finding child care that meets their needs.

~~**Improving Early Literacy** was a state grant that for at least five years matched private philanthropic funds to communities to support kindergarten transitions and early literacy efforts.~~

ECE Programs with Robust Wrap-Around Supports

~~**Even Start** is a small two-generational program that provides early care and family literacy supports for families of young children in which one or more parents has basic reading and/or English-as-a-second-language needs.~~

Family Resource Centers provide birth-to-ten programming to help students become kindergarten ready, early diagnostic programs to improve child health and development, parenting supports, parent outreach to promote child well-being and provide support and education to family daycare providers. Family Resource Centers promote comprehensive, integrated, community-based systems of family support and child development services located in public school buildings.

Grant uses federal funds to expand access and quality in state-funded preschool programs for about 700 children. PDG classrooms includes family engagement, connections with K-12, and mentoring and coaching for ECE providers.

Quality Improvement Efforts

Licensing is the OEC's primary line of quality assurance, through which the state assesses child care providers and camps based on state statutes and regulations.

The **Accreditation Facilitation Project** assists early care programs in pursuing NAEYC accreditation.

The **Program Leadership Institutes** offers courses for early care program administrators towards meeting OEC, NAEYC, and Connecticut Director Credential programs.

The **Quality Recognition and Improvement System (QRIS)** assesses child care centers and homes according to their Workforce, Health & Safety, and Learning & Environment. The QRIS model will be piloted in fall 2017.

Child Care Quality Enhancements promotes innovation in quality in state-supported child day care programs.

School Readiness Quality Enhancements promotes innovation quality in School Readiness programs.

State Head Start increases the number of Head Start slots, enhances program quality, and/or extends program hours.

The Early Head Start – Child Care Partnership expands access to high-quality programming for infants and toddlers below the poverty line, through partnerships with existing child care providers.

~~**Community Plans for Early Childhood** supports local early childhood councils or other local initiatives.~~

The **Early Learning and Development Standards (ELDS)** compile a framework for children's development from birth to five for use by early childhood professionals and families.

The **Core Knowledge and Competency Framework (CKCs)** communicates expectations of shared principles and practices for early childhood professionals. The OEC is working to adapt it for different types of professionals.

Public Act 17-41 amends previous legislation to require all ECE educators to achieve a bachelor's degree in an early childhood-related field from a regionally accredited institution of higher education by 2021.

Endnotes

¹ This brief does not provide a comprehensive evaluation of all child care settings in the state; rather, we examine quality in center-based care settings, which represent the most highly regulated form of care and the subject of significant state investment.

² For a useful and accessible explanation of early brain development, see Urban Child Institute. *Baby's Brain Begins Now: Conception to Age 3*. <http://www.urbanchildinstitute.org/why-0-3/baby-and-brain>.

³ The serve-and-return model is based on a longstanding body of research. For a useful summary, see Beverly Falk. *Defending Childhood: Keeping the Promise of Early Education*. 2012. For an accessible resource to learn more, see Harvard Center on the Developing Child. *5 Steps for Brain-Building Serve and Return*. Retrieved from <http://developingchild.harvard.edu/resources/5-steps-for-brain-building-serve-and-return/>.

⁴ See summary of neglect research in National Scientific Council on the Developing Child. *The Science of Neglect: The Persistent Absence of Responsive Care Disrupts the Developing Brain*. December 2012. Retrieved from: <http://46y5eh11fhgw3ve3ytpwxt9r.wpengine.netdna-cdn.com/wp-content/uploads/2012/05/The-Science-of-Neglect-The-Persistent-Absence-of-Responsive-Care-Disrupts-the-Developing-Brain.pdf>.

⁵ Esther Hafkamp-de Groen, et al. *Early detection and counselling intervention of asthma symptoms in preschool children: study design of a cluster randomised controlled trial*. BMC Public Health. 2010. Retrieved from: <https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-10-555>.

⁶ Lawrence J. Schweinhart. *The High/Scope Perry Preschool Study Through Age 40*. 2005. Retrieved from: <http://www.peeearlyyears.com/pdf/Research/INTERNATIONAL%20Early%20Years/Perry%20Project.pdf>.

⁷ See discussion of parent stress in Kristin Anderson Moore and Sharon Vandivere. *Stressful Family Lives: Child and Parent Well-Being*. June 2000. Retrieved from: <http://www.urban.org/sites/default/files/publication/62206/309565-Stressful-Family-Lives.PDF>.

⁸ For a useful discussion, see Brigid Schulte. *The U.S. Ranks Last in every Measure when it Comes to Family Policy, in 10 Charts*. The Washington Post. 23 June 2014. Retrieved from https://www.washingtonpost.com/blogs/she-the-people/wp/2014/06/23/global-view-how-u-s-policies-to-help-working-families-rank-in-the-world/?utm_term=.2383a0595eea.

⁹ Connecticut Voices analysis of Census 2015 5-Year Public Use Microdata Sample data

¹⁰ For example, four-year-olds in unregulated informal care watch more television and spend less time on pre-reading and math activities than children in formal care. See Bassok, Daphna, Maria Fitzpatrick, Eric Greenberg, and Susanna Loeb. *The Extent of Within- and Between-Sector Quality Differences in Early Childhood Education and Care*. In *Child Development*. 2013: <http://www.researchconnections.org/child-care/resources/26923http://onlinelibrary.wiley.com/doi/10.1111/cdev.12551/abstract>.

¹¹ The OEC's impending Unmet Need Report defines "access" as care that is affordable, that meets a child's developmental needs (i.e., is of high quality), and meets the family's needs with regards to hours, location, and other factors.

¹² Connecticut Voices analysis of Census 2015 5-Year Public Use Microdata Sample data.

¹³ See a list of some of the OEC's programs here at <http://www.ct.gov/oec/cwp/view.asp?a=4546&q=536096>. Notably, other agencies (e.g., DSS, DPH, SDE) and municipalities provide other supports not included in this list.

¹⁴ "The Abecedarian Project" (Frank Porter Graham Child Development Institute, 2016), <http://abc.fpg.unc.edu/>.

¹⁵ For example, we examined 4th grade math scores between Connecticut students who qualify for free and reduced price meals and students who did not. The disparity was 4th widest in the country. State comparison tool accessed at <https://nces.ed.gov/nationsreportcard/>.

¹⁶ In 2016, 74% of students receiving free lunch graduated high school in four years; in contrast, 95% of students who did not qualify for free and reduced price meals graduated within four years. See EdSight data at <http://edsight.ct.gov/SASPortal/main.do>.

¹⁷ Ray Noonan and Derek Thomas. *The State of Working Connecticut 2016*. September 2016. Retrieved from: <http://www.ctvoices.org/sites/default/files/econ16sowctfullreport.pdf>.

¹⁸ See Nicole Updegrave, et al. *The State of Early Childhood 2015*. December 2016: <http://www.ctvoices.org/ctvoices.org/state-early-childhood-2015>.

¹⁹ See discussion of slots available to infants and toddlers in our State of Early Childhood report. Nicole Updegrave, et al. *The State of Early Childhood 2015*. The OEC Unmet Need Report (release anticipated in late 2017) should illuminate more of this data.

²⁰ See our latest Census analysis showing poverty rates for Latino and black children 14 and 18 points higher than for white children in Derek Thomas and Ray Noonan. *American Community Survey 2015: Connecticut Residents See Income and Health Insurance Gains, but Child Poverty Remains High*. September 2016. Retrieved from: <http://www.ctvoices.org/publications/ACS-2015-data>.

²¹ See maps of disparities by race and place on our Tableau page at <https://public.tableau.com/en-us/s/>. For a discussion of the impact of racial segregation, see Lauren Ruth, et al. *The Connecticut Youth Opportunity Atlas*. March 2017. Retrieved from: <http://www.ctvoices.org/sites/default/files/Youth%20Opportunity%20Atlas%20Final.pdf>.

²² See a discussion of lower quality schools in communities serving children of color and low-income students in Kenneth Feder, Sarah Iverson, and Cid Oppenheimer. *Unequal Schools: Connecticut's Racial, Socioeconomic, and Geographic Disparities in Kindergarten Class Size and Teaching Experience*. March 2015. Retrieved from: <http://www.ctvoices.org/publications/unequal-schools-connecticuts-racial-socioeconomic-and-geographic-disparities-kindergart>.

²³ Lawrence J. Schweinhart. *The High/Scope Perry Preschool Study Through Age 40*. 2005. Retrieved from: <http://www.peelearlyyears.com/pdf/Research/INTERNATIONAL%20Early%20Years/Perry%20Project.pdf>.

²⁴ James Heckman, et al. *Analyzing Social Experiments as Implemented: A Reexamination of the Evidence from the High/Scope Perry Preschool Program*. 2010. Retrieved from: <http://onlinelibrary.wiley.com/doi/10.3982/QE8/pdf>. Pages 34-38.

²⁵ James Heckman, et al. *The Rate of Return to the HighScope Perry Preschool Program*. 2010. Retrieved from: https://heckmanequation.org/assets/2017/01/HeckmanMoonPintoSavelyevYavitz_RateofReturnPerryPreschool2010.pdf.

²⁶ Jorge Luis Garcia, et al. *The Life-cycle Benefits of an Influential Early Childhood Program*. December 2016. Retrieved from: <https://heckmanequation.org/resource/lifecycle-benefits-influential-early-childhood-program/>.

²⁷ *Ibid*.

²⁸ Lillian Mongeau. *Preschool Education: Go Big or Go Home?* September 2015. Retrieved from: <http://hechingerreport.org/preschool-education-go-big-or-go-home/>.

²⁹ Dale Farran, et al. *Variations in the Quality of TN-VPK Classrooms*. March 2014. Retrieved from: <https://my.vanderbilt.edu/tnpreevaluation/files/2014/03/Farran-SREE-Spring-2014-Presentation.pdf>.

³⁰ Sneha Elango, et al. *Early Childhood Education*. November 2015. Retrieved from: <https://heckmanequation.org/resource/early-childhood-education/>. Page 56.

³¹ Office of Head Start. *Head Start Program Facts Fiscal Year 2015*. Retrieved from: <https://eclkc.ohs.acf.hhs.gov/hslc/data/factsheets/docs/head-start-fact-sheet-fy-2015.pdf>.

³² Amy Rathbun, Anlan Zhang, and Thomas Snyder. National Center for Education Statistics. *Primary Early Care and Education Arrangements and Achievement at Kindergarten Entry*. June 2016. Retrieved from: <https://nces.ed.gov/pubs2016/2016070.pdf>. Page vii.

³³ Connecticut Academy of Science and Engineering. *Early Childhood Regression Discontinuity Study*. June 2016. Retrieved from: http://www.ct.gov/oec/lib/oec/early_childhood_regression_discontinuity_study_06_16_16.pdf. Page 44-45.

³⁴ The effect size for the CT Regression Discontinuity study found that student achievement in math increased by .48 in math and .69 in literacy. The Perry Preschool and Abecedarian studies had effect sizes between .7 and .8. An effect size is the effect of participating in the program on academic achievement in standard deviations. A standard deviation is a measure of the variation from the average.

³⁵ See Table 1 page 12 in Nicole Updegrave, et al. *The State of Early Childhood 2015*.

³⁶ Dale Farran, et al. *Variations in the Quality of TN-VPK Classrooms*. March 2014. Retrieved from: <https://my.vanderbilt.edu/tnpreevaluation/files/2014/03/Farran-SREE-Spring-2014-Presentation.pdf>.

³⁷ Phone conversation with Beth Vorhaus, Tennessee Department of Education, on June 22, 2017.

³⁸ U.S. Department of Health and Human Services. *Head Start Impact Study Final Report*. January 2010. Retrieved from: https://www.acf.hhs.gov/sites/default/files/opre/hs_impact_study_final.pdf. Pages 3-4 to 3-6.

³⁹ Elango et. al. Pages 53-54.

⁴⁰ Nicole Updegrave, et al. *The State of Early Childhood 2015*.

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- ⁴¹ The Office of Early Childhood's Unmet Needs Report will highlight in particular the well-documented need for more infant and toddler care provision.
- ⁴² Other accrediting agencies include the Association Montessori International (AMI), American Montessori Society (AMS), New England Association of Schools and Colleges (NEASC), and Head Start/Early Head Start.
- ⁴³ Connecticut Charts-A-Course. *Meeting Connecticut's School Readiness Requirement for Accreditation by the National Association for the Education of Young Children (NAEYC)*. Retrieved from: http://www.ct.gov/oec/lib/oec/earlycare/sr/gp_po/meetingsr.pdf.
- ⁴⁴ Thrive CT. *NAEYC Accreditation*. Retrieved from: <http://www.thrivect.org/provider-resources/naeyc-accreditation/>
- ⁴⁵ Jennifer Johnson. *Quality Recognition and Improvement System Listening Tour*. 19 June 2017.
- ⁴⁶ See full accreditation standards in National Association for the Education of Young Children. *NAEYC Early Childhood Program Standards and Accreditation Criteria & Guidance for Assessment*. April 2015. Retrieved from: <http://www.naeyc.org/files/academy/file/AllCriteriaDocument.pdf>.
- ⁴⁷ Christina Nelson, Toni Porter, and Kayla Reiman. *Examining Quality in Family Child Care: An Evaluation of All Our Kin*. Retrieved from <http://allourkin.org/sites/default/files/UserFriendly1-rev7%20%281%29.pdf>.
- ⁴⁸ As required in Public Act 14-39.
- ⁴⁹ Connecticut Office of Early Childhood *At a Glance*. 2015. Retrieved from: http://das.ct.gov/Digest/Digest_2015/Early%20Childhood,%20office%20of.pdf.
- ⁵⁰ Office of Early Childhood. *Connecticut Early Learning and Development Standards (CT ELDS)*. July 2016. Retrieved from: <http://www.ct.gov/oec/cwp/view.asp?a=4541&q=536726>.
- ⁵¹ For example, the Early Childhood Consultation Project in collaboration with the Department of Children and Families.
- ⁵² Office of Early Childhood. *Connecticut Core Knowledge and Competency Framework for Professionals Working with Young Children and Their Families*. 19 October 2016. Retrieved from: <http://www.ct.gov/oec/cwp/view.asp?a=4541&Q=586598&PM=1>.
- ⁵³ Jennifer Johnson. *Quality Recognition and Improvement System Listening Tour*. 19 June 2017.
- ⁵⁴ LaRue Allen and Bridget Kelly. *Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation*. The National Academies Press. 2015. Retrieved from: <https://www.nap.edu/catalog/19401/transforming-the-workforce-for-children-birth-through-age-8-a>. See also W. Steven Barnett. *Better Teachers, Better Preschools: Student Achievement Linked to Teacher Qualifications*. NIEER Preschool Policy Matters (2). 2003. Retrieved from: <http://eric.ed.gov/?id=ED480818>.
- ⁵⁵ Connecticut Voices analysis of Census 2015 5-Year Public Use Microdata Sample data.
- ⁵⁶ Information provided by Mary Farnsworth, OEC, via email on June 30, 2017.
- ⁵⁷ See the early childhood section in Derek Thomas et al. *The Governor's Budget – A Comparison to Current Year Appropriations*. February 2017. Retrieved from <http://www.ctvoices.org/ChildrenFY18Governor>.
- ⁵⁸ Derek Thomas et al. *The Governor's Budget – A Comparison to Current Year Appropriations*.
- ⁵⁹ Nicole Updegrove and Daniel Long. *Care 4 Kids in Connecticut: The Impact of Program Closure on Children, Parents, and Providers*. March 2017. Retrieved from <http://www.ctvoices.org/C4Kclosing>.
- ⁶⁰ Reported by Harriet Feldlaufer, Office of Early Childhood, February 16, 2017.