# Child Care Contribution Tax Credit Pilot Project
## *Final Report*

*Submitted to:*

**Oregon Employment Department — Child Care Division**
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# CHILD CARE CONTRIBUTION TAX CREDIT

# PILOT PROJECT

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NPC RESEARCH

*Informing policy, improving programs*

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## CCCTC Overview

In 2003, the Oregon Legislature enacted the Oregon Child Care Contribution Tax Credit (CCCTC). Proceeds from these credits have been used to fund two child care enhancement pilot projects. The CCCTC pilot projects (one in Lane County and one in Multnomah County) were guided by three goals:

- To decrease the cost of child care to 10% of gross family income;
- To increase and stabilize child care provider wages; and
- To increase child care quality through provider access to professional development and other enhancements.

Thus, the pilot projects consisted of three components:

1. *Parent subsidies:* The pilot projects provided income-eligible parents with child care subsidies to limit the percentage of family income spent on child care to 10%.
2. *Wage enhancements and other financial supports:* The projects provided child care providers with wage enhancements tied to enrollment and advancement on the Oregon Registry, scholarships, and facility improvement grants designed as incentives for quality improvements and to support provider retention.
3. *Mentoring, networking, and technical support:* The projects provided individualized technical assistance, facilitated networking among providers, and provided mentoring to enhance child care quality.

These three components were designed to jointly influence the three project goals, and represented a multi-pronged approach to determining the kinds of investments that are needed to create high-quality, affordable child care.

## CCCTC Evaluation Overview

The Oregon Employment Department's Child Care Division awarded 3-year evaluation contracts to NPC Research to conduct process and outcome evaluations of each pilot project. This report presents the findings from both pilot project evaluations. The evaluations monitored program implementation, documented barriers and successes in engaging child care providers and parents, and provided ongoing feedback to the project about implementation. In addition, the evaluations monitored family outcomes (such as child care utilization and stability, financial stress, and satisfaction with care) provider outcomes (such as engagement in professional development, revenue stability, and retention), and child care quality outcomes (such as environmental quality, quality of the learning environment, and social-emotional quality).

The evaluations employed a randomized design, with providers assigned to either the CCCTC intervention or to a control group. Data were collected in a variety of ways. Process study data were collected through quarterly reports submitted by the Project Directors, as well as through regular program updates via email, telephone, and project

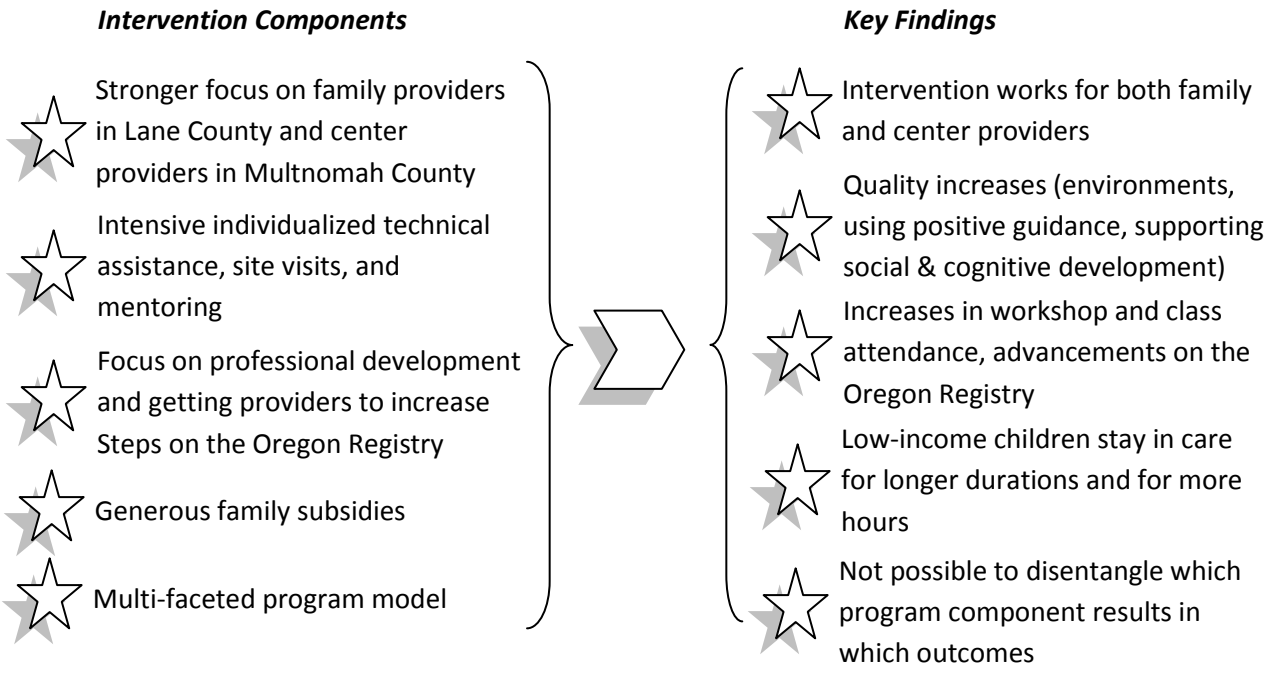
meetings. Outcome data were collected using four instruments, collected at baseline and annually thereafter: provider surveys, observations of child care settings using the Quality of Early Childhood Care Settings (QUEST) Inventory, facility director surveys, and parent surveys.

## Key Findings

Over the course of the 3-year pilot, the Lane County CCCTC project provided services to a total of 13 facilities (11 family child care facilities and 2 centers) employing 37 providers (17 family providers and 20 center providers) and serving than 300 children. The Multnomah County CCCTC project provided services to a total of 15 facilities (13 family child care facilities and 2 centers) employing 35 providers (17 family providers and 18 center providers) serving 448 children.

Figure A illustrates the key intervention components and outcomes. Below we summarize the key child care quality outcomes, provider outcomes, and family outcomes.

**Figure A. CCCTC Intervention and Outcomes**



## CHILD CARE QUALITY OUTCOMES

Quality outcomes were apparent for both the Lane County and Multnomah County pilot projects; however, the pattern of findings differed. In Lane County family-based providers showed greater quality improvements in several key domains, relative to control providers. However, among center-based providers the level of improvement was not greater for CCCTC participants, relative to controls. In Multnomah County, the pattern was somewhat reversed. Center-based providers showed greater improvements relative to controls, and only one domain showed greater improvement for CCCTC family providers relative to controls.

- Lane County family providers showed significant improvement relative to controls in environmental quality, particularly in equipment and materials for toddlers and preschoolers and in materials to support language and literacy. Multnomah County center providers showed significant improvement relative to controls in safety of furnishings and materials.
- Multnomah County center providers showed significant improvement relative to controls in their ability to respond positively to children and in their use of positive guidance.
- Lane County family providers showed significant improvement relative to controls in their ability to support children's social-emotional development.
- Lane family providers showed significant improvement relative to controls in three areas of cognitive and language development quality (supportive instructional style, supporting language development, and learning activities). Multnomah family providers showed significant improvement relative to controls in supporting language development, and Multnomah center providers showed significant improvement in using a supportive instructional style.
- In Lane County, increases in environmental quality were most apparent after the first year of intervention, while quality improvements in other domains continued to increase after the second year of intervention as well. Most providers in Multnomah did not have enough data over time to examine patterns of change.

## PROFESSIONAL DEVELOPMENT, INCOME, AND RETENTION OUTCOMES

Findings across the two pilot projects were relatively consistent on outcomes relating to professional development.

- CCCTC providers were more likely than control providers to enroll on the Oregon Registry over the course of the 3-year pilot projects.
- CCCTC providers were more likely than control providers to be at a Step 5 or higher on the Oregon Registry by the end of the pilot project.
- At follow-up, Lane County CCCTC providers were more likely than control providers to report participating in college courses in the past year.
- At follow-up CCCTC providers, especially those in Multnomah County, were more likely than controls to report they had networking opportunities and were part of a support group of providers.
- Control providers showed more confidence than CCCTC providers at baseline in a variety of skill domains, but that difference vanished by follow-up.
- Over the course of the 3-year pilots, a total of 11 control family providers went out of business compared to just 4 CCCTC family providers.
- CCCTC facilities were more likely than control facilities to report that revenues

had increased in the past year, at both baseline and follow-up time points.

### FAMILY OUTCOMES

The parent data collection methodology and instruments were different for the two pilot projects, so the outcomes measured at the two sites varied. In Multnomah County, where children were tracked over the course of the 3-year study, it was possible to measure placement stability and the relationship between subsidy usage and duration of care.

- There were no differences between subsidy and non-subsidy families in terms of the percent of children who left their care arrangement during the 3-year study, but subsidy parents reported more changes than control parents in the year prior to the start of the study.
- However, of the children who left care, subsidy children stayed at their care arrangement significantly longer than non-subsidy children (indeed, approximately 5 months longer).
- Subsidy families who left care were more likely than non-subsidy families to site financial concerns as a reason for leaving care.
- A majority of the Multnomah County families who received a CCCTC subsidy left the subsidy program at some point during the 3-year study; nearly half left because they left the care arrangement, but nearly one-third lost their subsidy due to funding restrictions. It is worth noting, however, that these families were no more likely to remove their children from care than other families.

Parents at both pilot sites were asked to report on their child care utilization, financial stress, and satisfaction with care.

- Compared to income-matched comparison families, CCCTC subsidy families at both pilot sites, not surprisingly, paid a lower hourly rate for child care.
- CCCTC subsidy parents had significantly more children enrolled in care compared to income-matched comparison families.
- CCCTC subsidy parents purchased significantly more hours of care relative to income-matched comparison families.
- Multnomah County CCCTC subsidy parents indicated more financial stress at baseline than income-matched control parents. This difference disappeared at follow-up; while control families increased in financial stress over time, CCCTC subsidy families' financial stress decreased.
- Lane County CCCTC parents scored significantly higher than control parents on a satisfaction with child care scale.

## Conclusions

Overall, the evaluation results suggest that both CCCTC projects achieved positive outcomes, although the pattern of results differed somewhat. Both programs showed positive outcomes in terms of enhancing provider engagement in professional development, as evidenced by high rates of enrollment on the Oregon Registry for CCCTC providers compared to control. Further, CCCTC providers in both counties were more likely to be at Step 5 at follow-up, compared to control, and Lane County providers were much more likely to be taking college-level classes. Findings for financial stability and retention of providers in the field were more modest but showed some positive trends, most notably that CCCTC facilities may have been less likely to close than control facilities (although these numbers were small).

Quality results were somewhat different between the two sites, with family providers in Lane County and center providers in Multnomah County exhibiting the most quality improvements. The Lane County results can be explained by the fact that family providers in Lane County on the whole participated in the program longer than center providers (who had more turnover) coupled with the fact that the focus of the Lane County project activities, particularly during the first 2 years, was on family providers and center directors, not center staff. In Multnomah County, on the other hand, both center and family providers, on the whole, participated in the program for less time than Lane County providers (due to a lengthy study recruitment period), and unlike in Lane County, the Multnomah County pilot placed a particular emphasis upon engaging and involving center staff in pilot project activities. Data from Lane County, where enough providers participated in 3 years of intervention to allow for analysis of change over time, indicated that improvements in several areas of quality were most striking *after* the second year of intervention. Further, due to differing recruitment goals, the family providers who participated in Multnomah County had less experience in the field, lower education levels, and were younger than their counterparts in Lane County. It could be that to see comparable quality changes in these providers would necessitate an even larger intervention dosage.

**"I have been able to have my children in quality care of my choosing. I am able to be at work and know my children are loved, educated and well taken care of."**
***– CCCTC Subsidy Parent***

Family outcomes were evident across both pilot projects. Subsidy parents paid lower hourly rates and this in turn may have increased their ability to engage in the workforce by purchasing more hours of child care. The decision to change care arrangements appears to be influenced by parents' circumstances (job changes, moves, etc.) not easily influenced by subsidy receipt; it is notable, therefore, that while subsidy families were no less likely to leave care than non-subsidy families, of those families who did leave their care arrangement, subsidy children remained in care significantly longer than non-subsidy children.

There were several key similarities between program implementation across the two sites. Both projects employed similar methods for meeting the needs of participating providers, providing on-site technical assistance, provider network development and support, and quality assessment and feedback.

However, there were several key differences in implementation. One of the most striking differences between the projects was the different experiences with participant recruitment and the resultant differences in length of project intervention. While participant recruitment went smoothly and quickly in Lane County with all providers on board within 3 months, recruitment took over a year in Multnomah County. As a result, Lane County providers took part in the intervention for substantially longer than the Multnomah County providers. The different recruitment experiences were most likely due, in large part, to the fact that the Lane County project was administered through the local Child Care Resource and Referral Network, an entity known and trusted by providers. On the other hand, in Multnomah County, the project was administered by an agency not well-known among providers; furthermore, the Multnomah County project was attempting to identify and recruit providers who had never participated in a network and were in other ways isolated from the field.

In addition to the recruitment differences between the sites, there were notable differences in project implementation that could have influenced outcomes. First, there were considerably more site visits to provide individualized technical assistance in Lane County, due at least in part to the greater engagement of, and emphasis on, family providers at this site. Further, the Lane County project invested more than twice as much as Multnomah County did for facility improvements, and this may account for the striking environmental quality improvements found among family providers in Lane County. Lane County providers also were much more likely than Multnomah County providers to receive substantial wage enhancements; enhancement amounts in Lane County ranged from $1,000 to $5,000 per year per provider for up to $15,000 for the 3 years, while in Multnomah County, enhancements were provided primarily during the second year only, and only two providers received more than $1,000.

**"[The CCCTC Project] provided the training and support to become the child care professional I've always wanted to be."**
***– CCCTC provider***

Because the pilot projects were complex and multi-faceted, it is not possible to know which program components were associated with which outcomes. The dual focus on affordability for parents and quality improvements for child care providers could impact outcomes in one of two competing manners. For example, the dual focus may have had the unintended consequence of "diluting" results in both areas. On the other hand, the dual focus could enhance outcomes: the family subsidies could help stabilize provider revenues, which in turn could allow providers to make environmental and other quality improvements. Further research that tests these components individually, as well as jointly, is needed to answer this question.

While it is not possible to disentangle which program components led to which outcomes, it can be concluded that the package of interventions, taken together, had a set of modest but wide-ranging effects on both families and providers. Further, results from both pilot projects indicate that the intervention can lead to effects for both family and center-based providers, although neither project had substantive impacts on both types of providers. Future projects that examine individual program components in planned-variation studies are needed to better "unpack" the set of interventions and identify which components are most (or least) important to outcomes.

# INTRODUCTION

## The Child Care Contribution Tax Credit (CCCTC) Pilot Project

In 2003, the Oregon Legislature enacted the Oregon Child Care Contribution Tax Credit. Taxpayers who make a contribution to the program receive a 75-cent Oregon state tax credit on every dollar. Proceeds from these credits have been used to fund two child care enhancement pilot projects awarded through competitive requests for proposals administered by the Oregon Employment Department's Child Care Division. The first project, the Lane County Child Care Enhancement Project (CCEP) was awarded to Family Connections at Lane Community College. That 3-year pilot project and its evaluation were completed in 2008. The second project, the Child Care Community Fund (CCCF) was awarded to Neighborhood House in Multnomah County in 2007, and the 3-year pilot phase and evaluation were completed in June 2010.

Both projects were guided by three goals:

- To decrease the cost of child care to 10% of gross family income;
- To increase and stabilize child care provider wages; and
- To increase child care quality through provider access to professional development and other enhancements.

The CCCTC pilot projects consisted of three components: a parent subsidy component, a provider wage enhancement component, and specialized technical assistance and supports aimed at quality improvement. First, the projects subsidized the cost of child care for parents who meet income eligibility criteria and whose children are enrolled in participating child care facilities.

Second, the projects offered wage enhancements for providers who enroll and advance on the Oregon Registry. Wage enhancements both act as incentives for participation in ongoing professional development and training, and serve as a means for increasing child care provider income, thus potentially influencing providers' ability to remain in the field.

Third, the program offered a variety of supports designed to enhance child care quality, such as facility enhancement funds, scholarships for trainings, networking opportunities, and mentoring and technical assistance for providers.

These three components were designed to jointly influence the three project goals, and represent a multi-pronged approach to determining the kinds of investments that are needed to create high-quality, affordable child care. A series of program logic models (see Appendix A) showing the relationship of program activities to expected outcomes was designed for the Lane County CCEP program and is applicable to the Multnomah County CCCF project as well (Worcel, Green, & Brekhus, 2006).

# Research Support for Child Care Quality Improvement Interventions

Below we summarize the research findings in relation to child care quality improvement projects, focusing specifically on the research base for education and training, mentoring and coaching, and monetary incentives.

## Research Support for Education and Training as a Strategy to Enhance Child Care Quality

Early childhood research has clearly demonstrated a connection between education and training and child care quality. A wide body of research suggests that providers who have more years of formal education and/or early childhood training provide a more safe, hygienic, and developmentally appropriate physical caregiving environment (Cassidy, Buell, Pugh-Hoese, & Russell, 1995; Howes, 1997; Mueller & Orimoto, 1995). Furthermore, providers with more education and training also tend to have more developmentally appropriate, sensitive, and positive, and fewer harsh, detached, and punitive interactions with children (Arnett, 1989; Burchinal, Howes, & Kontos, 2002; Cassidy et al., 1995; Ghazvini & Mullis, 2002; Howes, 1997; Howes, Whitebook, & Phillips, 1992). Global ratings of child care quality, which include features of the physical and social caregiving environment, have also been linked to higher levels of education and training among child care providers (Blau, 2000; Burchinal et al., 2002, Cassidy et al., 1995; Clarke-Stewart, Vandell, Burchinal, O'Brien, & McCartney, 2002; Epstein, 1999; Ghazvini & Mullis, 2002; Kontos, Howes, & Galinsky, 1996; Todd & Deery-Schmitt, 1996). It has been shown that education and training are related to more developmentally appropriate beliefs about caregiving and less authoritarian attitudes toward child rearing (Arnett, 1989; Cassidy et al., 1995). In fact, there is evidence suggesting that education/training has its effect on child care quality through its influence on teacher's beliefs about caregiving (Cassidy et al., 1995).

Education and training may work to produce quality child care in different ways for different subgroups of providers. Different kinds of providers (e.g., infant/toddler vs. preschool, family care vs. center care providers) may experience improvements along different dimensions of their caregiving (Ontai, Hinrichs, Beard, & Wilcox, 2002). Most notably, professional development aimed at center-based providers must include other members of the center, including supervisors; center-based teachers have less power than family providers to institute changes without the support of their supervisors (Weber & Trauten, 2008; Worcel & Green, 2008). At this point, an optimal or universal combination of training and formal education that promotes high-quality care has not been clearly identified (Whitebook & Sakai, 2003).

## Research Support for Mentoring as a Strategy to Enhance Child Care Quality

While extensive research has documented a link between formal training and education and child care quality, it is not clear, however, that more formal education, in and of itself, results in higher quality care, or whether there are other related factors that influence the quality of care (Weber & Trauten, 2008), such as, among other things, the degree of mentoring, coaching, and individualized technical assistance that is provided to the care givers.

Child care workers with more child-specific training tend to provide higher quality care than providers who are not trained (Arnett, 1989; Burchinal et al., 2002). In a mentoring or consultation context, child care providers receive collegial support, as well as the knowledge and skills typically received in other more traditional training modalities

such as workshops and classes (Wesley, 1994).

However, earlier research indicated that the effect of mentoring on the overall quality of the social and physical caregiving environment was modest. Studies found improvements in child care quality associated with participation in mentoring or consulting projects (Bagnato, Suen, Brickley, Smith-Jones, & Dettore, 2002; Ontai et al., 2002; Palsha & Wesley, 1998; Wesley, 1994), but often the effects were not statistically significant (DeBord & Sawyers, 1996; Fiene, 2002). In some cases improvements were noted along specific dimensions of caregiving quality, such as planning high-quality learning activities and using developmentally appropriate discipline strategies (Fiene, 2002; Mueller & Orimoto, 1995). The type and extent of improvement made in child care quality may depend upon children's age (Ontai et al., 2002; Palsha & Wesley, 1998), the caregiving setting (e.g., family care vs. center care) (Fiene, 2002), or the level of caregiving quality produced by the provider before engaging in the mentorship program (DeBord & Sawyers, 1996; Palsha & Wesley, 1998). The nature of the mentor/mentee relationship may also impact child care quality outcomes (Wesley, 1994), but this is rarely addressed in the literature.

As summarized by Weber and Trauten (2008), a wealth of recent research has examined professional development that pairs training and education with personalized assistance through mentoring, coaching, and networking. This body of research suggests that the combination of education and training with hands-on, personalized coaching results in positive behavior changes and increased quality of care. Thus, it is the combination of supports and training, rather than on in isolation of the other, that leads to the largest changes and improvements in quality.


Mentorship that offers professional support for child care providers may have positive effects on the providers' sense of professionalism, which could impact the quality of the local child care system. There is evidence that mentorship is linked with job satisfaction (Buell, Pfister, & Gamel-McCormick, M, 2002; Fiene, 2002; Mueller & Orimoto, 1995; Palsha & Wesley, 1998; Wesley, 1994), attaining early childhood credentials and/or seeking more training (Buell et al., 2002; Mueller & Orimoto, 1995), and increased knowledge about business practices (Mueller & Orimoto, 1995). These findings imply that the supportive nature of mentorship may indirectly influence larger indicators of systemic health, such as lower rates of job and occupational turnover; however, these relationships have not yet been directly examined.

## Research Support for Monetary Incentives as a Strategy to Enhance Child Care Quality

Over the past decade, there has been a growing awareness that in order to produce high-quality child care, providers must be adequately compensated. Indeed, the National Association for the Education of Young Children (NAEYC) has called for compensation commensurate with training, equal pay for educators regardless of child age and care

setting, and institutionalized career ladders with associated compensation standards (National Association for the Education of Young Children, 1990).

Higher wages have been found to be associated with higher quality social and physical caregiving environments (Ghazvini & Mullis, 2002; Peisner-Feinberg, et al., 1999; Whitebook, Howes, & Phillips, 1998; Weber & Trauten, 2008). It is more difficult to evaluate the efficacy of monetary incentives in *producing* higher quality child care: even though higher wages are associated with higher quality child care, it is unclear whether wage enhancements actually *increase* quality. Other types of monetary incentives (e.g., scholarships for training, materials stipends, bonuses) may function to motivate caregivers toward training and professional development, but so far these links have not been empirically examined. Some studies have evaluated the effects of programs aimed to increase child care quality that include monetary incentives. These programs are credited with increasing levels of training, certification, and licensure; use of developmentally appropriate activities; teacher sensitivity; confidence in child-caring skills; gains in knowledge about business practices, child development, and behavior management; and job satisfaction (Buell et al., 2002; Cassidy et al., 1995; Mueller & Orimoto, 1995). However, it is impossible to assess the unique contribution of monetary incentives in producing higher quality child care.

Some studies also show that higher wages are associated with less job turnover among child care providers (Peisner-Feinbert et al., 1999; Weber & Trauten, 2008; Whitebook et al., 1998). It has been shown that higher wages help child care providers feel more committed to their workplace (Gable & Hunting, 2001), which may then reduce turnover. Interestingly, level of provider training makes a difference. Low-skilled providers who make low wages appear to be committed to their workplace and to their job, whereas highly skilled providers who make low wages report less commitment and experience higher turnover (Gable & Hunting, 2001; Whitebook et al., 1998). Compensation, therefore, appears to be important for retaining highly skilled child care providers.

## About This Report

The next section of this report details the evaluation design, an overview of the study design and research questions, sample selection, and evaluation methodology. Next, the report provides an overview of the characteristics of the participating providers and families. The following section of the report details the pilot project implementation, including participant recruitment, and activities and supports for parents and providers. The next three sections of the report include detailed findings for outcomes related to child care quality, provider professional development, and family outcomes. The report concludes with an in-depth look at three participating providers, and a discussion of the implications of the study findings.

# THE CHILD CARE CONTRIBUTION TAX CREDIT EVALUATION

In addition to administering the two pilot projects, the Oregon Employment Department's Child Care Division (CCD) is overseeing an evaluation of the programs. NPC Research, a Portland-based research and evaluation firm, received both evaluation contracts from the CCD. Below we describe the study design and research questions, sample selection, and evaluation methodology.

## Study Design and Research Questions

NPC Research received contracts to conduct a 3-year evaluation of each of the two pilot projects, which included a process and an outcome study of each project. NPC completed the Lane County pilot project evaluation in 2008 and completed the Multnomah County pilot project evaluation in 2010.

The process study of each pilot project focused on documenting, describing, and explaining program implementation. A process study allows evaluators to determine whether a program is implemented as intended, highlight program accomplishments and challenges, and share lessons that may be useful to others seeking to implement similar projects. The process study addressed several key research questions:

- How well were the pilot projects implemented and to what extent did they produce desired outputs?
- What were the barriers and facilitators of successful implementation?
- How were project funds expended?
- Are the number and characteristics of parents, children, and providers different for the treatment and control groups?

The second component of each evaluation was an outcome study. The purpose of the outcome study is to understand the outcomes of the project on participating providers and families. Table 1 lists the study's research questions and related outcomes.

**Table 1. Outcome Study Research Questions and Outcomes**

| Research Questions | Outcomes |
|---|---|
| 1. Are CCCTC parents spending less than 10% of their household income on child care? | 1a. Increased affordability of care<br>1b. Reduced parental financial stress |
| 2. Are CCCTC parents more satisfied with their child care arrangements? | 2a. Increased stability of care<br>2b. Greater parental workforce productivity<br>2c. Increased satisfaction with care |
| 3. Do CCCCT providers show more evidence of engagement in professional development activities? | 3a. More professional development activities, as measured by numbers of trainings/classes and OR advancement<br>3b. Increased motivation for professional development<br>3c. Increased provider networking supports |
| 4. Are CCCCT providers compensated at a rate commensurate with their level of training and education? | 4a. Increased provider income<br>4b. Decreased provider financial stress |
| 5. Are CCCTC facilities more likely to have stable revenue and less likely to have problems with issues of parent non-payment? | 5a. Increased revenue stability<br>5b. Decreased problems with parental non-payment |
| 6. Are CCCTC providers more likely to stay in the field longer? | 6a. Increased provider retention<br>6b. Decreased provider stress |
| 7. Are CCCTC providers more likely to make facility improvements? | 7a. Increased environmental quality of care |
| 8. Are CCCTC children experiencing higher quality child care? | 8a. Increased quality of child-caregiver interactions<br>8b. Increased quality of social-emotional development environment<br>8c. Increased quality of cognitive/language development environment |

## Sample Selection

Below we describe the sample selection process for the Lane County and Multnomah County pilot projects.

### LANE COUNTY

The evaluation employed a randomized design, with providers assigned to either the CCCTC intervention or to a control group. To participate in the program, providers had to have been providing care for at least 1 year and also had to be on the Oregon Registry at Step 5 (or working on reaching Step 5). Those providers who expressed interest in participating were randomly assigned to either the CCCTC group or the control group. Providers in both groups had to agree to participate in the evaluation, and were promised $1,000 for their completion of each year's evaluation activities. The CCCTC group consisted of a total of 13 facilities, representing 11 family child care facilities and 2 child

care centers.[1] The control group consisted of 13 facilities representing 10 family child care facilities and 3 centers.[2] However, once the groups were selected, it became apparent that the control group was not a "no-treatment" group, as all of the 10 family child care providers (but none of the 3 centers) were participating in CARES, an existing quality-enhancement program, and therefore were receiving wage enhancements and taking part in professional development activities similar to what CCCTC was designed to provide. Therefore, the evaluation team added a third, no-treatment group of providers to the study.

To select the no-treatment group, Lane Family Connections provided NPC Research with a comprehensive list of 447 Lane County providers who met several criteria: providers included on the list could not be participating in child care improvement projects such as CCCTC or CARES, had to speak English, and had to serve 40 or fewer children. Next, NPC took a random stratified sample of 122 facilities (85% family child care, 15% centers). The CCCTC Project Director removed 17 facilities from this list because they were known to be out of business. Of the remaining 105, the evaluation team was unable to contact 10 due to out of date contact information. NPC spoke to the remaining 95; these calls served to both screen the provider for eligibility for the study and to further explain the study and ask for participation from those who were eligible. The eligibility screening process allowed NPC to verify that the provider was still in business, enrolled more than one child, served children under the age of 6, and worked more than 20 hours per week. This eligibility screening was necessary in order to select facilities that were similar to facilities in the CCCTC and control groups. Sixteen (13 family child care providers and 3 centers) were eligible for, and agreed to participate in, the study (21 did not meet the study eligibility criteria and 74 declined to participate in the study).

### MULTNOMAH COUNTY

As with Lane County, the Multnomah County project employed a randomized design, with providers randomly assigned to either the CCCTC intervention or to a control group. The recruitment goal was to enroll 12 facilities in each group (10 family providers and 2 centers) for a total of 24 facilities.[3]

The project structured its eligibility criteria in order to serve providers who were potentially

[1] The program was structured to serve 10 family providers and two centers; one family provider left the field (and therefore left the program) in Year 2 and was replaced by another facility, thus bringing the total number of family providers served to 11.

[2] Similarly, one of the control center facilities was dropped from the study after Year 1 due to instability and changes within that facility that resulted in uncertainty about the center's ability to remain in business. This center was replaced by another center, thus bringing the total number of control centers to 3.

[3] As happened in Lane County, it was necessary to replace several providers in the study in Multnomah County. Mid-way through the pilot project, it became necessary to replace the two child care centers in the control group. These two centers, after completing the baseline and one-year follow-up data collection, both enrolled in a new child care quality enhancement project that offered extensive grants (larger than the CCCTC pilot project) to sites to improve child care quality. These two centers, therefore, were removed from the study, and two additional child care centers were recruited to the control group. These new centers received a baseline data collection and a one-year follow-up. Thus, the control group consisted of four child care centers, all of whom received baseline and one-year follow-ups. In addition, four family child care facilities were added to the study to replace three treatment facilities and one control facility that left the program prior to follow-up data collection (additional treatment and control facilities that left after follow-up data collection were not replaced). One treatment facility was asked to leave the program due to noncompliance with requirements (not securing liability insurance), a second treatment facility was asked to leave because the provider was trying to secure family subsidy funds for children who had left care, and the third treatment facility and the control facility went out of business shortly after enrolling in the program, possibly due to the widespread economic recession.

most in need of assistance but who showed some level of commitment to child care as an ongoing career. To participate, family providers must have had less than 75 hours of education and at least 1 year of experience; all must have been registered with the Child Care Division or agreed to become registered within 3 months. Centers were required to be certified with the Child Care Division.

Because the recruitment process took longer than anticipated (as described in detail on page 15), the project advisory board agreed to expand recruitment efforts to include providers in Clackamas and Washington County, and to include exempt providers who were interested in becoming registered or licensed (though no more than 25% of the providers could fall into this category).

### SAMPLE SIZES

Table 2 shows the total number of facilities and providers enrolled in the pilot projects who completed a baseline survey and the total number of facilities and providers who completed at least one follow-up data collection.

**Table 2. CCCTC & Control Participation in Data Collection**

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | CCCTC | Comparison | CCCTC | Comparison | CCCTC | Comparison |
| **Family Child Care** | 11 facilities | 21 facilities | 13 facilities | 11 facilities | 24 facilities | 32 facilities |
| Baseline | 17 providers | 24 providers | 17 providers | 19 providers | 34 providers | 43 providers |
| Follow-Up | 15 providers | 22 providers | 14 providers | 13 providers | 29 providers | 35 providers |
| **Center Child Care** | 2 facilities | 6 facilities | 2 facilities | 4 facilities | 4 facilities | 10 facilities |
| Baseline | 20 providers | 39 providers | 18 providers | 37 providers | 38 providers | 76 providers |
| Follow-Up | 17 providers | 22 providers | 10 providers | 21 providers | 27 providers | 43 providers |

## Methodology

The process and outcome evaluations rely on information gathered from a variety of different sources, using several methodologies. The four types of information used for the evaluation include program-level data, facility-level data, provider-level data, and parent-level data. These data sources are described below.

### CCCTC PROGRAM-LEVEL DATA

In order to address many of the key process study questions, it was necessary to gather information about program implementation. The program-level data collected for this evaluation consisted of quarterly reports and sample tracking data, both described below. In addition, NPC staff members were in frequent phone, email and in-person contact with CCCTC staff members to exchange information about project and evaluation activities.

*Quarterly Reports:* The two pilot project Project Directors completed quarterly reports; these reports included information about the number of providers and families served, the types of activities conducted, and the allocation of funds.

*Provider Tracking Data:* The Project Directors compiled and updated a list of treatment

and comparison providers that included information about providers' date of enrollment in the project, Oregon Registry step, wage enhancement amounts, and, for providers who left their position, date and reason for exit.

### FACILITY-LEVEL DATA

The evaluation team collected two types of data from each treatment and comparison facility, as described below.

*Facility Owner/Director Survey*: At baseline (shortly after a facility's enrollment in the treatment or control group), the facility directors were asked to complete a written director survey. This survey, developed for this evaluation by NPC, gathered information about enrollment and revenue fluctuations and business practices. Facility directors completed this survey again 12 and 24 months after the baseline survey.

*Family Tracking Data:* For the Multnomah County pilot evaluation only, NPC worked with each facility director and the CCCTC Project Director to collect updated information on enrolled families each quarter. This family tracking data included enrollment and exit dates and reason for exit (if applicable) for every child at the facility along with information about whether the family received a CCCTC subsidy.

### PROVIDER-LEVEL DATA

The third type of data necessary for both the process and outcome evaluations was information from providers themselves. Providers were included in the evaluation if they worked directly with children for an average of 20 hours or more per week. Providers in the treatment group shared their perceptions of the services they were receiving, and data from providers in both study groups can be used to highlight differences in key outcomes such as income stability and quality of care. NPC conducted up to 2 years of data collection per provider (one at baseline immediately following facilities' engagement with the project and then annually thereafter). These site visits consisted of an observation and a provider survey (the Provider Enrollment Survey at baseline, and a Provider Follow-Up Survey at the subsequent data collection points. Each of these components is described in more detail below.

*Observations*: NPC staff members conducted observations with every provider in the two study groups using the Quality of Early Childhood Care Settings (QUEST) instrument developed by Abt Associates. This instrument consists of multiple subsections that measure environmental quality, the quality of the cognitive development environment, and social/emotional quality. The environmental quality subsections include ratings of health and safety in a variety of areas and the appropriateness/adequateness of equipment and materials. The subsections focusing on cognitive development include ratings of instructional style, learning opportunities, and language development. The subsections that focus on social/emotional quality include ratings of the caregiver's use of positive guidance, supervision style, and supporting social development and play. Each observation takes approximately 2 hours. Observations are conducted at baseline (shortly after a facility's enrollment in the treatment or control group) and 12 and 24 months after baseline.

*Participant Enrollment Survey.* All providers in both study groups completed a Participant Enrollment Survey at baseline. This written survey included sections on background and demographic information, provider confidence in a variety of domains, provider commitment to the field, and professional development activities. This measure was developed by the Oregon Child Care Research Partnership for use with all State-funded child care projects. NPC added several additional sections to this survey to capture data necessary for this particular program evaluation, including items to measure financial stress, networking opportunities,

and feelings of accomplishment as child care providers.

*Provider Follow-up Survey*: At the time of each follow-up observation, providers were asked to complete a paper-and-pencil survey that served as a follow-up instrument to the Participant Enrollment Survey. This brief survey included a subset of PES items that the evaluation team wanted to track over time along with the additional items developed for this evaluation, including a measure of financial stress.

### PARENT-LEVEL DATA

The evaluation also included a parent survey component.

*Parent Survey.* The parent survey, developed by NPC for this study, included questions about parental satisfaction with care, stability of care, amount spent on child care, financial stress, and work productivity. In exchange for their participation in the survey, parents received a $15 gift card to Fred Meyer or Target.

The parent survey methodology differed for the two pilot project evaluations. The Lane County parent survey component involved an annual point-in-time survey; while some parents participated in the survey more than once, the design was not intentionally longitudinal. In Multnomah County, on the other hand, the parent survey design was intentionally longitudinal to follow the same families over the course of the evaluation. The methodology for each project is described below.

#### *Lane County Parent Survey Methodology*

Due to budgetary constraints, the parent data collection activities were conducted just with parents in the CCCTC and control group; no parent-level data collection was conducted with no-treatment group parents. The parent survey was administered once annually during the 3-year evaluation.

In Year 1, the parent survey was administered through the mail. Providers were asked to give parents a flyer explaining the study along with a *consent to contact form*, and were asked to encourage parents to return the form. Those parents who returned signed *consent to contact forms* with their mailing addresses (100, 58 from CCCTC providers and 42 from control providers) became the sample of parents used for the parent survey. The parents who signed a *consent to contact* comprised 32% of families served by CCCTC providers and 26% of the families served by control providers. Surveys were mailed to these 100 parents, and NPC conducted follow-up phone calls and second mailings to all parents who did not return their survey. This methodology resulted in an eventual 68 surveys (38 from CCCTC parents and 30 from control parents), for a 66% response rate for consenting CCCTC parents and a 71% response rate for consenting control parents. These parents represented approximately 20% of the families served by the CCCTC and control facilities.

In order to both increase the parent sample size and to use resources more efficiently, NPC adopted a different strategy during Years 2 and 3, involving a three-pronged approach to parent survey data collection.

1. **Survey parties**: NPC staff visited each facility at a pre-arranged time (during busy pick-up times) and invited parents to complete the survey while they picked up their children.
2. **Drop-boxes**: NPC staff left extra blank surveys and drop-boxes at each facility and asked providers to have parents complete the surveys when they dropped off or picked up their children.
3. **Mailed surveys:** Finally, NPC mailed surveys to those parents who received CCCTC subsidies who did not complete a survey either at a survey party or through a drop box. Surveys were not mailed to parents who did not receive a

CCCTC subsidy (that is, parents at control facilities or parents at CCCTC facilities who did not qualify for subsidies). Receiving the highest possible response rate from CCCTC subsidy parents was the primary concern of the evaluation team, as it is these parents who can comment on what effect the subsidies have had on their families.

This three-pronged approach to the parent surveys resulted in much higher response rates in Years 2 and 3. In Year 2, a total of 207 parents completed the survey: 42 parents receiving the CCCTC subsidy (representing 86% of parents receiving a subsidy at the time of the data collection) and 165 other parents (representing 50% of all other parents). In Year 3, a total of 181 parents completed the survey: 34 parents receiving the CCCTC subsidy (representing 97% of parents receiving a subsidy at the time of data collection) and 147 other parents (representing 59% of all other parents at the time of data collection).

#### *Multnomah County Parent Survey Methodology*

NPC adopted the three-pronged approach in Multnomah County: NPC held survey parties, left drop boxes, and for subsidy parents, mailed surveys. Unlike in Lane County, however, in Multnomah County the goal was longitudinal data collection, that is, to follow the same group of parents over time. In order to maximize retention for the follow-up surveys, NPC used several approaches to follow-up parent survey data collection.

*Six-month telephone check-in calls:* NPC staff called each parent who completed a baseline survey 6 months before he/she was due for his/her annual follow-up to confirm that the phone number and address were still valid. If phone numbers were not valid, NPC attempted to get updated phone numbers from the CCCTC Project Director or from the child care site director.

*Mailed surveys:* Approximately 2 weeks before the parent became due to complete their follow-up survey, NPC staff mailed surveys to each parent who completed a baseline survey. Up to three replacement surveys were mailed at approximately 2-week intervals if there was no response from the parent and their address was still valid, e.g., their survey was not returned to sender.

*Phone calls:* After the follow-up survey was mailed to each parent, NPC staff made a confirmation call within 5 business days to ensure that the parent received the survey in the mail and to ask if they had any questions. The parent was also asked if they would prefer to complete the survey over the phone, in which case the survey was completed during the call; or if not, it was scheduled for a later date. If NPC staff did not reach the parent by phone but the phone number appeared to be in working order and valid for the parent, staff left weekly voicemail messages to confirm that the parent received the survey and remind them to complete and return it in order to receive a gift card.

*Child Care Facility:* After repeated unsuccessful attempts to have a CCCTC parent complete a survey, NPC staff asked the child care facility director for updated contact information for the parent if applicable and/or assistance in reminding parents to complete a follow-up survey.

*Project Director:* After repeated unsuccessful attempts to have a CCCTC subsidy parent complete a survey, the CCCTC Project Director included the survey with the parent's subsidy re-enrollment paperwork and encouraged the parent to complete and return the survey to NPC.

Out of 463 families with children enrolled at the CCCTC and comparison group facilities, baseline data were collected from 288 parents (110 CCCTC parents, 178 control parents; 41% from family programs, 59% from center programs). In Year 2, a total of 235 parents (82% of the baseline sample) com-

pleted the survey: 48 parents receiving the CCCTC subsidy (representing 64% of parents receiving a subsidy at the time of data collection) and 187 other parents. In Year 3, a total of 69 parents completed the survey who were due for a second follow-up survey during the study time period: 41 parents receiving the CCCTC subsidy (representing 59% of parents receiving the subsidy) and 28 other parents.

### *Parent Survey Sample Sizes*

Table 3 presents the sample sizes for the parent data collection in the Lane and Multnomah projects.

**Table 3. CCCTC & Control Parent Survey Sample Sizes**

| | Lane County | Multnomah County | |
|---|---|---|---|
| | **Baseline** | **Baseline** | **Follow-Up** |
| **CCCTC Subsidy**[1] | | | |
| Number received | 77 | 62 | 41 |
| Recruitment/retention rate | NA[2] | 82% | 87% |
| **CCCTC Non-subsidy** | | | |
| Number received | 128 | 48 | 28 |
| Recruitment/retention rate | NA[2] | 46% | 87%[3] |
| **Control** | | | |
| Number received | 171 | 178 | 151 |
| Recruitment/retention rate | NA[2] | 63% | 93%[3] |

[1] A parent is counted in the CCCTC subsidy group if she/he had ever received a subsidy. Although some parents may have received the subsidy but then later were disenrolled due to becoming ineligible or leaving their child care site, they are still counted in the CCCTC subsidy group for this table and subsequent analyses.

[2] Due to the change in parent recruitment procedures and record keeping over time in Lane County, it is not possible to report overall recruitment rates. In Year 1, 66% of CCCTC parents and 71% of control parents who returned consent to contact forms completed the survey. In Years 2 and 3, more than 80% of all CCCTC subsidy parents and over 50% of all other parents completed surveys.

[3] The Multnomah County retention rate was calculated just for the subset of parents due for follow-up before the end of the pilot study.

### DATA COLLECTION TIMELINE

As outlined above, some types of data were collected quarterly, while other data elements were conducted annually. Data collection for this evaluation was conducted on a rolling basis; that is, as each facility was enrolled in the CCCTC or control group, NPC conducted baseline data collection, and then the quarterly and annual follow-up due dates were calculated based on the date of the baseline data collection. Similarly, as new families enrolled in the facilities, NPC collected the baseline parent survey, and annual follow-up due dates were calculated based on the date of the baseline survey. Table 4 summarizes the data collection activities, including who completes each activity and when each activity is conducted.

**Table 4. CCCTC Evaluation Data Collection Activities**

| Data Collection Component: | Who Does This? | When Is This Completed? |
|---|---|---|
| **CCCTC Program-level Data** | | |
| Quarterly Reports | CCCTC Project Directors | Quarterly |
| Sample Tracking Data | CCCTC Project Directors | Quarterly |
| **Facility-level Data** | | |
| Facility Director Survey | Facility Directors | Baseline, 12 & 24 months post-baseline |
| Family Tracking Data *[Multnomah County only]* | Facility Directors & CCCTC Project Director | Quarterly |
| **Provider-level Data** | | |
| Observation<br>Participant Enrollment Survey<br>Provider Follow-Up Survey | Providers who work with children 20+ hours/week | Baseline, 12 & 24 months post-baseline |
| **Parent-level Data** | | |
| Parent Survey | Parents | Lane County: Annual point-in-time survey<br>Multnomah County: Annual longitudinal survey |

# PROGRAM IMPLEMENTATION AND ACTIVITIES

In this section, we document the implementation of the pilot projects, including provider recruitment, activities focused on families, activities focused on providers, and project expenditures.

## Recruitment

### LANE COUNTY

The first year of the project focused on start-up activities including recruiting providers. The project eligibility criteria were that providers must be registered and must have provided care for at least 1 year, and must have been on the Oregon Registry at Step 5 or above (or actively working on achieving Step 5). Lane Family Connections, the grantee agency, is the Lane County Child Care Resource and Referral Network (CCR&R), and this greatly helped with recruitment efforts. Most providers in the community were already familiar with Family Connections. The Project Director put an advertisement in the CCR&R newsletter, posted information on the agency's Web site, and also sent a flyer to everyone in their database who was a registered family provider above a Step 3. Furthermore, Family Connections had strong relationships with the Child Care Division, DHS, the Provider Resource Organization, and the Lane County Oregon Center Director's Coalition, and all these organizations helped spread the word about the pilot project. Through these efforts the project received 20 applicants, just short of the 24 needed to fill the treatment and control group. Next, the Project Director sent an email to all providers in the CCR&R database who had email addresses, and did phone calls to providers who did not have email.

The Project Director visited each provider who expressed interest in the program. At these meetings she explained the intent of the

program and addressed any questions or concerns providers may have had. Some providers were fearful that the program's goal would be to change who they were or to change their philosophy or values. The Project Director explained that the program, rather than "changing who you are," would help them become a "better you."

These initial recruitment activities (newsletter, flyer, email, and phone calls) were successful, and recruitment was complete within the first 3 months of the project. There was no need for multiple letters, phone calls, and other contacts, and this is likely due to the fact that Lane Family Connections was already well known in the community and providers trusted the Family Connections staff, and therefore providers were willing and eager to participate in the program.

Once the target number of providers were recruited, the Project Director randomly assigned providers to the CCCTC and control groups. In addition, the Project Director developed necessary forms and paperwork (e.g., parent income verification forms) and provided assistance to the CCCTC providers in completing all the necessary paperwork.

The project started enrolling families into the subsidy component in the second quarter (October-December 2005). In addition, dur-

ing this quarter, the program began providing wage and program enhancements and support, mentoring, and networking activities for providers. These program activities continued through Years 2 and 3.

Over the course of the 3-year pilot, the program provided services to a total of 37 providers (17 family providers and 20 center providers). During Year 1, CCCTC facilities served 269 children, during Year 2, CCCTC facilities served 297 children, and during Year 3, CCCTC facilities served 307 children.

While program activities for providers took place over the 3-year pilot period, not all providers received program services for the full 3 years (see Table 5). Some providers left their place of employment during the pilot period, and others joined their place of employment mid-way through the pilot period. While most family providers (71%) took part in the full 3 years of the program, this was true for just 35% of the center providers. Thus, the intensity of the intervention (in terms of number of activities and contacts with the Project Director) as well as the length of intervention, differed greatly; family providers received a far more extensive intervention than did center providers.

### MULTNOMAH COUNTY

During the first quarter of the project, the Project Director finalized all forms and materials and began recruiting facilities. The project structured its eligibility criteria in order to serve providers who were potentially most in need of assistance: providers were eligible for the program if they were at a Step 2 or lower on the Oregon Registry, and they could not be involved in any provider networks (currently or in the past). Providers also needed to be licensed or in the process of becoming licensed in order to be eligible for participation. Once facilities agreed to participate, the Project Director flipped a coin to determine whether the provider would be in the CCCTC or control group.

The project employed a variety of advertising and recruitment strategies. Initially, the project was focused on recruiting Multnomah County providers. In addition to mailing and calling providers with information about the project, the Project Director advertised the project with, and asked for referrals from, the Multnomah County Library, local Child Care Division licensing specialists, local CCR&R staff, and the local community health nurse. In addition, the project was advertised on Craigslist and through posters posted in venues around Multnomah County.

Recruiting family child care facilities took the project much longer than anticipated. While the four center facilities (two for each study group) were recruited in the first quarter of the project, recruitment of family child care facilities continued throughout Year 1 and into Year 2. As the recruitment process took longer than anticipated, the project advisory board agreed to expand recruitment efforts to include providers in Clackamas and Washington counties, and to include exempt providers who were interested in becoming registered or licensed (though no more than 25% of the providers could fall into this category).

The recruitment challenges, which the Lane County project did not face, may be due in part to the more stringent eligibility requirements for the Multnomah project. Those providers who seemed most interested in participating were those who exceeded the eligibility criteria, and those who met the criteria were most wary of participating. These providers seemed less willing to invite others into their programs and less willing to commit to monthly networking meetings.

Furthermore, unlike in Lane County, the Multnomah County pilot project was not housed within the county Child Care Resource and Referral Network. The grantee

agency was not well known to many providers, and this lack of familiarity and trust likely hampered recruitment efforts. Furthermore, this presented some logistical challenges. For example, the Project Director did not have access to the CCR&R mailing list, and therefore had to cross reference the Child Care Division list of providers with a list from the Oregon Center for Career Development to identify those providers who met project eligibility criteria.

Over the course of the pilot project, the program served 35 providers (17 family providers and 18 center providers) and a total of 448 children. As with Lane County, while program activities for providers took place over the 3-year pilot period, not all providers received program services for the full 3 years. Many providers were not recruited into the program until part way through the first year (or even at the start of the second year). Some providers left their place of employment during the pilot period, and others joined their place of employment midway through the pilot period. Unlike in Lane County, as illustrated in Table 5, the majority of family child care providers in the Multnomah County pilot project were *not* engaged in the program for the full 3 years. Indeed, only 18% of family child care providers received 3 years of the intervention, while 59% received one to 2 years of intervention, and 24% received 1 year or less. On the other hand, 39% of the center providers received 3 years of the intervention, while 17% received one to 2 years of intervention and 44% received 1 year or less of the intervention.

**Table 5. Length of CCCTC Intervention For Family and Center Providers**

| | Lane County | | Multnomah County | |
|---|---|---|---|---|
| **Length of Time in CCCTC** | **Family Providers** | **Center Providers** | **Family Providers** | **Center Providers** |
| Less than 1 year | 14% | 15% | 24% | 44% |
| 1 to 2 years | 7% | 35% | 59% | 17% |
| 2 to 3 years | 78% | 50% | 18% | 39% |

## Program Activities Focused on Families

One of the three primary aims of the CCCTC program was to address the issue of child care affordability, with the goal of helping low-income parents keep child care expenditures to within 10% of family income. Ultimately, increased stability of care for children and increased income for providers could result in program improvements and higher retention in the field.

To address this aim, the pilot projects paid subsidies directly to the providers each month; parents were responsible for paying the providers the remainder of their child care bill, which totaled 10% of the family's income. Parent eligibility was confirmed twice annually. In addition, families' subsidy participation and rate was verified anytime the family had a change in DHS subsidy, change in jobs, or change in household size. All families who applied for subsidies through the pilot projects also were required to apply for a DHS subsidy if they met the DHS income requirements.

In Lane County, 258 children received subsidies at any time during the 3-year pilot

project and in Multnomah County 122 children received subsidies. For more information on subsidy usage and how subsidies impacted family outcomes such as placement stability and financial stress, please see pages 58-71 of this report.

## Program Activities Focused on Providers

Both pilot projects provided activities for providers aimed at increasing professional development and child care quality. These activities included networking groups, site visits and technical assistance, and program and wage enhancements.

### NETWORKING GROUPS

In Lane County, each month, the participating family providers gathered for networking meetings. In addition to offering a chance for the providers to come together to support each other and share stories and experiences, each meeting focused on a particular topic and sometimes involved guest speakers or presentations. Below are some topics covered by the networking meetings:

- Making nutritious lunches using fresh produce;
- Learning about the Lane Community College Biz Center and the services it offers;
- Car seat safety (including free safety checks by a certified car seat safety instructor);
- Working with children with special needs and learning disabilities;
- Maintaining a hygienic environment;
- Gardening with children;
- Enriching outdoor play stations;
- Recycling and reusing, including recycled art;
- Family dynamics and cultural differences in communication;
- Learning styles;
- Sharing family and community history through pictures and stories;
- Incorporating music and movement into programs;
- Stress management;
- Communicating with parents;
- Eco-friendly child care;
- Organizing the child care environment; and
- Protecting your business (including how issues of child abuse, substance abuse, domestic violence, and natural disasters can imperil the business).

Along with these networking meetings, the Project Director prepared monthly newsletters that often included a book review and art project ideas. Network meetings continued through the 3-year pilot and into the "maintenance" years that followed.

During Year 2, the Lane County Project Director put increased effort into engaging center staff. One of the challenges identified through the Year 1 evaluation was that center staff did not feel as connected to the program as the family providers did, primarily because it was center directors, and not the line staff, who interfaced most with the program.

Therefore, during Year 2, center staff were invited to participate in two Center Staff Development Trainings. The first training was an opportunity for the providers to get to know each other and the Project Director and also included a review of the QUEST observation tool. The second training included a discussion of the difference between process art and product art. The Project Director also met individually with all center staff to set professional development goals, and she observed and provided feedback on each of

their teaching styles. The Project Director continued efforts with center providers during Year 3; these providers participated in quarterly meetings and goal-setting and visits from the Project Director.

Learning from the Lane County pilot project's experience of the necessity to engage center providers, during Year 1, the Multnomah County Project Director established several networking groups, which continued throughout the 3-year pilot project. There was a group for each of the participating centers and one for the participating family providers. Each networking group met approximately monthly and these meetings provided an opportunity for providers to learn and gain support from fellow providers, and provided an opportunity for the program to conduct trainings.

The topics and trainings covered at the Multnomah networking meetings were similar to Lane County's topics, and included Child Care Division rules and regulations, Oregon Registry enrollment and advancement pathways, health and safety practices, accounting and other business practices, Harms/Clifford assessments to evaluate classroom environment, classroom yoga, curriculum creation, Building Blocks of Social and Emotional Development, Opening Doors to Inclusive Child Care, and Creating a Climate for Growth.

In addition, most Multnomah pilot project providers also attended the annual Child Care Improvement Project conference, which included sessions on a range of topics including strengthening partnerships with parents, learning about the Ages and Stages Questionnaire, marketing strategies, and bringing the natural environment to the classroom.

During Year 3, the Multnomah pilot project family provider networking cohort and one of the center networks decided to work toward their Child Development Associate credentials, and the Project Director provided support and guidance through this process.

### Site Visits and Technical Assistance

The mentoring and technical assistance provided by the program took several forms at both projects, including monthly (and sometimes more frequent) site visits from the Project Directors, and frequent telephone contact between the Project Directors and the providers.

In Lane County, the Project Director spent considerable time on site visits, phone contacts, and email contacts with providers (see Table 6). Phone contacts increased most dramatically over time, more than doubling from Year 1 to Year 3. In hours, each year, this technical assistance took up just over 50% of the Project Director's time. During the "maintenance" phase after the 3-year pilot, the Project Director stopped most of the intensive, personalized technical assistance. However, the Project Director was still available to providers for occasional phone calls and site visits; indeed, during a typical maintenance phase month, the Project Director spent 32 hours providing such assistance (the equivalent of just under 20% FTE).

**Table 6. Project Director Activities by Year**

| Activity | Year 1 | Year 2 | Year 3 |
|---|---|---|---|
| Site Visits | | | |
| Lane County | 193 | 201 | 214 |
| Multnomah County | 88 | 122 | 91 |
| Phone Contacts | | | |
| Lane County | 796 | 1,198 | 2,297 |
| Multnomah County | 241 | 1,173 | 1,441 |
| Email Contacts | | | |
| Lane County | 172 | 452 | 585 |
| Multnomah County | 108 | 412 | 536 |

In Multnomah County, a similar pattern of frequent contact with providers is seen, although the number of site visits provided were considerably less than in Lane County. A similar proportion (approximately 60%) of the Project Director's time in Multnomah County was focused on providing technical assistance.

On-site, telephone, and email consultation covered a wide range of topics in both sites, including, but not limited to:

- Helping providers determine the provider to child ratio that would be the best fit for each program and helping providers identify whether there were certain age groups with which they worked best;
- Problem-solving around how to meet the required staff/student ratio at all times;
- Helping providers use their space most efficiently in terms of the arrangement of toys, furniture, and equipment—helping providers create work zones, make their space visually appealing and "fun;"
- Working with providers to display and share art projects;
- Establishing schedules and curriculum;
- Building an understanding of child development stages to help providers identify normal and abnormal behavior;
- Assisting with group activities and curriculum development;
- Discussing how to embrace diversity among families;
- Observing and coaching about interpersonal interactions including tone of voice;
- Training on outdoor play safety issues;
- Identifying and implementing environmentally-friendly practices;
- Reviewing of evacuation and emergency procedures;
- Helping with marketing ideas to boost enrollment;
- Providing training and information on a variety of topics, including: diversity, OR registration, classroom management, ADHD, health and safety, science for young children, and DHS subsidy regulations;
- Providing information, resources, and referrals on dealing with children with

challenging behaviors, learning or developmental delays, or medical problems; and

- Strategizing about how to handle difficult family situations, such as parental substance abuse or incarceration.

The business-oriented issues that the Project Directors addressed with providers included the following:

- Helping providers enroll on the Oregon Registry;
- Explaining the process and requirements for wage enhancement payouts;
- Explaining the parent subsidy process to providers and helping them enroll parents;
- Helping transition from part-time to full-time slots;
- Mentoring with center directors around personnel issues;
- Helping providers develop or modify contracts, billing systems, and rate schedules;
- Complying with license and Child Care Division health and safety issues;
- Helping family providers become certified sites;
- Consulting with providers on the process and benefits of the DHS subsidy program;
- Helping providers access other subsidy; and
- Referring providers to classes and trainings and helping secure scholarships.

In addition to the above activities, each year the Project Directors referred providers to classes and trainings and linked many with scholarships. During the final year of the Lane County pilot project, the project sent 19 providers to an OAEYC conference. In addition, one Lane County center director and one Multnomah center director took part in the OAEYC Director Certification Training.

**"The wage enhancement is the most beneficial part of the [CCCTC] project for me. The extra money is VERY helpful, especially on a limited teacher's salary."**
***– CCCTC Child Care Provider***

### PROGRAM AND WAGE ENHANCEMENTS

In Lane County, each year, each participating family facility received a $1,000 program enhancement grant and each center facility received a $2,000 grant. The Project Director worked with each program to identify priorities for facility improvements. Facilities used these grants for toy, equipment, and furniture purchases; home repairs; and staff training.

In addition, each Lane County pilot project provider who enrolled on the Oregon Registry (OR) at Step 5 or above was eligible for wage enhancements. The wage enhancements were based on a provider's OR step and ranged from $1,000 to $5,000 per year. Fifteen providers enrolled on the OR at Step 5 or above during Year 1. During Year 2, the CCCTC Project Director focused a good deal of her mentoring and support on making sure that CCCTC providers were enrolled on the OR at a Step 5 or higher, and therefore eligible for the wage enhancements. Twenty-four CCCTC providers received wage enhancements in Year 2. Many CCCTC providers saw a substantial increase in their income, with 14 providers receiving $2,000 or more and 5 CCCTC providers receiving $5,000 each in enhancements. During Year 3, 27 providers received wage enhancements, with 19 receiving $2,000 or more and 5 CCCTC providers receiving $5,000 in enhancements.

**Table 7. Wage Enhancement Distribution**

| County | # Providers receiving wage enhancements | Range of enhancements per year | % receiving $2,000 or more annually | % receiving $5,000 or more annually |
|---|---|---|---|---|
| Lane | 27 | $1,000-$5,000 | 71% | 21% |
| Multnomah | 12 | $200-$5,600 | 4% | 2% |

Like in Lane County, the first 2 years of the pilot project in Multnomah County, participants received program enhancements of $1,000 per year for family providers and $2,000 per year for centers. During the third year of the project, family providers received $500 and centers received $1,000.

Wage enhancements in Multnomah County were less than in Lane County. The Multnomah County project offered wage enhancements ranging from $200 to $400 per Step advancement, depending on the providers' Step. After a slow start during Year 1, during which time $800 was disbursed to providers in the form of wage enhancements, during Year 2 the program disbursed $11,000 to 12 providers for wage enhancements (enhancement amounts per provider ranged from $200 to $5,600). The program did not distribute any wage enhancements during Year 3 because at that time eligible participants were referred to the Oregon Center for Career Development in Childhood Care and Education (OCCD). With funding from the American Recovery and Reinvestment Act and the Oregon Community Foundation, and under the direction of the Oregon Employment Department's Child Care Division, OCCD then began a program of incentives for child care providers statewide tied to their enrollment and advancement on the Oregon Registry.

Thus, in Lane County, providers received far more substantial wage enhancements than was the case in Multnomah County, although it is unknown how many of the Multnomah County CCCTC providers received enhancements during Year 3 from OCCD.

## Program Expenditures

As illustrated in Table 8, in Lane County, the majority of pilot project funds over the 3 years were spent on the parent subsidy component of the project. Program administration, including the Project Director's salary, was the next largest expenditure, followed by funds for wage enhancements. While expenditures in most categories remained relatively stable across the 3 years, the amount spent on wage enhancements in the third year was more than double the amount spent in the second year ($106,000 in Year 3 compared to $47,125 in Year 2) due to providers' increased enrollment and advancement on the OR.

As with Lane County, in Multnomah County, the majority of project funds over the 3 years were spent on the parent subsidy component. However, the Multnomah County pilot project spent a smaller proportion of funds on wage enhancements and spent a somewhat higher percentage of funds on project salaries and administrative costs. The total project budget for Multnomah County was smaller than the Lane County budget ($814,481 for Multnomah County as compared to $1,203,684 for Lane County), and therefore Multnomah County spent significantly less than Lane County on parent subsidies ($532,458 for Multnomah County and $684,288 for Lane County) and on wage enhancements ($12,600 for Multnomah County and $170,125 for Lane County).

**Table 8. Lane County Pilot Project Expenditures**

| Activity | Year 1 Amount (% of Annual Expenditures) | Year 2 Amount (% of Annual Expenditures) | Year 3 Amount (% of Annual Expenditures) | Total Amount (% of Expenditures) | Per Participant Average Cost |
|---|---|---|---|---|---|
| Parent Subsidies | $210,854 (62%) | $250,230 (58%) | $223,204 (52%) | $684,288 (57%) | $2,652 per child |
| Provider Supports | | | | | |
| Wage enhancements | $40,500 (12%) | $47,125 (11%) | $82,500 (19%) | $170,125 (14%) | $6,301 per provider receiving enhancements |
| Program enhancement grants | $12,886 (4%) | $16,363 (4%) | $16,822 (4%) | $46,071 (4%) | $3,544 per facility |
| Project Director salary, benefits, and other administration | $69,779 (21%) | $95,861 (22%) | $99,152 (23%) | $264,792 (22%) | $7,788 per participating provider |
| Other (materials, scholarships, mail, telephone, incentives to control sites) | $7,016 (2%) | $23,587 (6%) | $7,805 (2%) | $38,408 (3%) | |
| Total Provider Supports | $130,181 (38%) | $182,936 (42%) | $206,279 (48%) | $519,396 (43%) | $15,000 per participating provider |
| **Total** | **$341,035** | **$433,166** | **$429,483** | **$1,203,684** | |

**Table 9. Multnomah County Pilot Project Expenditures**

| Activity | Year 1 Amount (% of Annual Expenditures) | Year 2 Amount (% of Annual Expenditures) | Year 3 Amount (% of Annual Expenditures) | Total Amount (% of Expenditures) | Per Participant Average Cost |
|---|---|---|---|---|---|
| Parent subsidies | $90,620 (56%) | $304,056 (72%) | $137,782 (60%) | $532,458 (65%) | $4,364 per child |
| Provider Supports: | | | | | |
| Wage enhancements | $800 (0%) | $ 11,800 (3%) | $0 (0%) | $12,600 (2%) | $1,050 per provider receiving enhancements |
| Program enhancement grants | $500 (0%) | $12,825 (3%) | $4,700 (2%) | $18,025 (2%) | $1,202 per facility |
| Project Director salary, benefits, and other administration | $65,027 (40%) | $82,848 (20%) | $76,882 (34%) | $224,757 (28%) | $6,422 per participating provider |
| Other (materials, scholarships, mail, telephone, incentives to control sites) | $6,186 (4%) | $10,746 (3%) | $9,709 (4%) | $26,641 (3%) | |
| Total Provider Supports | $72,513 (44%) | $118,219 (28%) | $91,291 (40%) | $282,023 (35%) | $8,058 per participating provider |
| **Total** | **$163,133** | **$422,275** | **$229,073** | **$814,481** | |

# DESCRIPTION OF PROVIDERS AND FAMILIES SERVED

## Provider Demographics

Child care providers completed the Provider Enrollment Survey (PES) at baseline to provide demographic information and describe their work and background as a child care provider. The goal was to have providers complete the PES within 4 weeks of enrollment with the project.

Table 10 presents demographic information for the CCCTC and control groups based on the baseline PES. As would be expected, almost all participating providers were women. In both pilot projects, a majority of the providers were 35 years old or younger. The Multnomah County group of providers were more racially/ethnically diverse, and in particular had more African American providers, than the Lane County group of providers. More Lane County providers than Multnomah County providers had bachelors or masters degrees; this likely a reflection of the different eligibility criteria between the two projects. Indeed, when comparing just the participating family providers in Lane and Multnomah County, the difference is even more pronounced: participating family providers in Lane County were both significantly older and had significantly more education than their Multnomah County counterparts. It is also worth noting, however, that the Multnomah County control group had as many providers with Master's and Bachelor's degree as the Lane County providers; it was the CCCTC providers who were least likely to have a Bachelor's or Master's degree. Interestingly, though, Multnomah County providers were **more** likely to have obtained an Associate's Degree (AA).

## Table 10. Provider Demographics[4]

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| **Characteristic** | **CCCTC % (n)** | **Control % (n)** | **CCCTC % (n)** | **Control % (n)** | **CCCTC % (n)** | **Control % (n)** |
| **Gender** | N = 37 | N = 62 | N = 35 | N = 56 | N = 72 | N = 118 |
| Female | 92% (34) | 98% (61) | 91% (32) | 95% (53) | 92% (66) | 97% (114) |
| Male | 8% (3) | 2% (1) | 9% (3) | 5% (3) | 8% (6) | 3% (4) |
| **Age** | N = 37 | N = 62 | N = 35 | N =56 | N = 72 | N = 118 |
| 25 and under | 30% (11) | 19% (12) | 29% (10) | 21% (12) | 29% (21) | 20% (24) |
| 26 to 35 | 27% (10) | 36% (22) | 37% (13) | 39% (22) | 32% (23) | 37% (44) |
| 36 to 45 | 8% (3) | 26% (16) | 26% (9) | 11% (6) | 17% (12) | 19% (22) |
| 46 and older | 35% (13) | 19% (12) | 9% (3) | 29% (16) | 22% (16) | 24% (28) |
| **Race/ethnicity** | N = 36 | N = 61 | N = 35 | N = 55 | N = 71 | N = 116 |
| White | 81% (29) | 75% (46) | 60% (21) | 78% (43) | 70% (50) | 77% (89) |
| Hispanic | 14% (5) | 18% (11) | 20% (7) | 6% (3) | 17% (12) | 12% (14) |
| African American | 0% (0) | 0% (0) | 17% (6) | 13% (7) | 9% (6) | 6% (7) |
| Asian/Pacific Islander | 3% (1) | 5% (3) | 3% (1) | 4% (2) | 3% (2) | 4% (5) |
| American Indian/ Alaskan Native | 3% (1) | 0% (0) | 0% (0) | 0% (0) | 1% (1) | 0% (0) |
| Other | 0% (0) | 2% (1) | 0% (0) | 0% (0) | 0% (0) | 1% (1) |
| **Primary Language** | N = 36 | N = 62 | N = 34 | N = 56 | N = 70 | N = 118 |
| English | 94% (34) | 94% (58) | 94% (32) | 91% (51) | 94% (66) | 92% (109) |
| Spanish | 6% (2) | 7% (4) | 6% (2) | 4% (2) | 6% (4) | 5% (6) |
| Other | 0% (0) | 0% (0) | 0% (0) | 5% (3) | 0% (0) | 3% (3) |
| **Highest Education Level** | N = 36 | N = 61 | N = 35 | N =56 | N = 71 | N = 117 |
| Master's degree | 3% (1) | 2% (1) | 0% (0) | 7% (4) | 1% (1) | 4% (5) |
| Bachelor's degree | 17% (6) | 18% (11) | 9% (3) | 13% (7) | 13% (9) | 15% (18) |
| Associate's degree | 6% (2) | 18% (11) | 26% (9) | 20% (11) | 16% (11) | 19% (22) |
| Certification (child-related/other) | 14% (5) | 5% (3) | 11% (4) | 13% (7) | 13% (9) | 9% (10) |
| High school diploma/GED | 56% (20) | 54% (33) | 51% (18) | 43% (24) | 54% (38) | 49% (57) |
| Less than high school | 6% (2) | 3% (2) | 3% (1) | 5% (3) | 4% (3) | 4% (5) |

[4] Due to rounding, percentages may not add up to 100%.

## Experience and Training

Table 11 presents providers' professional characteristics based on PES items. Within Multnomah County, control providers had been in the field longer than CCCTC providers. Lane County providers in both groups tended to have been in the field for longer, compared to Multnomah County, and this could reflect Multnomah County's emphasis on recruiting providers with limited experience. Nearly all providers reported that they earned $30,000 or less from their child care work, and more than half earned less than $15,000 annually. Over half the providers reported that their families had additional sources of income. Multnomah County comparison group providers were the most likely to have child care as their only source of income.

**Table 11. Provider Professional Characteristics**

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| **Characteristic** | **CCCTC % (n)** | **Control % (n)** | **CCCTC % (n)** | **Control % (n)** | **CCCTC % (n)** | **Control % (n)** |
| **Type of position** | N = 35 | N = 59 | N = 35 | N = 56 | N = 70 | N = 115 |
| Director | 46% (16) | 44% (26) | 43% (15) | 34% (19) | 44% (31) | 39% (45) |
| Staff | 54% (19) | 56% (33) | 57% (20) | 66% (37) | 56% (39) | 61% (70) |
| **Length of time in field*** | N = 36 | N = 60 | N = 34 | N = 55 | N = 70 | N = 115 |
| Over 5 years | 61% (22) | 68% (41) | 32% (11) | 58% (32) | 47% (33) | 64% (73) |
| 3 to 5 years | 8% (3) | 13% (8) | 24% (8) | 7% (4) | 16% (11) | 10% (12) |
| 1 to 2 years | 14% (5) | 12% (7) | 21% (7) | 26% (14) | 17% (12) | 18% (21) |
| Less than 1 year | 17% (6) | 7% (4) | 24% (8) | 9% (5) | 20% (14) | 8% (9) |
| **Income from child care** | N = 34 | N = 60 | N = 34 | N = 54 | N = 68 | N = 114 |
| $15,000 or less | 68% (23) | 62% (37) | 65% (22) | 50% (27) | 66% (45) | 56% (64) |
| $30,000 or less | 94% (32) | 95% (57) | 100% (34) | 91% (49) | 97% (66) | 93% (106) |
| **Child care percent of total income** | N = 36 | N = 57 | N = 34 | N = 55 | N = 70 | N = 112 |
| Only source of income | 19% (7) | 23% (13) | 21% (7) | 44% (24) | 20% (14) | 33% (37) |
| More than half of income | 11% (4) | 16% (9) | 24% (8) | 16% (9) | 17% (12) | 16% (18) |
| About half of income | 33% (12) | 16% (9) | 29% (10) | 20% (11) | 31% (22) | 18% (20) |
| Less than half of income | 36% (13) | 46% (26) | 27% (9) | 20% (11) | 31% (22) | 33% (37) |

* Multnomah County providers in the control group have more years in the field (statistically significant at $p < .05$) compared to the treatment group. This significant difference holds up in the total sample as well.

## Family Demographics

Parents completed a baseline Parent Survey to report demographic information and record their experiences with child care.

Table 12 presents demographic information for two sub-groups of CCCTC parents (those who received subsidies and those who did not) and the control parents. Perhaps not surprisingly, CCCTC parents who received a subsidy were significantly younger and had lower educational levels than control parents and CCCTC parents whose incomes were too high to qualify for subsidies. Education levels of Multnomah County control families were quite high, with over 60% having a Bachelor's degree (compared to only 20% of subsidy parents). This difference was not apparent among Lane County parents. Overall, more than three-quarters of parents were Caucasian, and almost all listed English as their first language.

**Table 12. Parent Demographics**

| | Lane County | | | Multnomah County | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| Characteristic | CCCTC Subsidy Parents % (n) | CCCTC Non-subsidy parents % (n) | Control Parents % (n) | CCCTC Subsidy Parents % (n) | CCCTC Non-subsidy parents % (n) | Control Parents % (n) | CCCTC Subsidy Parents % (n) | CCCTC Non-subsidy parents % (n) | Control Parents % (n) |
| **Age** | N = 77 | N = 127 | N = 171 | N = 60 | N = 47 | N = 175 | N = 137 | N = 174 | N = 346 |
| Mean[a] | 31 | 35 | 34 | 30 | 34 | 35 | 31 | 35 | 35 |
| **Race/ethnicity** | N = 77 | N = 128 | N = 168 | N = 60 | N = 48 | N = 178 | N = 137 | N = 176 | N = 346 |
| White | 86% (66) | 85% (109) | 88% (148) | 77% (46) | 79% (38) | 86% (153) | 82% (112) | 84% (147) | 87% (301) |
| Hispanic | 5% (4) | 5% (6) | 5% (9) | 7% (4) | 4% (2) | 5% (8) | 6% (8) | 5% (8) | 5% (17) |
| African American[b] | 0% (0) | 2% (2) | 1% (1) | 23% (14) | 8% (4) | 6% (11) | 16% (14) | 3% (6) | 4% (12) |
| Asian/ Pacific Islander | 3% (2) | 2% (2) | 1% (2) | 5% (3) | 6% (3) | 6% (11) | 3% (5) | 3% (5) | 4% (13) |
| American Indian/ Native Alaskan | 1% (1) | 5% (6) | 2% (4) | 7% (4) | 2% (1) | 4% (7) | 4% (5) | 4% (7) | 3% (11) |
| Other | 5% (4) | 2% (3) | 2% (4) | 2% (3) | 6% (3) | 3% (5) | 5% (5) | 3% (6) | 3% (9) |

| | Lane County | | | Multnomah County | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| **Characteristic** | **CCCTC Subsidy Parents % (n)** | **CCCTC Non-subsidy parents % (n)** | **Control Parents % (n)** | **CCCTC Subsidy Parents % (n)** | **CCCTC Non-subsidy parents % (n)** | **Control Parents % (n)** | **CCCTC Subsidy Parents % (n)** | **CCCTC Non-subsidy parents % (n)** | **Control Parents % (n)** |
| **Primary Language**[c] | N = 77 | N = 128 | N = 177 | N = 60 | N = 48 | N =178 | N = 137 | N = 176 | N = 355 |
| English | 96% (74) | 95% (121) | 97% (166) | 100% (60) | 98% (47) | 98% (174) | 98% (134) | 96% (168) | 96% (340) |
| Spanish | 1% (1) | 2% (2) | 2% (3) | 8% (5) | 10% (5) | 2% (4) | 4% (6) | 4% (7) | 2% (7) |
| Other | 3% (2) | 4% (5) | 1% (2) | 0% (0) | 8% (4) | 5% (8) | 2% (2) | 5% (9) | 3% (10) |
| **Highest Education Level**[d] | N = 77 | N = 128 | N = 170 | N = 60 | N = 48 | N = 177 | N = 137 | N = 176 | N = 347 |
| Bachelor's degree or higher | 17% (13) | 42% (54) | 25% (43) | 20% (12) | 44% (21) | 62% (109) | 18% (25) | 43% (75) | 44% (152) |
| Associate's degree | 16% (12) | 20% (26) | 22% (37) | 11% (7) | 17% (8) | 14% (25) | 14% (19) | 19% (34) | 18% (62) |
| Certification | 9% (7) | 9% (11) | 13% (22) | 18% (11) | 8% (4) | 6% (11) | 13% (18) | 9% (15) | 10% (33) |
| Some vocational/trade school | 17% (13) | 10% (13) | 15% (25) | 13% (8) | 4% (2) | 4% (7) | 15% (20) | 9% (15) | 9% (32) |
| High school diploma/GED | 36% (28) | 13% (17) | 21% (36) | 32% (19) | 19% (9) | 11% (20) | 34% (47) | 15% (26) | 16% (56) |
| Less than high school | 5% (4) | 6% (7) | 4% (7) | 5% (3) | 8% (4) | 3% (5) | 5% (7) | 6% (11) | 4% (12) |

[a] Statistically significant difference at $p < .05$: CCCTC subsidy parents were younger than CCCTC non-subsidy and control parents.

[b] Statistically significant difference at $p < .05$: CCCTC subsidy parents were more likely to be African American than CCCTC non-subsidy and control parents.

[c] Total for each parent group may exceed 100% as parents could select more than one primary language spoken in their home.

[d] Statistically significant difference at $p < .05$: CCCTC subsidy parents had significantly lower education than CCCTC non-subsidy and control parents.

# CHILD CARE QUALITY OUTCOMES

## Child Care Quality Outcomes Findings in Brief

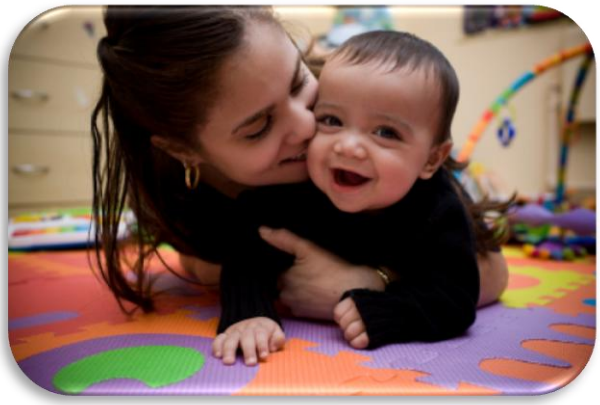
Both Lane and Multnomah County CCCTC projects resulted in improvements in provider quality. However, the pattern of findings differed somewhat for each site. In Lane County, family-based providers showed greater quality improvements in several key domains, relative to control providers. However, among center-based providers the level of improvement was not greater for CCCTC participants, relative to controls—both groups improved over time on several dimensions.

For Multnomah County, the pattern was somewhat reversed. Center-based providers showed greater improvements, relative to controls, on several key quality domains. Only one domain showed greater improvement for CCCTC family providers in Multnomah County; for other indicators, both treatment and control groups improved over time (and in two cases, control groups showed more improvement).

Because of these different patterns, combining the two datasets, rather than increasing the sample size and statistical power to detect differences, served to dilute the significant findings in either site, making the cross-site (combined) results inappropriate for interpretation.

## Child Care Quality Outcomes—Detailed Findings

To examine the influence of the CCCTC project on observable differences in child care, trained data collectors used the QUEST rating scale, as described previously. Because results from the Lane County Child Care Enhancement Project suggested that there were different levels of improvement for family



vs. center-based providers, data were analyzed separately for these two groups.

The total sample for Multnomah County for these analyses consists of 50 providers who were observed at baseline and at follow-up. Twenty five providers (13 treatment and 12 control) were family-based providers, and twenty five (8 treatment and 17 control) worked in child care centers. In Lane County, there were a total of 37 family providers (15 treatment, 22 control) and 44 center providers (17 treatment, 27 control). Thus, the combined sample included 62 family providers (28 treatment, 34 control) and 69 center providers (25 treatment, 44 control).

Thus, sample sizes for family and center providers (separately) are quite small, which limits the study's statistical power to detect program effects. Further, given the small sample sizes, results should be interpreted with caution as small samples are more susceptible to the influence of the quality of one or two providers (either negatively or positively). Multivariate within-subjects (repeated measures) Analysis of Variance (MANOVA) was used to analyze outcomes, including group status (treatment vs. control) and the group X time interaction term as predictors.

## ENVIRONMENTAL QUALITY

Table 13a shows the QUEST results for family providers' environmental quality. These indicators measure the extent to which the materials and physical environments meet high standards for developmental appropriateness and safety. As can be seen, family providers in Lane County showed significant improvements in several indicators of environmental quality, compared to controls. Specifically, CCCTC providers in Lane County improved more than control providers in terms of equipment for toddlers and preschoolers, safety of furnishings/materials, and quality and quantity of materials to support language and literacy (also see Figure 1). However, Multnomah County family providers showed no more improvement than control providers; for most indictors, both treatment and control groups improved over time. When samples were combined, the statistically significant findings in Lane County were mitigated by the lack of program effects for Multnomah County providers. Only improvements in materials for language/literacy remained significant across both program sites.

For center-based providers (Table 13b), only one domain showed significant improvement for the treatment providers, relative to controls (safety of furnishing and materials, for Multnomah County providers). Again, for several domains, there was significant improvement over time for both control and treatment providers.

In Lane County, where more providers participated in three years of intervention, it was possible to examine trends in quality over time (see Appendix B). Interestingly, the most significant improvements in environmental quality were apparent between baseline and the first follow-up, with environmental quality stabilizing or showing only slight increases between first and second follow-up.

**Table 13a. Family Providers' Improvements in Environmental Quality as Measured by the QUEST**

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | *CCCTC* | *Control* | *CCCTC* | *Control* | *CCCTC* | *Control* |
| **Space & Comfort** | | | | | | |
| | *n=15* | *n=22* | *n=13* | *n=12* | *n=28* | *n=34* |
| Baseline | 2.68 | 2.62 | 2.93 | 2.76 | 2.80 | 2.67 |
| Follow-up | 2.92 | 2.87 | 2.96 | 2.63 | 2.94 | 2.80 |
| *Significant change over time?* | *Yes* | *Yes* | *No* | *No* | *Yes* | *Yes* |
| *CCCTC group improve more?* | *No* | | *No* | | *No* | |
| **Equipment & Materials – Infants** | | | | | | |
| | *n=1* | *n=3* | Na | Na | *n=Na* | *n=Na* |
| Baseline | 2.0 | 1.95 | -- | -- | -- | -- |
| Follow-up | 2.71 | 2.30 | -- | -- | -- | -- |
| *Significant change over time?** | *NA* | *NA* | -- | -- | -- | -- |
| *CCCTC group improve more?** | *NA* | | -- | | -- | |

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | *CCCTC* | *Control* | *CCCTC* | *Control* | *CCCTC* | *Control* |
| **Equipment & Materials – Toddlers** | | | | | | |
| | *n=9* | *n=13* | *n=9* | *n=8* | *n=18* | *n=21* |
| Baseline | 2.21 | 1.91 | 2.6 | 2.0 | 2.41 | 1.95 |
| Follow-up | 2.78 | 2.22 | 2.5 | 2.5 | 2.63 | 2.34 |
| *Significant change over time?* | *Yes* | *Yes* | *No* | *Yes* | *Yes* | *Yes* |
| *CCCTC group improve more?* | ***Yes*** | | *No* | | *No* | |
| **Equipment & Materials – Preschoolers** | | | | | | |
| | *n=15* | *n=21* | *n=10* | *n=9* | *n=25* | *n=30* |
| Baseline | 2.27 | 2.00 | 2.46 | 1.96 | 2.35 | 1.90 |
| Follow-up | 2.75 | 2.30 | 2.62 | 2.30 | 2.70 | 2.30 |
| *Significant change over time?* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* |
| *CCCTC group improve more?* | ***Yes*** | | *No* | | *No* | |
| **Safety of furnishings and materials** | | | | | | |
| | *n=15* | *n=22* | *n=13* | *n=12* | *n=28* | *n=34* |
| Baseline | 2.64 | 2.68 | 2.88 | 2.87 | 2.75 | 2.74 |
| Follow-up | 2.96 | 2.87 | 2.94 | 2.97 | 2.95 | 2.91 |
| *Significant change over time?* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* |
| *CCCTC group improve more?* | ***Yes*** | | *No* | | *No* | |
| **Materials to support language and literacy** | | | | | | |
| | *n=15* | *n=22* | *n=13* | *n=12* | *n=28* | *n=34* |
| Baseline | 2.08 | 2.07 | 2.23 | 1.89 | 2.15 | 2.01 |
| Follow-up | 2.66 | 2.26 | 2.53 | 2.22 | 2.60 | 2.25 |
| *Significant change over time?* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* |
| *CCCTC group improve more?* | ***Yes*** | | *No* | | *Yes* | |

QUEST scale scores can range from 1 to 3.

*NA= insufficient sample size for significance testing.

## Table 13b. Center Providers' Improvements in Environmental Quality as Measured by the QUEST

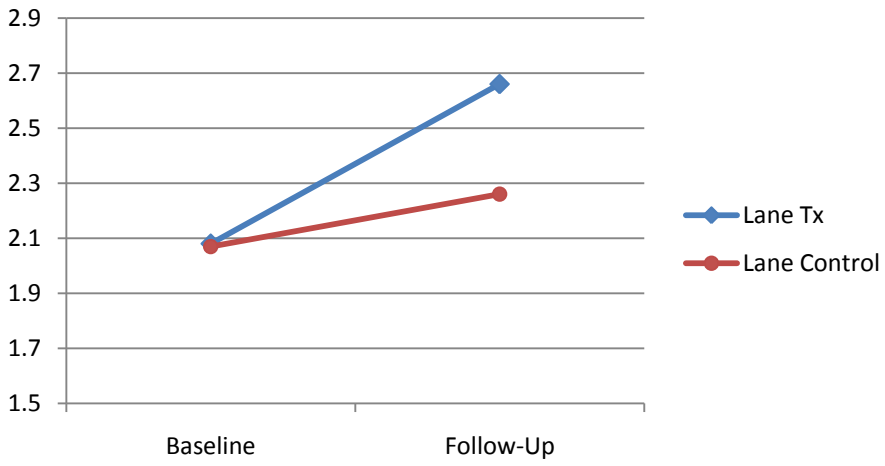
| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | *CCCTC* | *Control* | *CCCTC* | *Control* | *CCCTC* | *Control* |
| **Space & Comfort** | | | | | | |
| | *n=15* | *n=27* | n=8 | n=17 | *n=23* | *n=44* |
| Baseline | 2.86 | 2.72 | 2.80 | 2.91 | 2.84 | 2.80 |
| Follow-up | 2.88 | 2.95 | 2.97 | 2.98 | 2.91 | 2.97 |
| *Significant change over time?* | *Yes* | *Yes* | *Yes* | *No* | *Yes* | *Yes* |
| *CCCTC group improve more?* | *No* | | *No* | | *No* | |

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | *CCCTC* | *Control* | *CCCTC* | *Control* | *CCCTC* | *Control* |
| **Equipment & Materials – Infants** | | | | | | |
| | *n=3* | *n=5* | *n=1* | *n=3* | *n=4* | *n=8* |
| Baseline | 2.40 | 1.64 | 2.71 | 2.91 | 2.48 | 2.11 |
| Follow-up | 2.71 | 2.48 | 2.0 | 2.95 | 2.53 | 2.66 |
| *Significant change over time?** | *NA* | *NA* | *NA* | *NA* | *NA* | *NA* |
| *CCCTC group improve more?** | *NA* | | *NA* | | *NA* | |
| **Equipment & Materials – Toddlers** | | | | | | |
| | *n=2* | *n=8* | *n=3* | *n=7* | *n=5* | *n=15* |
| Baseline | 3.00 | 1.85 | 2.63 | 2.86 | 2.78 | 2.32 |
| Follow-up | 2.28 | 2.24 | 2.52 | 2.76 | 2.42 | 2.48 |
| *Significant change over time?* | *NA* | *NA* | *Na* | *Na* | *Na* | *Na* |
| *CCCTC group improve more?* | *NA* | | *Na* | | *Na* | |
| **Equipment & Materials – Preschoolers** | | | | | | |
| | *n=6* | *n=15* | *n=5* | *n=6* | *n=11* | *n=21* |
| Baseline | 2.56 | 2.22 | 2.67 | 2.78 | 2.61 | 2.38 |
| Follow-up | 2.61 | 2.47 | 2.87 | 2.87 | 2.73 | 2.58 |
| *Significant change over time?* | *NA* | *NA* | *Na* | *Na* | *Yes* | *Yes* |
| *CCCTC group improve more?* | *NA* | | *Na* | | *No* | |
| **Safety of furnishings and materials** | | | | | | |
| | *n=17* | *n=27* | *n=8* | *n=17* | *n=25* | *n=44* |
| Baseline | 2.83 | 2.90 | 2.85 | 2.98 | 2.84 | 2.94 |
| Follow-up | 2.88 | 2.92 | 2.98 | 2.97 | 2.91 | 2.95 |
| *Significant change over time?* | *No* | *No* | *Yes* | *No* | *Yes* | *No* |
| *CCCTC group improve more?* | *No* | | ***Yes*** | | *No* | |
| **Materials to support language and literacy** | | | | | | |
| | *n=15* | *n=27* | *n=8* | *n=17* | *n=23* | *n=44* |
| Baseline | 2.37 | 2.01 | 2.35 | 2.47 | 2.36 | 2.19 |
| Follow-up | 2.39 | 2.28 | 2.55 | 2.55 | 2.45 | 2.38 |
| *Significant change over time?* | *Yes* | *Yes* | *Marginal* | *No* | *Yes* | *Yes* |
| *CCCTC group improve more?* | *No* | | *No* | | *No* | |

QUEST scale scores can range from 1 to 3.

*NA= insufficient sample size for significance testing.

**Figure 1. Quality Ratings for Materials for Language & Literacy: Changes Over Time for Family Providers in Lane County**




## CHILD-CAREGIVER INTERACTIONS

Table 14a shows the results for family provider scores on QUEST scales measuring the quality of interactions between children and caregivers. Children of caregivers who are nurturing and responsive tend to have more positive attachments and are less at risk for social-emotional problems (Shonkoff & Phillips, 2000). Neither Multnomah nor Lane County CCCTC providers showed greater improvement, relative to controls, on these subscales, although there was a marginally significant effect for the level of supervision of children for Lane County providers. In Multnomah County, it appeared that the control providers showed more improvement than did the treatment providers for one subscale (use of positive guidance).

Results for center-based providers, at least in Multnomah County, were somewhat more encouraging. Center-based providers in Multnomah County showed greater improvement in their ability to respond positively to children, and in their use of positive guidance, relative to controls (see Figures 2 and 3). There were no significant differences between treatment and control providers for Lane County, or for the two sites combined.

## Table 14a. Family Providers' Improvements in Quality of Caregiver-Child Interactions as Measured by the QUEST

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | *CCCTC* | *Control* | *CCCTC* | *Control* | *CCCTC* | *Control* |
| **Caring & Responding** | | | | | | |
| | *n=14* | *n=18* | *n=13* | *n=12* | *n=27* | *n=30* |
| Baseline | 2.62 | 2.41 | 2.92 | 2.70 | 2.77 | 2.52 |
| Follow-up | 2.94 | 2.76 | 2.94 | 2.85 | 2.94 | 2.80 |
| *Significant change over time?* | *Yes* | *Yes* | *No* | *no* | *Yes* | *Yes* |
| *CCCTC group improve more?* | *No* | | *No* | | *No* | |
| **Using positive guidance** | | | | | | |
| | *n=14* | *n=22* | *n=13* | *n=12* | *n=27* | *n=34* |
| Baseline | 2.45 | 2.30 | 2.83 | 2.51 | 2.37 | 2.68 |
| Follow-up | 2.78 | 2.66 | 2.87 | 2.72 | 2.63 | 2.82 |
| *Significant change over time?* | *Yes* | *Yes* | *No* | *Yes* | *Yes* | *Yes* |
| *CCCTC group improve more?* | *No* | | *No, control improved more* | | *No* | |
| **Supervision** | | | | | | |
| | *n=15* | *n=22* | *n=13* | *n=12* | *n=26* | *n=34* |
| Baseline | 2.78 | 2.52 | 2.95 | 2.78 | 2.86 | 2.61 |
| Follow-up | 2.97 | 2.68 | 3.00 | 2.94 | 2.98 | 2.77 |
| *Significant change over time?* | *Yes* | *Yes* | *No* | *Marginal* | *Yes* | *Yes* |
| *CCCTC group improve more?* | *Trend (t=-1.79; p=.08)* | | *No* | | *No* | |

QUEST scale scores can range from 1 to 3.

**Table 14b. Center Providers' Improvements in Quality of Caregiver-Child Interactions as Measured by the QUEST**

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | *CCCTC* | *Control* | *CCCTC* | *Control* | *CCCTC* | *Control* |
| **Caring & Responding** | | | | | | |
| | *n=15* | *n=24* | *n=8* | *n=16* | *n=23* | *n=40* |
| Baseline | 2.76 | 2.38 | 2.76 | 2.89 | 2.76 | 2.58 |
| Follow-up | 2.66 | 2.67 | 2.98 | 2.92 | 2.77 | 2.77 |
| *Significant change over time?* | *No* | *No* | *Yes* | *No* | *No* | *No* |
| *CCCTC group improve more?* | *No* | | ***Yes*** | | *No* | |
| **Using positive guidance** | | | | | | |
| | *n=17* | *n=27* | *n=8* | *n=16* | *n=25* | *n=43* |
| Baseline | 2.51 | 2.17 | 2.58 | 2.78 | *n=28* | *n=34* |
| Follow-up | 2.60 | 2.60 | 2.88 | 2.78 | 2.53 | 2.41 |
| *Significant change over time?* | *Yes* | *Yes* | *Yes* | *no* | 2.69 | 2.67 |
| *CCCTC group improve more?* | *No* | | ***Yes*** | | *No* | |
| **Supervision** | | | | | | |
| | *n=17* | *n=27* | *n=8* | *n=17* | *n=25* | *n=44* |
| Baseline | 2.75 | 2.77 | 2.76 | 2.91 | *n=28* | *n=34* |
| Follow-up | 2.95 | 2.93 | 2.92 | 3.00 | 2.75 | 2.83 |
| *Significant change over time?* | *Yes* | *Yes* | *Yes* | *No* | 2.94 | 2.95 |
| *CCCTC group improve more?* | *No* | | *No* | | *No* | |

QUEST scale scores can range from 1 to 3.

**Figure 2. Quality Ratings for Caring and Responding: Changes Over Time for Center Providers in Multnomah County**

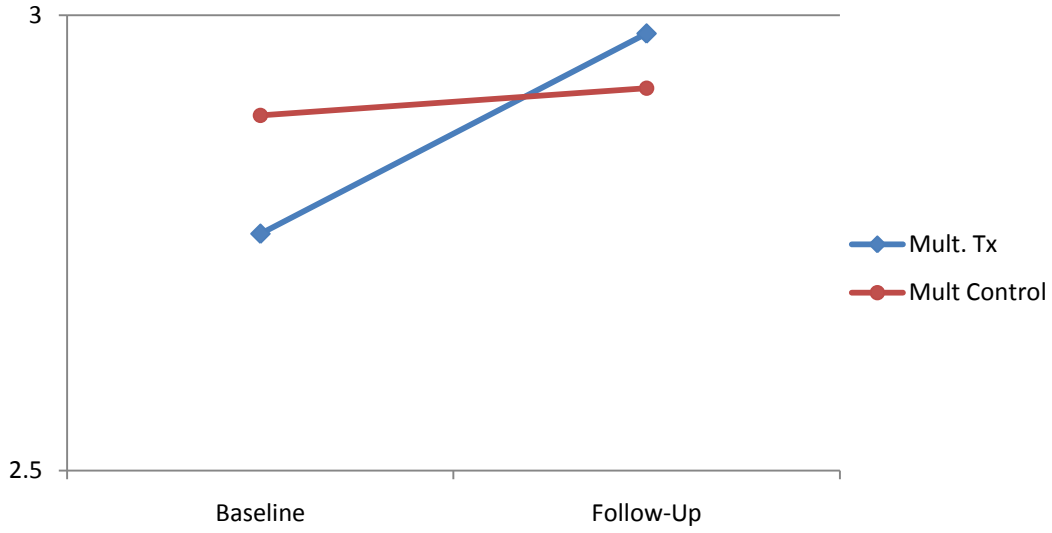
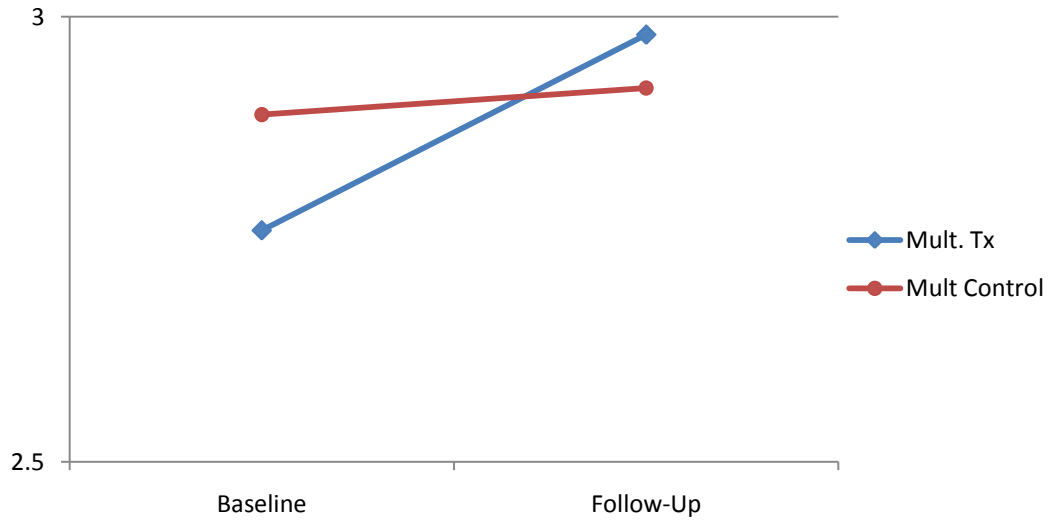



**Figure 3. Quality Ratings for Positive Guidance: Changes Over Time for Center Providers in Multnomah County**




## SOCIAL-EMOTIONAL DEVELOPMENT

Tables 15a & 15b show results for QUEST subscales that assess the extent to which the child care provider supports the children's social-emotional development. Similar to the previous findings, there were improvements for several domains over time for both treatment and control groups. Only family providers in Lane County appeared to show greater improvement relative to controls in terms of their ability to support children's social emotional development. No other significant effects of the CCCTC intervention were detected for either center-based or family providers.

## Table 15a. Family Providers' Changes in Social-Emotional Development Support as Measured by the QUEST

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | *CCCTC* | *Control* | *CCCTC* | *Control* | *CCCTC* | *Control* |
| **Supporting social emotional development** | | | | | | |
| | *n=15* | *n=22* | *n=13* | *n=10* | *n=28* | *n=32* |
| Baseline | 2.22 | 2.25 | 2.70 | 2.59 | 2.43 | 2.36 |
| Follow-up | 2.64 | 2.48 | 2.81 | 2.63 | 2.72 | 2.52 |
| *Significant change over time?* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* |
| *CCCTC group improve more?* | ***Yes*** | | *No* | | *No* | |
| **Supporting play** | | | | | | |
| | *n=15* | *n=22* | *n=13* | *n=12* | *n=28* | *n=34* |
| Baseline | 2.76 | 2.34 | 2.85 | 2.58 | 2.80 | 2.45 |
| Follow-up | 2.96 | 2.85 | 2.94 | 2.72 | 2.95 | 2.80 |
| *Significant change over time?* | *No* | *No* | *Yes* | *Yes* | *Yes* | *Yes* |
| *CCCTC group improve more?* | *No* | | *No* | | *No (Control improved more)* | |

QUEST scale scores can range from 1 to 3.

## Table 15b. Center Providers' Changes in Social-Emotional Development Support as Measured by the QUEST

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | *CCCTC* | *Control* | *CCCTC* | *Control* | *CCCTC* | *Control* |
| **Supporting social emotional development** | | | | | | |
| | *n=17* | *n=25* | *n=8* | *n=17* | *n=25* | *n=42* |
| Baseline | 2.05 | 1.88 | 2.50 | 2.60 | 2.17 | 2.19 |
| Follow-up | 2.31 | 2.37 | 2.75 | 2.74 | 2.45 | 2.52 |
| *Significant change over time?* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* |
| *CCCTC group improve more?* | *No* | | *No* | | *No* | |
| **Supporting play** | | | | | | |
| | *n=17* | *n=27* | *n=8* | *n=17* | *n=25* | *n=44* |
| Baseline | 2.84 | 2.62 | 2.92 | 2.92 | 2.87 | 2.73 |
| Follow-up | 2.83 | 2.89 | 2.91 | 2.96 | 2.85 | 2.92 |
| *Significant change over time?* | *No* | *Yes* | *No* | *No* | *No* | *Yes* |
| *CCCTC group improve more?* | *No* | | *No* | | *No (Control improved more)* | |

QUEST scale scores can range from 1 to 3.

### COGNITIVE/LANGUAGE DEVELOPMENT

Table 16a presents results for family providers' ability to support children's cognitive and language development. As can be seen, the Lane County treatment group showed more improvement, relative to control, across all three dimensions of cognitive/language development. Family providers in Multnomah County also showed more improvement in terms of their support for children's early language and literacy development (see Figure 4).

Results for center-based providers (Table 16b) are less encouraging, although Multnomah County again showed a positive effect for center-based providers in terms of level of improvement in the area of having a supportive instructional style.

In Lane County, where it was possible to examine data from three time points (see Appendix B), improvements in these quality domains appear to continue to increase over time across all three years. In contrast to the environmental quality domains, where most of the change occurred after the first year of intervention, providers' scores on these cognitive/language development domains continued to increase not only after the first, but also after the second, year of intervention.

**Table 16a. Family Providers' Cognitive and Language Development Quality as Measured by the QUEST**

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | *CCCTC* | *Control* | *CCCTC* | *Control* | *CCCTC* | *Control* |
| **Supportive instructional style** | | | | | | |
| | *n=15* | *n=22* | *n=13* | *n=12* | *n=28* | *n=34* |
| Baseline | 2.32 | 2.36 | 2.82 | 2.60 | 2.55 | 2.44 |
| Follow-up | 2.92 | 2.62 | 2.86 | 2.75 | 2.89 | 2.67 |
| *Significant change over time?* | *Yes* | *Yes* | *No* | *Yes* | *Yes* | *Yes* |
| *CCCTC group improve more?* | ***Yes*** | | *No* | | *No* | |
| **Supporting language development & early literacy** | | | | | | |
| | *n=15* | *n=22* | *n=13* | *n=12* | *n=28* | *n=34* |
| Baseline | 1.96 | 2.04 | 2.02 | 2.03 | 1.98 | 2.04 |
| Follow-up | 2.40 | 2.08 | 2.54 | 2.06 | 2.47 | 2.07 |
| *Significant change over time?* | *Yes* | *Yes* | *Yes* | *No* | *Yes* | *No* |
| *CCCTC group improve more?* | ***Yes*** | | ***Yes*** | | ***Yes*** | |
| **Learning activities & opportunities** | | | | | | |
| | *n=15* | *n=22* | *n=13* | *n=12* | *n=28* | *n=34* |
| Baseline | 2.22 | 1.90 | 2.27 | 2.15 | 2.24 | 1.99 |
| Follow-up | 2.73 | 2.20 | 2.49 | 2.39 | 2.62 | 2.27 |
| *Significant change over time?* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* |
| *CCCTC group improve more?* | ***Yes*** | | *No* | | *No* | |

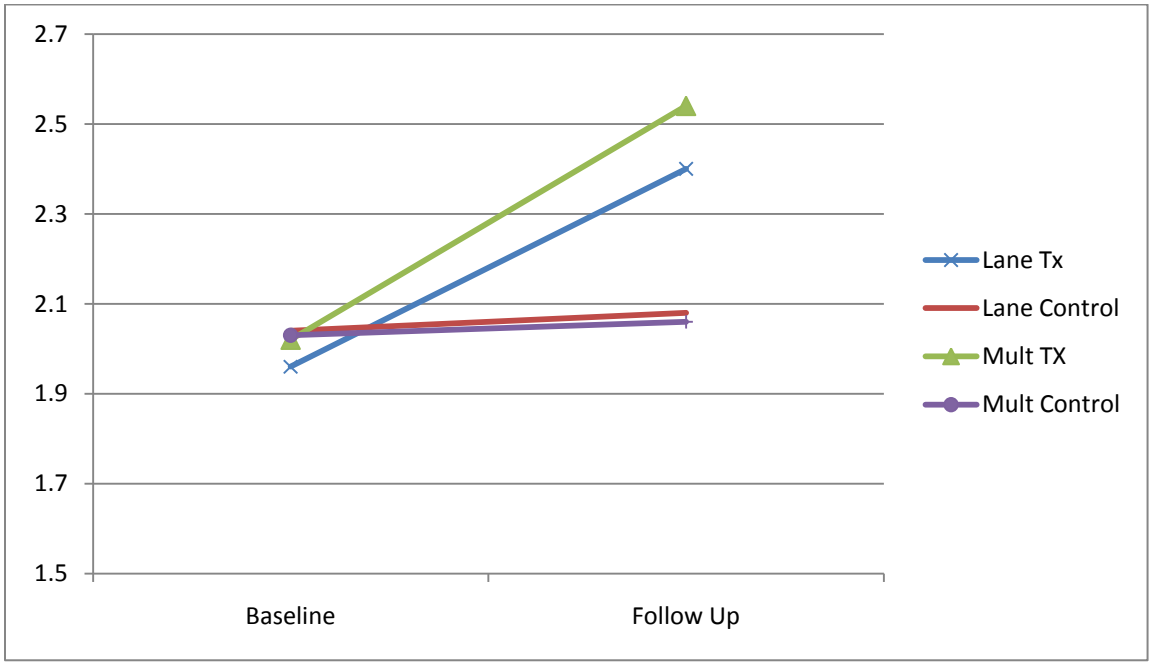
QUEST scale scores can range from 1 to 3.

## Table 16b. Center Providers' Cognitive and Language Development Quality as Measured by the QUEST

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | *CCCTC* | *Control* | *CCCTC* | *Control* | *CCCTC* | *Control* |
| **Supportive instructional style** | | | | | | |
| | *n=16* | *n=22* | *n=8* | *n=17* | *n=24* | *n=39* |
| Baseline | 2.44 | 2.24 | 2.71 | 2.91 | 2.53 | 2.53 |
| Follow-up | 2.70 | 2.71 | 2.94 | 2.95 | 2.78 | 2.81 |
| *Significant change over time?* | *Yes* | *Yes* | *Yes* | *No* | *Yes* | *Yes* |
| *CCCTC group improve more?* | *No* | | ***Yes*** | | *No* | |
| **Supporting language development & early literacy** | | | | | | |
| | *n=13* | *n=21* | *n=8* | *n=17* | *n=21* | *n=38* |
| Baseline | 2.12 | 1.96 | 2.34 | 2.23 | 2.20 | 2.08 |
| Follow-up | 2.13 | 2.22 | 2.40 | 2.55 | 2.23 | 2.37 |
| *Significant change over time?* | *No* | *No* | *No* | *No* | *No* | *Yes* |
| *CCCTC group improve more?* | *No* | | *No* | | *Marginal (p=.075); control improved more* | |
| **Learning activities & opportunities** | | | | | | |
| | *n=17* | *n=27* | *n=8* | *n=17* | *n=25* | *n=44* |
| Baseline | 2.04 | 206 | 2.65 | 2.42 | 2.16 | 2.29 |
| Follow-up | 2.35 | 2.31 | 2.57 | 2.62 | 2.42 | 2.43 |
| *Significant change over time?* | *Yes* | *Yes* | *No* | *No* | *Yes* | *Yes* |
| *CCCTC group improve more?* | *No* | | *No* | | *No* | |

QUEST scale scores can range from 1 to 3.

**Figure 4. Quality Rating Scores for Caregiver Support for Language & Literacy: Changes Over Time in Family Providers**




## Overall Quality Results

In all, results from the QUEST observations of child care quality present a somewhat mixed picture of improvements among the CCCTC providers. In Lane County, there appeared to be a pattern of significant quality improvements that was concentrated among the family providers. While there were improvements for Lane County CCCTC center providers, these improvements were not larger in magnitude than improvements seen over time for providers in the control group. This finding was repeated in a number of areas in both sites: both treatment and control providers showed significant improvements in a number of domains. For Multnomah County, it was the center-based providers who appeared to demonstrate greater improvements, although these were limited to a few, albeit important, domains (safety, caregiver-child interactions, and supportive instructional style). Family providers in Multnomah County did show more improvement than controls in terms of their support for language and literacy development (also, notably, one of the domains in which scores were lowest at baseline for all providers). Family providers in both Lane and Multnomah County significantly improved in this very important dimension, while control providers showed little or no change.

# PROFESSIONAL DEVELOPMENT, INCOME, AND RETENTION OUTCOMES

## Professional Development, Income and Retention Findings in Brief

The evaluation team tracked several provider outcomes relating to professional development, income, and retention including motivation for professional development, Oregon Registry activity, networking, confidence, financial stress, retention, and revenues. Findings across the two pilot projects on these outcomes were relatively consistent, with the following significant results:

- CCCTC providers were more likely than control providers to enroll on the Oregon Registry (OR) over the course of the 3-year pilot project.
- CCCTC providers were more likely than control providers to be at Step 5 or higher on the Oregon Registry by the end of the 3-year pilot projects.
- At follow-up, Lane County CCCTC providers were more likely than Lane County control providers to report participating in college courses in the past year.
- At follow-up, CCCTC providers, especially those in Multnomah County, were more likely than controls to report that they had networking opportunities and were part of a support group of providers.
- Control providers showed more confidence than CCCTC providers at baseline in a variety of skill domains, but that difference vanished by follow-up.
- Both CCCTC and control providers indicated reduced financial stress at follow-up; while the reduction for CCCTC providers was greater than for control providers, this difference did not reach statistical significance.
- Over the course of the 3-year pilots, a total of 11 control family providers went out of business compared to just 4 CCCTC family providers.
- Control providers were less likely to report that their facility revenues had increased at follow-up, compared to baseline. CCCTC providers were more likely than control to report that revenues had increased in the past year, at both baseline and follow-up time points.
- At follow-up, CCCTC facilities were more likely than control facilities to have written contracts explaining payment policies.

## Professional Development, Income, and Retention—Detailed Findings

### MOTIVATION FOR PROFESSIONAL DEVELOPMENT

Using the Provider Enrollment Survey data, we examined whether there were changes in providers' motivation for professional development. Providers answered two items measuring provider motivation, answering on a 5-point scale ranging from 1 "Strongly disagree" to 5 "Strongly agree": "I would like to improve my training/education in childhood care and education" and "It is important to me to improve my education and training." As illustrated in Table 17, these two items revealed few differences between CCCTC and control groups or between baseline and follow-up within groups. Of the providers who had completed baseline and follow-up surveys for this report (56 CCCTC and 70 control providers), there was a significant difference between CCCTC and control groups at follow-up regarding the motivation to improve training and education in child-

hood care and education ($p < .05$), with CCCTC providers showing overall higher motivation scores. There were no significant differences among center and family providers.

**Table 17. Provider Motivation for Professional Development**

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | CCCTC % (n) | Control % (n) | CCCTC % (n) | Control % (n) | CCCTC % (n) | Control % (n) |
| **I would like to improve my training/ education in childhood care and education** | | | | | | |
| | N=32 | N=37 | N=24 | N=33 | N=56 | N=70 |
| Agree at baseline | 97% (31) | 89% (33) | 92% (22) | 94% (31) | 95% (53) | 91% (64) |
| Agree at follow-up | 100% (32) | 87% (32) | 96% (23) | 91% (30) | 98% (55) | 89% (62) |
| *Significant change over time?* | *No* | *No* | *No* | *No* | *No* | *No* |
| *CCCTC group more motivated?* | ***Yes*** | | *No* | | *Yes* | |
| **It is important to me to improve my education and training** | | | | | | |
| | N=32 | N=39 | N=24 | N=33 | N=56 | N=72 |
| Agree at baseline | 97% (31) | 90% (35) | 92% (22) | 91% (30) | 95% (53) | 90% (65) |
| Agree at follow-up | 97% (31) | 92% (36) | 100% (24) | 100% (33) | 98% (55) | 96% (69) |
| *Significant change over time?* | *No* | *No* | *No* | *Trend* | *No* | *No* |
| *CCCTC group more motivated?* | *No* | | *No* | | *No* | |

## OREGON REGISTRY ACTIVITY

The Oregon Registry (OR) provides a pathway for professional recognition in childhood care and education by certifying achievements such as obtaining degrees, credentialing, or certification through formal education and community-based training. OR status was obtained from two sources: baseline and follow-up provider surveys as well as from the Project Director, who updated this information in a quarterly provider update spreadsheet from OR records. Because many providers responded on the survey that they were enrolled on the OR but did not know what step they were on, the information updated by the Project Director provided more reliable and complete data.

While a higher proportion of CCCTC providers (compared to control providers) were enrolled in the Oregon Registry at baseline, this difference was not significant (see Table 18). An additional 15 CCCTC providers and nine control providers became enrolled between baseline and follow-up resulting in a significant change over time. There was increased enrollment in both Lane and Multnomah County, although the percentage improvement in Multnomah County was larger, with only 39% of providers on the OR at baseline, and 100% enrolled at the follow-up.

In addition to being more likely to enroll, CCCTC providers were also more likely to reach or exceed Step 5 or higher on the OR from baseline to follow-up compared to control providers. There were no significant differences at baseline or follow-up comparing center and family providers within CCCTC and control groups; further both Lane and Multnomah County treatment groups showed significant improvements.

While there were significant differences on Oregon Registry enrollment and reaching Step 5, there were not significant differences between CCCTC and control providers on overall OR advancement: all providers (CCCTC and control) advanced Steps on the OR over the 3-year study.

Additionally, two CCCTC family providers received assistance from the Project Director to advance them from Registered to Certified providers.

**Table 18. Provider Professional Development Activities**

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | **CCCTC % (n)** | **Control % (n)** | **CCCTC % (n)** | **Control % (n)** | **CCCTC % (n)** | **Control % (n)** |
| **Oregon Registry Enrollment** | | | | | | |
| | N=24 | N=26 | N=18 | N=22 | N=42 | N=48 |
| Enrolled at baseline | 79% (19) | 58% (15) | 39% (7) | 46% (10) | 62% (26) | 52% (25) |
| Enrolled at follow-up | 96% (23) | 73% (19) | 100% (18) | 68% (15) | 98% (41) | 71% (34) |
| *Significant change over time?* | *Yes* | *No* | *Yes* | *Trend* | *Yes* | *Yes* |
| *CCCTC group more likely to enroll?* | ***Yes*** | | ***Yes*** | | ***Yes*** | |
| **Enrolled at Step 5 or Higher** | | | | | | |
| | N=20 | N=24 | N=15 | N=11 | N=35 | N=35 |
| At Step 5 at baseline | 0% (0) | 0% (0) | 0% (0) | 0% (0) | 0% (0) | 0% (0) |
| At Step 5 at follow-up | 85% (17) | 54% (13) | 53% (8) | 36% (4) | 71% (25) | 49% (17) |
| *Significant change over time?* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* | *Yes* |
| *CCCTC group more advanced?* | ***Yes*** | | ***Yes*** | | ***Yes*** | |
| **Progressed on Oregon Registry** | | | | | | |
| | N=16 | N=12 | N=5 | N=3 | N=21 | N=15 |
| Moved up steps on Registry | 38% (6) | 33% (4) | 80% (4) | 33% (1) | 48% (10) | 33% (5) |
| *CCCTC more movement?* | *No* | | *No* | | *No* | |
| **College Credit Courses** | | | | | | |
| | N=37 | N=67 | N=35 | N=56 | N=72 | N=123 |
| College courses in previous year at baseline | 14% (5) | 8% (5) | 11% (4) | 13% (7) | 13% (9) | 10% (12) |
| College courses in previous year at follow-up | 46% (17) | 8% (5) | 9% (3) | 11% (6) | 28% (20) | 9% (11) |

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | **CCCTC % (n)** | **Control % (n)** | **CCCTC % (n)** | **Control % (n)** | **CCCTC % (n)** | **Control % (n)** |
| *Significant change over time?* | *Yes* | *No* | *No* | *No* | *Yes* | *No* |
| *More CCCTC group had courses?* | ***Yes*** | | *No* | | ***Yes*** | |
| **Workshops/Trainings** | | | | | | |
| | N=37 | N=67 | N=35 | N=56 | N=72 | N=123 |
| Workshops in previous year at baseline | 65% (24) | 69% (46) | 60% (21) | 70% (39) | 63% (45) | 69% (85) |
| Workshops in previous year at follow-up | 68% (25) | 57% (38) | 63% (22) | 46% (26) | 65% (47) | 52% (64) |
| *Significant change over time?* | *No* | *No* | *No* | *Yes* | *No* | *Yes* |
| *More CCCTC group had workshops?* | *No* | | *No* | | *Trend* | |

Table 18 also presents providers' professional development activities. The baseline and follow-up provider survey asked providers to indicate if they had attended any college credit courses or workshops or trainings in the previous year. If they attended any courses, workshops, or trainings, they were asked to indicate which topic areas were covered in 16 areas as well as what "other" topics they may have attended.

Similar proportions of providers in both groups participated in college-credit courses and workshops or trainings at baseline (no differences by group or county existed at baseline). However, Lane county providers in the CCCTC group participated in more college credit courses at follow-up ($p < .05$).

The majority of providers in both groups did participate in some workshops or trainings at baseline and the difference between groups was not significant. Among CCCTC providers, about the same proportion participated in a workshop or training at baseline and follow-up. However, among control providers, participation in workshops was significantly lower at follow-up compared to baseline ($p < .05$). The difference in proportions between the CCCTC (65%) and control (52%) groups at follow-up was at the level of a trend ($p < .10$).

The most common workshops attended by CCCTC providers at baseline were child abuse and neglect (36%), childhood health and safety (35%), and children's social growth and development (24%). The most common workshops attended by control providers at baseline were childhood health and safety (37%), development of curriculum and activities (28%), children's social growth and development (26%), and child abuse and neglect (26%). The most common workshops attended by CCCTC providers at follow-up

included development of curriculum and activities (18%), children's social growth and development (14%) and guidance of children's behavior (14%). Control providers commonly attended guidance of children's behavior (6%), development of curriculum and activities (5%), working with parents and families (5%), and self-care, family and work stress management (5%) at follow-up. While the number of workshops attended clearly decreased from baseline to follow-up overall, CCCTC providers participated in workshops at a higher rate than comparison providers at follow-up ($p < .05$).

### NETWORKING SUPPORTS

CCCTC providers were more likely than controls to agree that they had networking opportunities and got support from fellow providers as shown in Table 19. Although similar proportions of CCCTC and control group providers agreed they had opportunities to network with other providers at baseline, the proportion of CCCTC providers agreeing at follow-up was significantly larger than at baseline. Further, the proportion of CCCTC providers agreeing at follow-up that they had networking opportunities was significantly larger than that of control providers.

A similar pattern was noted for the item measuring the extent to which the providers agree they are part of a support group of providers. Compared to baseline, CCCTC providers were more likely to agree at follow-up that they get support from other providers. Additionally, the number of CCCTC providers agreeing at follow-up that they were part of a support group of providers was significantly larger than that of control providers.

In Lane County, both CCCTC and control family providers showed greater increases in networking over time, while center providers did not. In Multnomah County, there were no significant differences between center and family providers at baseline or follow-up for the opportunities to network scale or either of the other networking items, indicating that providers at both family and center facilities experienced networking opportunities similarly. This suggests that the program was successful in supporting networking opportunities across both types of child care settings. The program provided a network for each center and a network for the family providers that held regular meetings. Both center and family providers reported that these networks fostered not only a sense of community but also a shared commitment to the quality improvement goals of the program. Thus, the participating centers approached the CCCTC project as teams, providing mutual support and encouragement to collectively improve each center's quality.

**"[The most important part for me was the] help and encouragement to go back to school and get my degree in Child Development. I'm 51 years old and would not have done that on my own."**
***– CCCTC provider***

## Table 19. Provider Networking Activities

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | **CCCTC % (n)** | **Control % (n)** | **CCCTC % (n)** | **Control % (n)** | **CCCTC % (n)** | **Control % (n)** |
| **I have opportunities to network with other providers** | | | | | | |
| | N=32 | N=38 | N=24 | N=34 | N=56 | N=72 |
| % agree at baseline | 78% (25) | 66% (25) | 16% (11) | 53% (18) | 64% (36) | 60% (43) |
| % agree at follow-up | 81% (26) | 76% (29) | 83% (20) | 41% (14) | 82% (46) | 60% (43) |
| *Significant change over time?* | *No* | *No* | *Yes* | *No* | *Yes* | *No* |
| *More CCCTC group has opportunities?* | *No* | | ***Yes*** | | ***Yes*** | |
| **I am part of a support group of providers** | | | | | | |
| | N=31 | N=39 | N=24 | N=34 | N=55 | N=73 |
| % agree at baseline | 55% (17) | 49% (19) | 42% (10) | 44% (15) | 49% (21) | 47% (34) |
| % agree at follow-up | 68% (21) | 46% (18) | 88% (21) | 47% (16) | 76% (72) | 47% (34) |
| *Significant change over time?* | *No* | *No* | *Yes* | *No* | *Yes* | *No* |
| *CCCTC group more likely to be part of a group?* | *Trend* | | ***Yes*** | | ***Yes*** | |
| **I get support from other child care providers** | | | | | | |
| | N=32 | N=39 | N=24 | N=34 | N=56 | N=73 |
| % agree at baseline | 56% (18) | 59% (23) | 46% (11) | 59% (20) | 52% (29) | 59% (43) |
| % agree at follow-up | 78% (25) | 67% (26) | 83% (20) | 53% (18) | 80% (45) | 60% (44) |
| *Significant change over time?* | *Yes* | *No* | *Yes* | *No* | *Yes* | *No* |
| *CCCTC group more likely to get support?* | *No* | | ***Yes*** | | ***Yes*** | |

### CONFIDENCE

Providers were asked to rate their level of confidence in their skills in 20 areas on the provider survey at baseline and follow-up, including children's health and safety, children's growth and development, caring for children with special needs, and other areas of professional development. The response scale ranged from 1 "Not very confident" to 6 "Very confident." These 20 items were also used to create a 20-item confidence scale.[5]

Mean comparisons were performed by independent samples t-tests to compare CCCTC and control groups and paired samples t-tests to compare change over time within CCCTC and control groups.

The skill area that had the highest mean ratings by both groups of providers at baseline was childhood health and safety (CCCTC = 5.17, control = 5.37). The skill area that was rated lowest by both CCCTC and control providers at baseline was working with children with physical disabilities (CCCTC = 3.42, control = 3.47). Both CCCF and control providers continued to rate confidence in working with children with physical disabilities the lowest at follow-up.

There was a significant difference in mean confidence levels between CCCTC and comparison group providers at baseline, with control providers having a significantly ***higher*** level of confidence ($p < .05$). This difference was no longer present at follow-up. There was no difference between site types at baseline, although there appeared to be a trend difference (with family providers slightly higher than controls) in confidence ratings at follow-up.

All providers (program and control) significantly increased their reported level of confidence from baseline to follow-up ($p < .05$). However, there was no difference in the amount of change over time between groups (control and treatment providers both increased in confidence at about the same rate). Within the CCCTC group from baseline to follow-up, the overall increase in confidence ratings were greatest in the following domains: confidence with child abuse and neglect, confidence with utilization of community resources, confidence with development as a child care professional, confidence with guidance of challenging behaviors, confidence with children with emotional disabilities, confidence with development of curriculum and activities, confidence with children with physical disabilities, confidence with guidance of children's behavior, and confidence with children with learning delays, all of which showed significant change over time. CCCTC family providers showed a significant increase in confidence with development as a child care professional, confidence with utilization of community resources, confidence with child abuse and neglect, confidence with children with emotional disabilities, confidence with guidance of challenging behaviors, and confidence with children with physical disabilities. CCCTC center providers showed significant increases in confidence ratings of utilization of community resources, child abuse and neglect, and development of curriculum and activities.

### SATISFACTION

Providers were asked to rate their level of agreement with eight items on the provider survey at baseline and follow-up to measure their sense of accomplishment or satisfaction as a child care provider. The response scale ranged from 1 "Strongly disagree" to 5 "Strongly agree."[6] These items assess the providers' feelings of accomplishment work-

[5] This is a 20-item scale. Cronbach's alpha for this scale at baseline = 0.92, Cronbach's alpha for this scale at follow-up = 0.93.

[6] This is an 8-item scale. Cronbach's alpha for this scale at baseline = 0.73, Cronbach's alpha for this scale at follow-up = 0.79.

ing with children and parents, feeling they can handle and support the children in their care, feeling they can respond effectively to challenging behaviors, and knowing who to talk to when children need additional support.

There were no significant differences at baseline or follow-up between CCCTC and control providers on the mean scale score. When individual items of the scale were examined, the control group showed a significant increase in knowing how to respond effectively when a child becomes disruptive and knowing how to respond effectively when a child seems sad or lonely from baseline to follow-up ($p < .05$); there was no increase for treatment group providers. Providers in the CCCTC group showed a trend in increasing their knowledge of knowing who to talk to when a child needs additional support due to social or emotional concerns ($p < .10$), while control group providers did not show improvement in this area.

### PROVIDER FINANCIAL STRESS

The provider survey included a scale consisting of seven items that measured the degree to which providers could meet their families' basic needs such as housing, food, and clothing. [7] In addition, the survey included questions about whether providers worried about their income from child care, whether they worried about their families' finances overall, and whether they were unsure about their income on a month-to-month basis. The responses for these items and scale ranged from 1 "Strongly disagree" to 5 "Strongly agree." For the purposes of these analyses, items were reverse-coded so that an increase in score relates to an increase in stress.

There were several items at baseline that showed a significant difference between CCCTC and control groups, such that CCCTC providers appeared less worried about their families being able to afford mortgage or rent, clothing, and food compared to controls. However, overall financial stress scale scores at baseline were not significantly different for CCCTC vs. control providers, but were significantly different for family providers (who reported feeling less stress) compared to center providers ($p < .05$) at baseline.

There were no significant differences between CCCTC and control providers at follow-up on any of the financial stress items or scale; however, center providers had a significantly higher mean stress scale score compared to family providers ($p < .05$).

Although both groups showed a reduction in stress overall from baseline to follow-up, CCCTC providers showed slightly greater reductions in financial stress, compared to control providers; however this difference between baseline and follow-up within each group was not statistically significant.

### PROVIDER RETENTION

One goal of the pilot projects was to foster conditions that would encourage providers to stay in the field; indeed, it is hypothesized that all of the components of the projects (parent subsidy, provider wage enhancements, and funds and technical assistance for quality improvements) could lead to increased retention and decreased provider stress.

In Lane County, retention rates were similar for CCCTC and control providers. During the 3-year study, 30% (11) of CCCTC providers left their jobs (7 center providers and 4 family providers) and 40% (25) of control providers left their jobs (16 center providers and 9 family providers). However, while the percent of family *providers* exiting the field was not significantly different across the two groups, there was a difference in number of *facilities* that went out of business. Over the course of the 3-year pilot project, six control family child care facilities went out of busi-

[7] This is a 7-item scale. Cronbach's alpha for this scale at baseline = 0.91, Cronbach's alpha for this scale at follow-up = 0.93.

ness (employing the 9 family providers who lost their jobs), while only one CCCTC family child care facility left during the 3-year pilot project.

Of the providers who left, 10 (2 CCCTC and 8 control) left because of dissatisfaction with the child care field; 6 (1 CCCTC, 5 control) left because of personal reasons (e.g., family relocation); and for the remainder the reason for leaving their job was unknown.[8] Thus, for those with a known reason, only 18% of CCCTC providers left because of dissatisfaction with the field, compared to 32% of control providers; however, the sample size is too small to allow significance testing.

Analyses of the group of providers who left their jobs over the course of the 3 years indicate that, as a group, these providers tended to have less experience as measured by the number of years they had been in the field, were younger, and had lower incomes than providers who did not leave their jobs. Dropouts did not differ from those who remained at their jobs on any other demographic variables or on the financial stress, sense of accomplishment, or networking scales. Further, those who left their jobs did not differ significantly in terms of any of the measures of child care quality from those who remained in the study.

In Multnomah County, 26 providers left their jobs during the 3-year study, including 10 at control family sites, 3 at control centers, 4 at CCCTC family sites and 9 at CCCTC centers. The primary reason for most of the providers leaving the study (8 of 26, 31%) was that the provider went out of business. Indeed, during the 3 years, 3 CCCTC and 5 control family providers went out of business.

Of the remaining 18 providers who left their jobs, ten were at CCCTC sites and eight were at control sites. There were a variety of reasons accounting for their departure.

The ten CCCTC center providers left their jobs for the following reasons:

- 5 left by voluntary departure (including retirement);
- 4 had a career change and/or returned to school; and
- 1 was a poor fit for the center where they worked and was asked to leave.

The eight control family providers left their jobs for the following reasons:

- 2 left by voluntary departure (including retirement);
- 2 had a career change and/or returned to school;
- 2 were a poor fit for the center where they worked and were asked to leave;
- 1 was laid off; and
- 1 left for reasons unknown.

[8] Reasons for leaving were tracked when possible. However, often providers would leave their job before the evaluation team or Project Director could gather information on the reason for departure.

### INCOME & REVENUE STABILITY

The facility director survey asked whether the facility's revenues now (at the time the survey was completed) were about the same as, less than, or more than revenues a year ago. As displayed in Table 20, CCCTC and control directors differed in their responses. At follow-up, control directors were less likely than they had been at baseline to report that their center revenue had increased in the past year. However, in both Lane and Multnomah counties, directors were just as likely to report an increase in revenue at follow-up, compared to baseline. CCCTC directors in both counties were also generally more likely to report that revenues had increased during the last year, compared to controls. Additionally, there was a trend for more control providers to report revenues at follow-up were less than a year ago compared to at baseline.

**Table 20. Facility Revenue**

| | Lane County | | Multnomah County | | Total | |
|---|---|---|---|---|---|---|
| | **CCCTC N = 13 % (n)** | **Control N = 27 % (n)** | **CCCTC N =15 % (n)** | **Control N = 15 % (n)** | **CCCTC N = 28 % (n)** | **Control N = 42 % (n)** |
| **Would you say the facility's revenue now is:** | | | | | | |
| **Less now than a year ago** | | | | | | |
| % agree at baseline | 7% (1) | 8% (2) | 39% (5) | 20% (2) | 23% (6) | 11% (4) |
| % agree at follow-up | 7% (1) | 28% (7) | 46% (6) | 20% (2) | 27% (7) | 26% (9) |
| *Significant change over time?* | *No* | *Trend* | *No* | *No* | *No* | *Trend* |
| *Significant difference between groups?* | *No* | | *No* | | *No* | |
| **About the same as a year ago** | | | | | | |
| % agree at baseline | 31% (4) | 52% (13) | 23% (3) | 40% (4) | 27% (7) | 49% (17) |
| % agree at follow-up | 31% (4) | 52% (13) | 15% (2) | 70% (7) | 23% (6) | 57% (20) |
| *Significant change over time?* | *No* | *No* | *No* | *No* | *No* | *No* |
| *Significant difference between groups?* | *No* | | ***Yes*** | | ***Yes*** | |
| **More than a year ago** | | | | | | |
| % agree at baseline | 62% (8) | 40% (10) | 38% (5) | 40% (4) | 50% (13) | 40% (14) |
| % agree at follow-up | 62% (8) | 20% (5) | 38% (5) | 10% (1) | 50% (13) | 17% (6) |
| *Significant change over time?* | *No* | *No* | *No* | *Trend* | *No* | *Yes* |
| *Significant difference between groups?* | ***Yes*** | | *No* | | ***Yes*** | |

The facility survey also asked directors to indicate whether they had any of a variety of business practices in place, including written contracts for parents explaining when payment is due and consequences for late payment, a systematic way of tracking which parents have paid and when, policies or procedures for parents who do not pay their bills on time, written billing statements or summaries for parents, and procedures for parents leaving the facility to give notice or pay a certain amount if no notice is given.

There were no significant differences between CCCTC and control directors on any of these items with one exception: CCCTC directors were more likely to have a written procedure in place for payments ($p < .05$). Across both groups, all practices were being implemented by a majority of providers. The practice that was most likely to be in place for CCCTC directors was having a written contract for parents (89%). Control directors reported having a system of tracking payments as their most frequent practice (74%). The practices least likely to be in place included providing billing statements (CCCTC, 64%), having a written contract for payments (control, 64%), and having a way of tracking parents who do not pay on time (control, 64%).

# FAMILY OUTCOMES

## Family Outcomes Findings in Brief

Because our family data collection instruments and methodologies varied markedly between Multnomah and Lane County,[9] we report the findings from the two counties separately below.

In Multnomah County, there were no differences between subsidy and non-subsidy families in terms of the percent of children who left their care arrangement during the 3-year study period, but subsidy parents reported more child care arrangement changes in the year prior to the study. However, of the children who left care during the 3-year study period, subsidy children stayed at their care arrangement significantly longer than non-subsidy children (indeed, approximately 5 months longer). Despite the child care subsidy, however, these families who left their care arrangements were more likely to site financial concerns as a reason for leaving care.

A majority of Multnomah County families who received a CCCTC subsidy left the subsidy program at some period during the 3-year study; nearly half left because they left care, 28% lost their subsidy due to CCCTC funding restrictions, and 15% were moved to another subsidy program. It is worth noting

that the 19 families who lost their subsidies due to funding restrictions were no more likely to remove their children from care than other families.

Compared to income-matched comparison families, CCCTC subsidy parents at both pilot sites, not surprisingly, paid a lower hourly rate for child care, and furthermore, had significantly more children enrolled in care and bought more hours of care. In Multnomah County, families decreased their child care spending over time (though this did not reach statistical significance), although they did not decrease their utilization of the child care arrangement under study (and therefore may have been decreasing their usage of *other* types of care arrangements).

Few families relied upon help paying for child care from family members, employer subsidized child care, or other types of assistance programs, though a sizeable minority (particularly CCCTC families) utilized DHS subsidies.

Multnomah County CCCTC subsidy parents indicated more financial stress at baseline than matched controls. However, at follow-up this difference had disappeared: while control families increased in financial stress over time, CCCTC subsidy families' financial stress decreased.

[9] As described in the methodology section of this report, the evaluation team modified the family data collection between the Lane and Multnomah County pilot projects. In Multnomah County, NPC Research tracked every child enrolled at the treatment and control sites in order to document subsidy usage and length of time in care. This data allowed for an analysis of the relationship between subsidy usage and duration of care, something that was not possible in Lane County. Furthermore, the parent survey instrument was modified substantially between the two pilots, and the Multnomah pilot evaluation involved longitudinal data collection; as a result, the parent survey data cannot be combined across the two pilot projects.

Lane County CCCTC parents scored significantly higher on a satisfaction with child care quality scale, were more likely to agree that the child care arrangement was just what their child needed, and were more likely to agree that their provider was a skilled professional than control parents. These differences were not evident in Multnomah County, where both the CCCTC and control parents indicated quite high satisfaction with the quality of care.

Below we begin with a summary of the placement stability data available in Multnomah County (parallel data were not collected in Lane County), followed by a discussion of the Multnomah County family outcomes tracked longitudinally through the parent survey. This section of the report ends with a discussion of the Lane County family outcomes data generated from a point-in-time parent survey.

## Multnomah County Family Outcomes—Detailed Findings

### PLACEMENT STABILITY

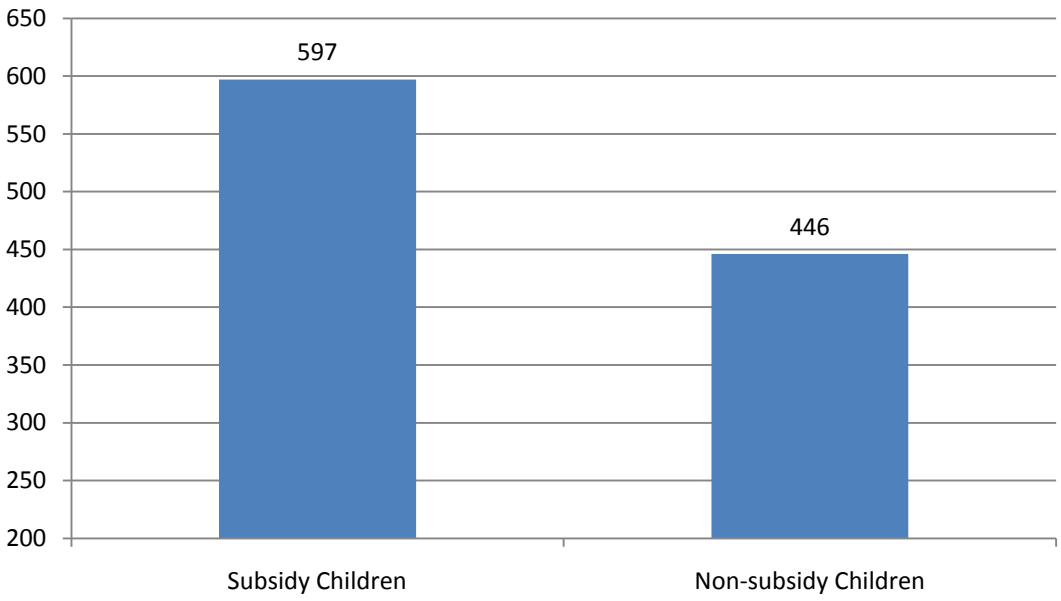
As part of the Multnomah County evaluation, NPC tracked each child enrolled at CCCTC and control sites over the course of the 3-year study in order to measure placement stability. For each child, the evaluation team tracked the date they entered care, whether they left care, and if so, the date they left and the reason for departure (if known) In addition, NPC tracked whether the family received a CCCTC subsidy, and if so, how long they received the subsidy and the reason for leaving the subsidy (for those who stopped receiving the subsidy).

NPC tracked a total of 1,034 children, 447 in the CCCTC group and 587 in the control group. Slightly less than half of all children left their care arrangement during the 3-year study. One quarter of the children left their

care arrangement because they aged out of care (e.g., a child leaving preschool for kindergarten), 15% left their arrangement because of family work schedule changes, 13% left because their families moved, 10% left due to financial concerns, and 6% of the children were asked to leave their care arrangement. The remaining children left care for other, or unspecified, reasons.

The tracking data indicate that there was no difference between subsidy and non-subsidy families in the percent of children who left their care arrangement (48% of both subsidy and non-subsidy children left their arrangement during the 3-year study). However, there was a significant difference in length of time in care. As illustrated in Figure 5, of all children who left their care arrangements during the 3-year study, children who received subsidies stayed in their child care arrangement significantly longer than children who did not receive subsidies ($p < .01$): indeed, subsidy children stayed in their arrangement for an average of 597 days, while non-subsidy children stayed in their arrangement for an average of 446 days.

**Figure 5. Days Spent in Care for Children Who Left Care**




The tracking data also indicate that there were significant differences between subsidy families and other families for reasons for exiting care. Of those children who left care, subsidy children were more likely to leave care due to financial concerns, while non-subsidy families were more likely to leave care due to family schedule changes or moves.

A total of 122 children received a CCCTC subsidy, and a majority of those children (65%, or 79 children) left the subsidy program during the 3-year study. Nearly half of these children stopped receiving subsidies because they left care (47%, or 32 children), 28% of the children lost their subsidy due to CCCTC funding restrictions, 15% were moved to another subsidy program, and 7% of families became ineligible because their incomes increased.

Interestingly, the 19 families who lost their subsidies due to CCCTC funding restrictions were no more likely to leave their care arrangement than other families, and those who did leave their care arrangement did not site financial concerns as a reason for their exit.

## AFFORDABILITY OF CARE

The parent survey was completed by parents whose children received care at CCCTC sites as well as by parents whose children received care at the control sites. Furthermore, the CCCTC parents can be broken into two sub-groups: those who received subsidies and those who did not. By definition, the CCCTC subsidy parents were lower income than CCCTC non-subsidy parents and the control sample as a whole, and therefore we created an income-matched sub-sample of the control parents in order to examine differences in family outcomes between CCCTC subsidy and control parents. The matched control sample consists of the control parents with incomes comparable to the CCCTC subsidy sub-sample.[10] The matching assured that the two sub-samples were not significantly different from one another on income levels, age or education.

Table 21 presents baseline parent income and child care expenditure data. As expected, the

[10] Parents not reporting on age, income, or education level could not be placed in either the matched control or non-matched control samples and are excluded from subsample analyses reported here.

CCCTC subsidy and matched control samples had significantly lower income than the CCCTC non-subsidy and remaining control parents. Also as expected, the CCCTC subsidy group spent significantly less on child care and paid a lower hourly rate than the other three groups of parents. Furthermore, the subsidy parents utilized more child care: these parents had significantly more children enrolled in care and bought more hours of care than the other three groups of parents, perhaps due to the lower hourly rate paid.

**Table 21. Multnomah County Baseline Parent Income & Child Care Expenditures**

| | CCCTC Subsidy | Matched Control | CCCTC non-subsidy | Remaining Control |
|---|---|---|---|---|
| **Average monthly take-home income**[a] | N = 58 | N = 60 | N = 42 | N = 103 |
| Mean | $1,978 | $1,891 | $4,191 | $5,519 |
| Range | $1,767 - $2,190 | $1,700 - $2,082 | $3,286 - $5,097 | $5,053 - $5,984 |
| **Average monthly expenditure on child care (all care)**[b] | N = 58 | N = 57 | N = 46 | N = 113 |
| Mean | $335 | $474 | $558 | $827 |
| Range | $276 - $394 | $401 - $546 | $422 - $694 | $742 - $911 |
| **Average monthly expenditure on <u>this</u> child care**[c] | N = 58 | N = 54 | N = 45 | N = 110 |
| Mean | $268 | $440 | $367 | $626 |
| Range | $226 - 310 | $361 - $518 | $314 - $430 | $563 - $688 |
| **Average number of children at <u>this</u> child care**[d] | N = 61 | N = 60 | N = 48 | N = 118 |
| Mean | 1.5 | 1.2 | 1.3 | 1.2 |
| Range | 1.3 – 1.7 | 1.1 – 1.3 | 1.1 – 1.5 | 1.1 – 1.3 |
| **Number of hours per week children are in this child care arrangement**[e] | N = 59 | N = 58 | N = 48 | N = 117 |
| Mean | 37 | 28 | 25 | 24 |
| Range | 34 - 40 | 24 - 32 | 22 - 29 | 22 - 27 |
| **Average out-of-pocket per-child per-hour rate for <u>this</u> child care**[f] | N = 57 | N = 51 | N = 45 | N = 109 |
| Mean | $2.28 | $5.65 | $4.35 | $6.82 |
| Range | $1.53 - $3.04 | $3.52 - $7.79 | $3.54 - $5.15 | $6.17 - $7.47 |

[a] CCCTC subsidy and matched control parents had significantly lower income than CCCTC non-subsidy and non-matched control parents, p<.001.
[b] CCCTC subsidy parents spent significantly less on monthly child care, compared to CCCTC non-subsidy and non-subsidy control parents, p<.001. Matched control parents spent significantly less on monthly child care compared to non-matched control parents, p < .001.
[c] Non-matched control parents spend significantly more on the specific program's child care compared to the other three groups, p<.001.
[d] CCCTC subsidy parents had significantly more children enrolled, p<.001.
[e] CCCTC subsidy children received significantly more hours of care, p<.001.
[f] CCCTC subsidy parents had significantly lower hourly rate compared to the other three groups, p<.001.

It is possible to examine change over time on these income and child care expenditure variables for the subset of parents who completed two rounds of parent surveys. For this subset of 89 (44 subsidy and 45 matched control) families with income information, CCCTC subsidy parents showed no change in income between baseline and follow-up (from $2,030 to $2,029), but the matched control sample's monthly income rose significantly between the two time points, from $2,003 to $2,740, ($p < .05$). Further there was a (non-significant) decrease over time in the monthly amount spent on ***all child care***. The CCCTC subsidy group decreased from $345 to $283 a month, and the matched control group decreased from $509 to $429. There were no significant changes over time in the amount spent on ***this child care*** or hourly rates for ***this*** care. However, there was a significant change over time (for both groups) in how many children were in care (with significantly fewer children in care at follow-up compared to baseline for both groups).

Thus, the changes in total monthly amounts spent on all child care may be due to decreases in the utilization or cost of ***other*** child care arrangements, and/or having fewer children in care.

The parent survey also asked parents about what sources of help they may receive in paying for child care. Table 22 presents this information for all parents who completed a baseline survey. Parents rarely relied on help from family members, employers, or a dependent care assistance program, but a sizeable minority of parents, particularly in the CCCTC groups, utilized DHS subsidies.

**Table 22. Multnomah County Baseline Sources of Help for Child Care Expenses**

| | CCCTC subsidy N=59 % (n) | CCCTC non-subsidy N=48 % (n) | Control N=178 % (n) |
|---|---|---|---|
| **Do you receive any source of help paying for child care?** | 51% (30) | 23% (11) | 30% (54) |
| **Do you receive help paying for child care from:** | | | |
| Family members[a] | 2% (1) | 0% (0) | 10% (18) |
| DHS subsidy[b] | 34% (20) | 21% (10) | 11% (20) |
| Employer-subsidized child care | 2% (1) | 0% (0) | 2% (4) |
| Dependent care assistance program | 10% (6) | 0% (0) | 2% (3) |
| Other: Site scholarship | 3% (2) | 2% (1) | 7% (13) |

[a] Control families were significantly more likely to receive assistance from family members, $p<.001$.

[b] CCCTC families were significantly more likely to receive DHS subsidies, $p<.001$.

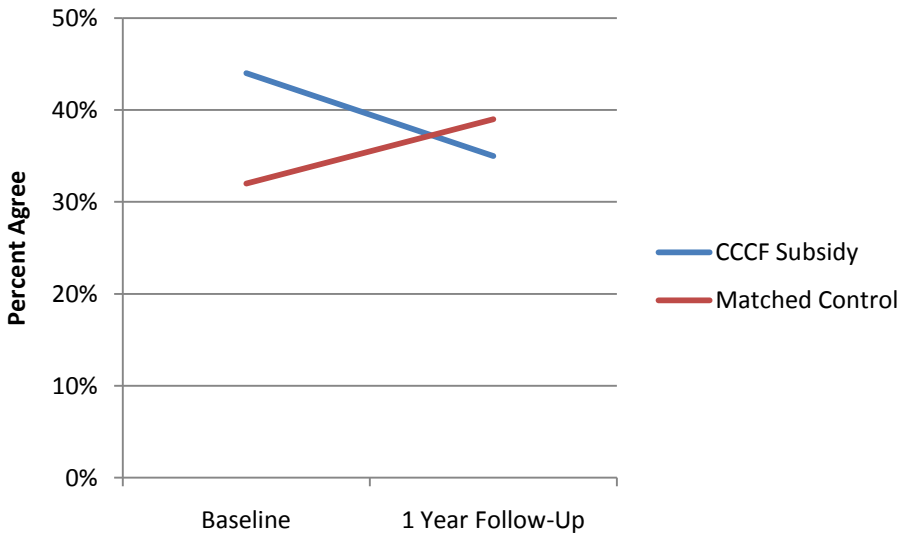
Parents answered a series of questions on the survey about financial stress, including how often they worry about being able to pay their child care bills, how often they worry about their finances overall, and a scale to measure how often they worry about a series of basic financial needs (such as rent/mortgage and groceries). Table 23 reports baseline and follow-up data for the CCCTC subsidy and matched control groups for those parents who completed two rounds of surveys. Despite the fact that the CCCTC subsidy and matched control groups had similarly low incomes, at baseline there was a trend with the CCCTC subsidy group reporting more worry over paying child care bills, worry about overall finances, and higher financial needs scale scores than the matched control sample. However, these differences disappeared at follow-up; the CCCTC subsidy and matched control groups did not differ on any of the three measures of financial stress at follow-up. While control parents' stress levels increased over time, CCCTC parents were experiencing less financial stress since beginning to receive the subsidy (see Figure 6).

**Table 23. Multnomah County Parent Financial Stress**

| | CCCTC Subsidy % (n) | Matched Control % (n) |
|---|---|---|
| **I often worry about whether I will be able to pay my child care bills.** | N = 43 | N = 44 |
| % agree at baseline | 44% (19) | 32% (14) |
| % agree at follow-up | 35% (15) | 39% (17) |
| *Significant change over time?* | *No* | *No* |
| *CCCTC subsidy less worried?* | Trend at baseline, No difference at follow-up | |
| **I often worry about my family's finances overall.** | N = 47 | N = 44 |
| % agree at baseline | 81% (38) | 71% (31) |
| % agree at follow-up | 66% (31) | 71% (31) |
| *Significant change over time?* | *Yes* | *No* |
| *CCCTC subsidy less worried?* | Trend at baseline, No difference at follow-up | |
| Financial Stress Subscale: **I often worry about meeting my family's financial needs (e.g., mortgage/rent, food, etc.)**[11] | N = 47 | N = 44 |
| Baseline mean | 2.97 | 2.44 |
| Follow-up mean | 2.86 | 2.72 |
| *Significant change over time?* | *No* | *No* |
| *CCCTC subsidy less worried?* | Trend at baseline, No difference at follow-up | |

[11] Cronbach's alpha for this scale was high with alpha = .91 at baseline and alpha = .90 at follow-up.

**Figure 6. Multnomah County Percent of Parents Worrying About Ability to Pay Child Care Bills**




The follow-up survey included several additional questions to capture information about how the current economic environment may be impacting families participating in the study. Parents were asked whether, during the past 12 months, they or a spouse had lost a job, had reduced wages, or had reduced hours. One-fourth (26%) of those parents who had completed a follow-up survey reported that they or a spouse lost a job in the past year (control group parents were more likely to have lost a job ($p < .05$)), 16% of parents reported reduced wages (with no differences between groups), and 21% of parents reported reduced work hours (again, with no differences between groups).

Those parents who received a CCCTC subsidy were asked a series of questions on the survey about how the subsidy has helped their families. Table 24 displays this data for all subsidy families who completed a survey. Almost all (91%) parents stated that it would be difficult to afford their child care arrangement without the subsidy and over half (57%) said they would have to remove their child from care if they did not have the subsidy. Nearly two-thirds (65%) of families believed the subsidy has helped them to afford their basic needs, nearly all (96%) believed it improved their standard of living, and two-thirds (67%) stated that the subsidy has helped them save toward long-term goals. Further, 89% of parents said that the subsidy had allowed them to purchase more hours of care and 86% reported being able to work more hours than they otherwise would have.

**Table 24. Multnomah County Impact of CCCTC Subsidy on Families Receiving the Subsidy**

| | Strongly Disagree % (n) | Disagree % (n) | Agree % (n) | Strongly Agree % (n) |
|---|---|---|---|---|
| We would not have been able to afford this child care without the subsidy | 0% (0) | 10% (4) | 29% (12) | 62% (26) |
| If we didn't have the subsidy we would have to take our child out of this child care | 7% (3) | 36% (15) | 19% (8) | 38% (16) |
| The CCCTC subsidy has helped our family | 0% (0) | 2% (1) | 10% (4) | 88% (37) |
| The CCCTC subsidy has helped us to afford our basic needs (e.g., food, mortgage/rent, etc.)[12] | 2% (1) | 33% (14) | 48% (20) | 17% (7) |
| The CCCTC subsidy has improved our standard of living | 2% (1) | 2% (1) | 55% (23) | 41% (17) |
| The CCCTC subsidy has helped us be able to save for our long-term goals | 10% (4) | 24% (10) | 38% (16) | 29% (12) |
| The CCCTC subsidy has helped us place our children in care for more hours | 2% (1) | 10% (4) | 41% (17) | 48% (20) |
| The CCCTC subsidy has helped us be able to work more paid hours | 2% (1) | 12% (5) | 38% (16) | 48% (20) |

[12] Cronbach's alpha for this scale=.89.

Parents' qualitative responses mirrored the quantitative responses displayed in Table 24. Parents described how the subsidy helped their families, explaining that the subsidy allowed them to pay bills or debt: "I can afford to make all my bill payments (and credit) on time to avoid extra fees that I normally wouldn't be able to pay. And after all my debt is paid off then I can begin to save for my daughter's future." Parents also explained that the subsidy had allowed them to access high-quality care: "I would not have been able to send my child to such a loving, caring child care if not for this subsidy." A provider reiterated this statement: "Many parents cannot afford child care on their own. This program enables the child care to continue providing healthy and safe care through the scholarships offered by this project. We are more than thankful."

**"I have been able to provide consistent ongoing child care for my children that is top quality without feeling stressed out each month financially. I am no longer having to incur debt to meet monthly expenses— [the subsidy] has helped to alleviate a good deal of stress."**
***– CCCTC subsidy parent***

Other parents described how the subsidy had helped them get or keep employment: "I am able to afford sending my daughter to day care. If not [for the subsidy], I would have had to cut my hours at work and get state assistance." Some parents explained that the subsidy had allowed them to send their children to care for more hours or days each week in order to bolster their children's early childhood education and/or to allow the parents to work more hours.

### CHILD CARE UTILIZATION

The parent survey also included a series of questions to gather information about families' child care utilization, including questions about the stability of arrangements and the number and type of arrangements. The questions about child care stability included, at baseline and follow-up, questions about how many times families had changed child care arrangements in the past year and how many days of work parents had missed due to child care changes/problems.

On the most recent follow-up, 42% of parents reported changing child care providers during the past year (up from 36% changing providers during the past year at baseline). At baseline, subsidy parents changed providers significantly more frequently than control parents; however this difference was no longer present at follow-up, which parallels the tracking data reported earlier. Few parents (less than 25%) missed any days of work due to child care problems. There were no difference between baseline and follow up, or between groups, on the number of days of missed work.

In addition to questions about child care stability, the survey included questions about the types of care utilized. As illustrated in Table 25, approximately a quarter of the parents reported utilizing care provided by a relative; most reported not having to pay for relative care. Smaller numbers of parents reported utilizing care provided by friends, neighbors, or nannies/babysitters. Many parents in the subsidy group reported utilizing other child care centers or some other type of child care arrangement, and having to pay for that care.

**Table 25. Multnomah County Types of Additional Child Care Arrangements Utilized**

| | CCCTC Subsidy N = 48 % (n) | Matched control N = 43 % (n) |
|---|---|---|
| **Do you use child care provided by a relative?** | | |
| Yes; we pay for this care | 2% (1) | 7% (3) |
| Yes; we do not pay for this care | 23% (11) | 23% (10) |
| No | 75% (36) | 70% (30) |
| **Do you use child care provided by a friend or neighbor?** | | |
| Yes; we pay for this care | 4% (2) | 9% (4) |
| Yes; we do not pay for this care | 4% (2) | 7% (3) |
| No | 92% (44) | 84% (36) |
| **Do you use child care provided by a nanny/babysitter?** | | |
| Yes; we pay for this care | 6% (3) | 5% (2) |
| Yes; we do not pay for this care | 0% (0) | 0% (0) |
| No | 94% (45) | 95% (41) |
| **Do you use another family or center child care facility?** | | |
| Yes; we pay for this care | 40% (19) | 23% (10) |
| Yes; we do not pay for this care | 4% (2) | 5% (2) |
| No | 56% (27) | 72% (21) |
| **Do you use any other type of child care arrangement?** | | |
| Yes; we pay for this care | 2% (1) | 5% (2) |
| Yes; we do not pay for this care | 0% (0) | 0% (0) |
| No | 98% (47) | 95% (41) |

It was possible to examine change over time in utilization of these child care arrangements for the subsample of parents who completed follow-up surveys. This analysis revealed no significant differences between study groups. However, there were some significant changes for both groups over time in utilization: both groups were more likely to use a relative for care at baseline compared to follow-up ($p < .05$), and both groups were more likely to use another child care provider at follow-up compared to baseline ($p < .05$).

Thus, while data presented earlier suggest that matched control families had an increase in child care expenditures for other types of care, data do not reveal an increased utilization of other types of care. It could be, then, that the increased expenditures are due to an increase in cost for these care arrangements (something not captured on the parent survey), or it could be that with a larger follow-up sample it could be possible to detect significant differences over time in types of care arrangements.

### Parental Assessment of Child Care Quality

Finally, the parent survey included a section to measure parents' satisfaction with the quality of care their children were receiving. This section included a satisfaction with quality of care scale[13] and two additional items that measured parents' agreement with whether the care arrangement was what their children needed and whether parents agreed that their providers were skilled professionals. There were no changes over time for the subset of parents who had completed follow-up surveys, nor were there any differences between CCCTC and control parents at baseline or follow-up. Most parents rated the child care quality highly (an average scale score of 4.7 out of a possible 5.0). Additionally, 92% of parents "often" or "always" felt that the child care arrangement was what their children need (however, subsidy parents rated this higher than control parents, $p < .05$); and 94% of parents "often" or "always" felt that their providers were skilled professionals. These high satisfaction ratings at baseline make it difficult to show changes over time associated with CCCTC program involvement.

## Lane County Family Outcomes—Detailed Findings

### Affordability of Care

Table 26 displays parents' income and child care expenditures. CCCTC subsidy parents, on average, spent less on child care each month (averaging $282 per month, compared to $544 for the CCCTC non-subsidy parents and $373 for matched control parents, and $526 for the unmatched control parents) and had cheaper hourly rates. This is not surprising, given that, by definition, CCCTC subsidy parents are paying less for child care. The average monthly take-home income for CCCTC subsidy parents was significantly less than the other two groups: $1,868, compared to $3,456 for CCCTC non-subsidy parents and $5,756 for the non-matched control parents. Again, this is not surprising, as, by definition, CCCTC subsidy parents have lower incomes. It is interesting to note, paralleling the Lane County results, that CCCTC subsidy parents also purchased significantly more hours of care per week than the matched control and non-subsidy CCCTC parents: 37 hours for CCCTC subsidy parents (essentially, full-time child care) compared to just under 30 hours for parents in the other two groups.

[13] Cronbach's alpha for the quality of care scale was .88 at baseline, .92 at follow-up.

**Table 26. Lane County Family Income and Child Care Expenditures**

| | CCCTC Subsidy | Matched Control | CCCTC Non-Subsidy | Remaining Control |
|---|---|---|---|---|
| **Monthly take-home income*** | | | | |
| Mean | $1,868 | $2,105 | $3,456 | $5,756 |
| Standard Deviation | $738 | $1,148 | $1,649 | $1,589 |
| N | 77 | 113 | 125 | 41 |
| **Monthly total child care expense**** | | | | |
| Mean | $282 | $373 | $544 | $526 |
| Standard Deviation | $173 | $306 | $696 | $338 |
| N | 77 | 111 | 126 | 49 |
| **Monthly child care expense on this child care**** | | | | |
| Mean | $301 | $298 | $416 | $441 |
| Standard Deviation | $201 | $234 | $273 | $207 |
| N | 34 | 51 | 70 | 23 |
| **Number of hours purchased per week***** | | | | |
| Mean | 37 | 27 | 28 | 35 |
| Standard Deviation | 11 | 15 | 14 | 15 |
| N | 34 | 52 | 73 | 21 |
| **Hourly rate******** | | | | |
| Mean | $1.65 | $2.41 | $3.14 | $2.54 |
| Standard Deviation | $1.44 | $2.12 | $2.55 | $0.90 |
| N | 34 | 50 | 67 | 21 |

* CCCTC subsidy parents and matched controls had significantly lower incomes than CCCTC non-subsidy or non-matched control parents at p<.001.

** CCCTC subsidy parents pay significantly less for child care than CCCTC non-subsidy or non-matched control parents at p<.05.

*** CCCTC subsidy parents use significantly more hours of care per week than CCCTC non-subsidy or matched control parents at p<.01.

**** CCCTC subsidy parents have a significantly cheaper hourly rate than CCCTC non-subsidy parents at p<.01.

As in Multnomah County, through the parent survey, the evaluation team examined levels of financial stress among parents using a series of questions about potential financial stressors in parents' lives.

To examine the effect of CCCTC on financial stress, we again selected a subset of the control families who were matched to the CCCTC subsidy families on income (that is, a similarly low-income group of parents). As illustrated in Table 27, CCCTC subsidy parents scored similarly to the matched control group parents in terms of worries about paying child care bills and worries about their families' finances overall, but still were more likely than the matched control group to have worries about meeting basic financial needs. Thus, even with the subsidy support, CCCTC subsidy parents experience significant amounts of financial stress.

**Table 27. Lane County Parent Financial Stress**

| Parents who agree with the following statements: | CCCTC Subsidy Parents % (n) | Matched Control Parents % (n) |
|---|---|---|
| I often worry about whether I will be able to pay my child care bills. | 38% (29) | 30% (33) |
| I often worry about my family's finances overall. | 68% (52) | 60% (67) |
| I often worry about meeting my family's financial needs (e.g., mortgage/rent, food, etc.).* | 38% (28) | 24% (27) |

*CCCTC subsidy parents reported significantly more financial stress than the matched control parents ($p<.01$).

**"This program is one of the best things that a family can have. If not for the program, it would be impossible for me to have my kids in a day care even close to good as [CCCTC child care facility]."**

*— CCCTC Parent*

As noted in Lane county, subsidies impacted affordability for participating parents (as illustrated in Table 28): 91% indicated that they would have been unable to afford their current child care arrangements without the subsidy. Further, almost all parents (96%) agreed that the subsidy helped them to be able to provide for the basic needs of their families.

**Table 28. Lane County Impact of CCCTC Subsidy on Families Receiving the Subsidy**

| | Strongly Disagree % (n) | Disagree % (n) | Agree % (n) | Strongly Agree % (n) |
|---|---|---|---|---|
| The CCCTC subsidy has helped our family | 1% (1) | 0% (0) | 4% (3) | 95% (75) |
| The CCCTC subsidy has helped us to afford our basic needs (e.g., food, mortgage/rent, etc.) | 0% (0) | 4% (3) | 25% (19) | 71% (55) |
| We would not have been able to afford this child care without the subsidy | 3% (2) | 8% (6) | 23% (18) | 68% (54) |
| The CCCTC subsidy has improved our standard of living | 0% (0) | 4% (3) | 28% (21) | 68% (53) |
| The CCCTC subsidy has helped us be able to save for our long-term goals | 3% (2) | 21% (16) | 22% (17) | 55% (42) |
| If we didn't have the subsidy we would have to take our child out of this child care | 11% (9) | 33% (26) | 18% (14) | 39% (31) |

## Parental Assessment of Child Care Quality

The evaluation team collected measures of parents' perceptions of the quality of care through several items on the parent survey. Parents were asked how much they agreed that their child care provider was just what their child needed and how much they agreed that their provider was a skilled professional (on a scale of 1, strongly disagree, to 5, strongly agree). In addition, the survey included a 17-item assessment of quality scale.[14]

Table 29 displays parents' satisfaction ratings for CCCTC (subsidy and non-subsidy parents are combined for this analysis, as both of these groups of parents were sending their children to the same group of providers) and control parents. CCCTC parents scored significantly higher on the satisfaction with quality of care scale, were more likely to agree that the child care arrangement was just what their children needed, and were more likely to agree that their provider was a skilled professional.

**Table 29. Lane County Mean Parental Assessment of Quality Scores**

| | CCCTC Parents | Control Parents |
|---|---|---|
| Satisfaction with quality of care scale score* | 4.8 (n=183) | 4.6 (n=152) |
| Care arrangement is just what child needs* | 4.6 (n=203) | 4.4 (n=169) |
| Provider is a skilled professional* | 4.8 (n=203) | 4.7 (n=169) |

*CCCTC had significantly higher satisfaction scores at p<.01.

Finally, parents answered open-ended questions about how the CCCTC subsidy had helped them, and the themes discussed by parents mirrored the Multnomah County parent responses. First, parents discussed how grateful they were to be able to enroll and keep their children in the high-quality care offered by the CCCTC providers; many stated they would not be able to have their children in that care without the CCCTC subsidy. Second, parents stressed that, particularly during the current difficult economic times, the CCCTC subsidy made it possible for them to afford their daily expenses, including gas and rent.

[14] This scale had an alpha=0.92.

# DISCUSSION AND CONCLUSIONS

The Child Care Contribution Tax Credit Pilot Project Evaluation used myriad data collection strategies to gather information about the projects' implementation and outcomes. The previous sections of this report document the information gathered through facility, provider, and parent surveys as well as direct observations of child care quality. While this quantitative data provides valuable information about project activities and outcomes, the picture would not be complete without taking an in-depth, qualitative look at providers' experiences with the pilot projects. Thus, we begin the final section of this report by doing exactly that—focusing on two family providers in Lane County and one center in Multnomah County who participated in the pilot projects. We describe these facilities' experiences with the projects and the changes they have made as a result of their participation. The report then ends with a summary and discussion of the evaluation findings.

## A Focus on Provider Changes

The QUEST data presented in this report provides a quantitative assessment of participating providers' child care quality at baseline and at follow-up. In addition to this quantitative data, the providers themselves, and the Lane and Multnomah Project Directors, can provide a more nuanced account of changes providers made based on their participation in the pilot projects. In this section we highlight the experiences of two family providers and one center that participated in the pilot projects (the names of the providers and center have been changed to protect confidentiality).

### JANE'S EXPERIENCE

Jane started her family child care business after many years of working with children in elementary settings. She had a particular interest in working with low-income families. Jane was facing two main challenges when she began the CCCTC pilot project: (1) she did not have experience with, or knowledge of, early childhood development and education, and (2) she needed assistance with business practices. Jane hoped that by participating in the program she would gain access to training, mentorship, and fellowship with other providers, with the ultimate goals of stabilizing her income and improving her physical environment and curriculum.

When Jane started the CCCTC project, she was providing care 24 hours a day and 7 days a week, was charging low fees, and was having great difficulty in getting payment from parents. She suffered from stress, and the Project Director feared she was heading towards burnout. The Project Director focused on helping Jane gain business practices, including helping her create a solid contract and parents' manual, encouraging her to raise her rates, helping her set a schedule, and assisting with strategies for working with parents to increase timely payments.

In addition to assistance with business practices, the Project Director focused on providing Jane with information regarding early childhood development and education. The Project Director worked with Jane on social and emotional development and interactions and on developing curriculum. Jane devel-

oped space and equipment for infants and toddlers, improved her playground, and purchased more educational toys and activities.

By the end of the three-year pilot project, Jane had moved from a registered to a certified family child care business and employed her son in her business. She had increased and stabilized her revenue enough to allow her to purchase group health insurance for her and her son. Furthermore, she had a renewed energy and commitment to her profession.

### KAREN'S EXPERIENCE

Karen started her family child care business in her 60s after a career in special education. She had been caring for her grandchildren, then began caring for the children of her daughter's friends, and therefore decided to start a family child care business. Like Jane, she had limited business skills, and also needed help gearing her environment, curriculum, and activities toward younger children. Karen joined the CCCTC project because she hoped to gain a mentor who could assist her with business practices and help her gain an understanding of how young children grow, think, and learn. She desired to serve six children and hoped the project would help her realize that goal.

**"I learned so, so much…I'm really able to provide better quality [through] acquiring knowledge and understanding in this field and practice."**

*– CCCTC Provider*

As with Jane, the Project Director focused efforts on assisting Karen with business practices. Karen did not have a contract, and had allowed flexibility with parents regarding when they needed to pay their child care bill. As a result, parents often paid their child care bill late in the month. The Project Director helped Karen create a contract and a parent handbook, helped her set rates and schedules, and helped her understand DHS policies and procedures. The Project Director also helped Karen gain skills in communicating with parents (verbally and through letters) to ensure prompt payment. Karen relied on the Project Director for assistance with a variety of business-related issues, and the Project Director was available by phone and in person as issues arose. For example, when a child fell and injured herself at Karen's day care, the Project Director arrived to help Karen with the proper documentation and to provide her support through the process.

Karen also shared Jane's desire to learn more about early childhood development. The project helped her understand more about how children learn and interact with each other, and she has learned to enjoy spending time on the floor with the children and to listen to what they have to say and to have fun with them. Through site visits, the Project Director helped model behaviors ("let me show you what I mean"). Karen thrives on classes and learning opportunities, and through the project participated in numerous trainings as well as early childhood education college courses.

Furthermore, with the Project Director's assistance and with funds from the project, Karen made numerous changes to her physical environment. She has reorganized her physical space to include a quiet room for napping, a "bounce room" for indoor large motor activities, and has divided the main room into centers (home living, block/building, etc.). The facility now looks like a professional child care program, and by the end of the 3-year pilot project, she had reached her goal of enrolling six children.

### THE CHILDREN'S PLACE EXPERIENCE

When the Children's Place child care center enrolled in the pilot project, the center was at

a point of transition. The director was turning over her position to her daughter at the same time that the program had been losing revenue. The new director did not have experience in directing a child care center, and due to her mother's health problems, she took over the director duties faster than anticipated. Furthermore, the center served low-income families and therefore had a limited revenue stream. Both the outgoing and incoming directors hoped that participation in the CCCTC pilot project would help them make the center a thriving business again.

The center was further challenged when the facility suffered from a large flood and a parent filed a complaint. As a result, the state licensing agency issued a report detailing numerous health and safety violations, and the future of the center was in jeopardy. However, the CCCTC Project Director worked tirelessly with the Children's Place staff and coordinated with the licensing agency. Through telephone and on-site support, the Project Director helped the center address the health and safety violations. Furthermore, the CCCTC project supported the center in both improving the physical environment and in engaging and motivating staff. With the support of the CCCTC pilot project, the center was able to make repairs and improvements that transformed the center into a bright and welcoming environment. In addition, the Project Director provided trainings to the center staff, linked staff with additional trainings and resources, and encouraged the new director to apply for the Oregon Center Director's Certificate program. By the end of the three-year pilot project, the director had completed this program, and staff members were providing a warm, engaging, and stimulating environment to the children.

**"I have become far more knowledgeable in the developmental areas of a child's ages and stages. I cannot describe all the ways [the Project Director] has helped me."**

*— CCCTC Provider*

### PROJECT ACTIVITIES THAT FOSTERED GROWTH

Jane, Karen, and the Children's Place all made positive changes to their child care programs over the course of their involvement with the CCCTC pilot projects, and they all attributed these changes to several key factors of the pilot projects. All stressed the importance of having a mentor who was available to them by phone and in-person. Indeed, frequent site visits allowed the Project Directors to model behavior, suggest environmental improvements, and provide moral support and encouragement.

In addition to the importance of having a hands-on mentor, all three women also stressed the importance of the networking groups. The provider networking groups served several purposes. First, the network meetings often involved trainings (put on by the Project Directors, invited speakers, or by the CCCTC providers themselves) on a variety of topics. Second, the network meetings gave providers an opportunity to learn from each other. Finally, the networking groups fostered a sense of community among the participants, which in turn led to increased feelings of professionalism and motivation.

The changes that these three child care facilities achieved were made possible because they received support in a combination of critical areas: business practices, physical environment, and early childhood development. Without assistance with business practices, Jane, Karen, and the Children's Place struggled to stay afloat financially. Without assistance with their physical environments, the three facilities were not child-focused and did not have adequate age-appropriate educational toys and equipment. And without as-

sistance with early childhood development, the three programs struggled with schedules, curricula, and interacting with the children in warm and age-appropriate manners. With the holistic support of the CCCTC pilot projects across these domains, these three child care facilities became viable businesses providing high-quality child care.

## Conclusions

### PILOT PROJECT OUTCOMES

Overall, evaluation results suggest that positive outcomes were achieved by both CCCTC projects, although the patterns of these results differed somewhat. Both programs showed positive results in terms of the desired outcome of enhancing provider engagement in professional development, as evidenced by high rates of enrollment in the Oregon Registry (OR) for CCCTC providers compared to control. Further, CCCTC providers in both counties were more likely to be at Step 5 at follow-up, compared to control, and Lane County providers were much more likely to be taking college-level classes. Findings for financial stability and retention of providers in the field were modest but showed some positive trends. Specifically, it appeared that CCCTC providers reported somewhat less financial stress over time, compared to controls and that facilities that were participating in the CCCTC projects may have been less likely to close, although these numbers were small. Further, it appeared that those CCCTC providers who did leave the field were less likely to do so because of dissatisfaction with the child care field, compared to control providers. This may have been due to both the increased engagement in professional development (e.g., feeling that child care was a 'career'), the increased perceived peer supports that CCCTC providers reported due to network involvement (especially the case in Multnomah County), as well as to the increased stability of facility revenue that may be associated with providing parent subsidies. CCCTC providers, compared to controls, were more likely to report that their facility income had increased during the previous year, as illustrated by Jane, Karen, and the Children's Place experiences.

Quality results were somewhat different for the two sites. Specifically, quality improvements in the Lane County site were found in several different quality domains for family providers, but not for center providers. In Multnomah County, the pattern was reversed, with more improvements among center providers. One key factor that may underlie the differences in quality outcomes is that in Multnomah County, center providers were much more likely to have remained in the program for two to three years, compared to family providers. Results from the prior Lane County report (Worcel & Green, 2008) suggested that quality improvements took several years to be evidenced in many programs. In Lane County, there appeared to be a primary focus, at least in the first year or two, on family providers; an opposite pattern characterized the work in Multnomah County. Lane County family providers showed more improvement, compared to control providers, in terms of several domains of environmental quality, as well as several areas reflecting the quality of caregiver-child interactions (specifically, support for social-emotional development, supportive instructional style, and support for learning activities and opportunities); indeed, these are the types of changes reported by Jane and Karen, above. Family providers in both Lane and Multnomah County showed improvements relative to controls in the level of support for early literacy and language development, suggesting that this area was a target for improvement in both programs. Center providers in Multnomah County, on the other hand, showed significant improvement relative to controls in terms of the safety of materials, quality of caring/responding, use of positive guidance, and supportive instructional style, outcomes

that are highlighted in the experience of the Children's Place.

These different patterns of results suggest both different topical foci for the two different programs in terms of the content of technical assistance provided, as well as differential success in working with family based vs. center based providers. Taken together, however, these results suggest that improvements with both kinds of providers can result from a project like the CCCTC, and that improvements can be documented across a number of important domains of the quality of care. The lack of quality improvements among Multnomah County family providers could be due in part to the fact that this group of providers was younger, less experienced, and had lower educational levels than their Lane County counterparts. It may be that an even more intensive intervention is needed to affect change with this group of providers.

These findings suggest that future interventions of this nature would do well to be strategic and planful in terms of making sure that those persons providing technical assistance and mentoring address all of the areas of quality thoroughly and comprehensively, and that successful engagement, potentially using different strategies and approaches, is important for achieving results with different types of child care providers. Furthermore, data from Lane County suggest that the types of quality improvements possible may be dependent, at least in part, on the length of the intervention: while quality improvements by and large were seen after the first year of the intervention (and not beyond), other, less tangible, domains of quality started to improve during the first year and continued to improve after subsequent years of the intervention.

Finally, it is worth noting that across both projects, the evaluation team noted improvements in both the treatment and control participants in a number of areas. It may be that simply having a regular observer in the facility, as well as awareness of the kinds of things the observer was looking for, raised some providers' quality, or at least observed quality on the day of the observation. This kind of "observer" effect is difficult to ameliorate in a research study such as this one. Furthermore, because the study employed random assignment, even the control facilities possessed a desire and motivation to improve their skills, as indicated by their initial expression of interest to participate in the intervention. Therefore, it could be that while they did not get the intervention services, they could have found other supports and information that allowed them to improve their quality.

**"I have gained so much knowledge that was directly brought about by the networking, trainings and educational scholarships offered from [CCCTC]."**

*— CCCTC Provider*

One major intended consequence of the CCCTC project was that low-income families participating in CCCTC programs would experience the benefits of receiving higher quality child care. This was clearly the case for children receiving care in family-based settings in Lane County, and in center-based settings in Multnomah County. For families, it was also hypothesized that both the increased provider quality, as well as the financial benefit of receiving a substantial child care subsidy, would lead to several positive benefits for families. Specifically, it was expected that there would be increased child care stability for children, increased family satisfaction with care, and, especially for subsidy families, increased affordability of care, decreased financial stress, and increased ability for parents to engage in the workforce. Affordability outcomes, not surprisingly, were quite evident in both program sites, with subsidy parents paying lower hourly

rates; this increased affordability and also allowed subsidy parents to enroll more of their children in child care and to buy more hours of child care in subsidy programs. Parents' financial stress, however, proved more difficult to influence, although it is notable that in Multnomah County, while control parents' stress increased significantly from baseline to follow-up, the reported financial stress of CCCTC parents remained mostly stable, despite the growing economic recession that was occurring during the time of this study. Thus, while the subsidies may not have reduced parent stress significantly, they may have buffered the impact of the economic downturn on the stress levels of these families, a not insignificant finding. It is likely true that for these low-income families, the sources of financial stress are multi-faceted and chronic, and stress levels remained fairly high despite the reduced cost of child care. Subsidy parents in both program sites indicated that the subsidy made a significant contribution to family income, helping families meet basic needs in other areas, and helping them to improve their standard of living.

**"Our monthly meetings with [the Project Director] have been very supportive…we feel seen and appreciated! Our meetings and trainings with other teachers make me feel less lonely and more a part of an extended ECE community."**

*— CCCTC Provider*

Stability of care (measured longitudinally only in Multnomah County) showed that while children in subsidy arrangements were no less likely to change to a different provider at some point during the 3-year study (about half of all children changed care providers in both groups), these children did remain in care with the subsidy provider for significantly longer than did children in non-subsidy child care programs. Again, the decision to change care providers is multi-determined, and appears to be more influenced by parents' circumstances (changes in jobs, moves, etc.) than by receipt of the subsidy or satisfaction with care. Most parents appeared to be satisfied with the quality of care being received, regardless of the intervention. In both programs, however, receipt of the subsidy appeared to be associated with allowing parents to purchase more hours of child care. In Multnomah County, the evaluation asked parents whether the subsidy also allowed them to work more hours: Almost all subsidy parents said yes to this question (86%). This is an important finding, given the importance of affordable, high-quality child care in supporting parents' ability to engage in the workforce. Especially for parents working lower-paying jobs, the cost of child care can outweigh the benefits of working, thus, providing the subsidy appears to be an effective way of supporting these parents to engage in paid employment.

### Differences in Implementation of CCCTC Projects

Data collected through the process evaluation suggests that there were considerable similarities in the implementation of the two CCCTC projects, and a few marked differences. Both projects employed similar methods for meeting the needs of participating providers, providing on-site technical assistance, phone and email support, provider network development and support, and quality assessment and feedback. Topics covered in technical assistance varied widely in both sites, although both programs reporting spending considerable time on helping providers (especially family providers) enhance the business side of their operation. Several key differences between the Lane and Multnomah County projects were apparent as well. First, in Lane County, there were considerably more site visits to provide indivi-

dualized TA. This may be at least in part due to the greater engagement of, and emphasis on, family providers in the Lane County project. Lane County also spent more on facility enhancement grants (a total of $46,071 vs. $18,025). This could account for the pattern of significant improvements among family providers in Lane County (relative to controls) on dimensions related to quality of environments (e.g., equipment and materials for toddlers, preschoolers, and for language and literacy). In Multnomah County, the only measureable environmental improvement (relative to controls) was for center providers in terms of safety of equipment.

Providers in Lane County were also much more likely to receive substantial wage enhancements for making progress on the Oregon Registry. This project element was never fully implemented in Multnomah County. These investments also seemed to correspond to slightly more engagement in professional development by Lane County providers. Eighty-five percent of Lane County providers were at Step 5 or higher at follow up, compared to 53% of Multnomah County providers, and Lane County providers were much more likely to be engaged in taking college credits at follow-up than were Multnomah County providers. However, it is not entirely clear whether these differences were due to differences in receipt of more/larger wage enhancements, to the fact that Lane County providers participated for a longer period of time in the CCCTC program, compared to Multnomah County providers, or to the fact that Multnomah County providers on average began the intervention at lower Steps than the Lane County providers. The difference between sites in the length of program participation was due to another striking difference between the two project sites in terms of the ease of recruitment of the project sample. In Lane County, recruitment happened relatively quickly, while in Multnomah County recruitment proved difficult and took over a year to complete. Interviews with the program staff suggest that this difference may have been due, in large part, to housing the program within the local Child Care Resource and Referral Network in Lane County, an organization already well-known to the provider community and well-trusted in terms of providing quality improvement support. In Multnomah County, the contracted provider not only had to overcome several logistical hurdles to obtain information about child care providers and to do outreach on behalf of the program, but also was largely unknown to the child care community.

Finally, it is worth noting that implementation of parent subsidies also differed across the two sites: more children in Lane County were able to receive subsidies (258 vs. 122), and Lane County spent significantly more money on subsidies than Multnomah County. Indeed, subsidies for some Multnomah County families were discontinued due to funding restrictions, though many of these families were either able to take advantage of another subsidy program or were re-enrolled in the CCCTC subsidy when additional funds were secured.

Because this project was complex and multifaceted, it is simply not possible to know which program components were associated with which outcomes. It could be that the dual focus on affordability for parents and quality improvements for child care providers may have had the unintended consequence of "diluting" results in both areas. On the other hand, providing families child care subsidies may have stabilized provider income, which in turn could have allowed providers to make the quality improvements documented by this study.

The generous parent subsidies allowed parents to purchase more hours of care, and that this may have allowed them to work more hours in their jobs. It was less clear that the subsidy led to greater stability of care for children (subsidy children were equally likely to leave their care arrangement as controls

during the study, but they did remain in that care arrangement longer prior to leaving), or to reductions in family financial stress. However, it could be argued that for children of low-income parents, receipt of more hours of higher quality child care and longer episodes of care are significant positive outcomes. Certainly research has suggested that receipt of high-quality child care by low-income children can have positive benefits for their development (NICHD Early Child Care Research Network, 2000). However, the cost of the parent subsidy to the overall program was extremely high, accounting for 57% of the program budget in Lane County, and 65% in Multnomah County. Whether this investment "paid off" for children in terms of any long-term benefit is not known, and would require further study.

While it is not possible to disentangle *which* program components led to *which* outcomes, it can be concluded that the package of interventions, taken together, had a set of modest but wide-ranging effects on both families and providers. Future studies that examine individual program components in planned-variation studies are needed to better "unpack" the set of interventions and identify which components are most (or least) important to outcomes.

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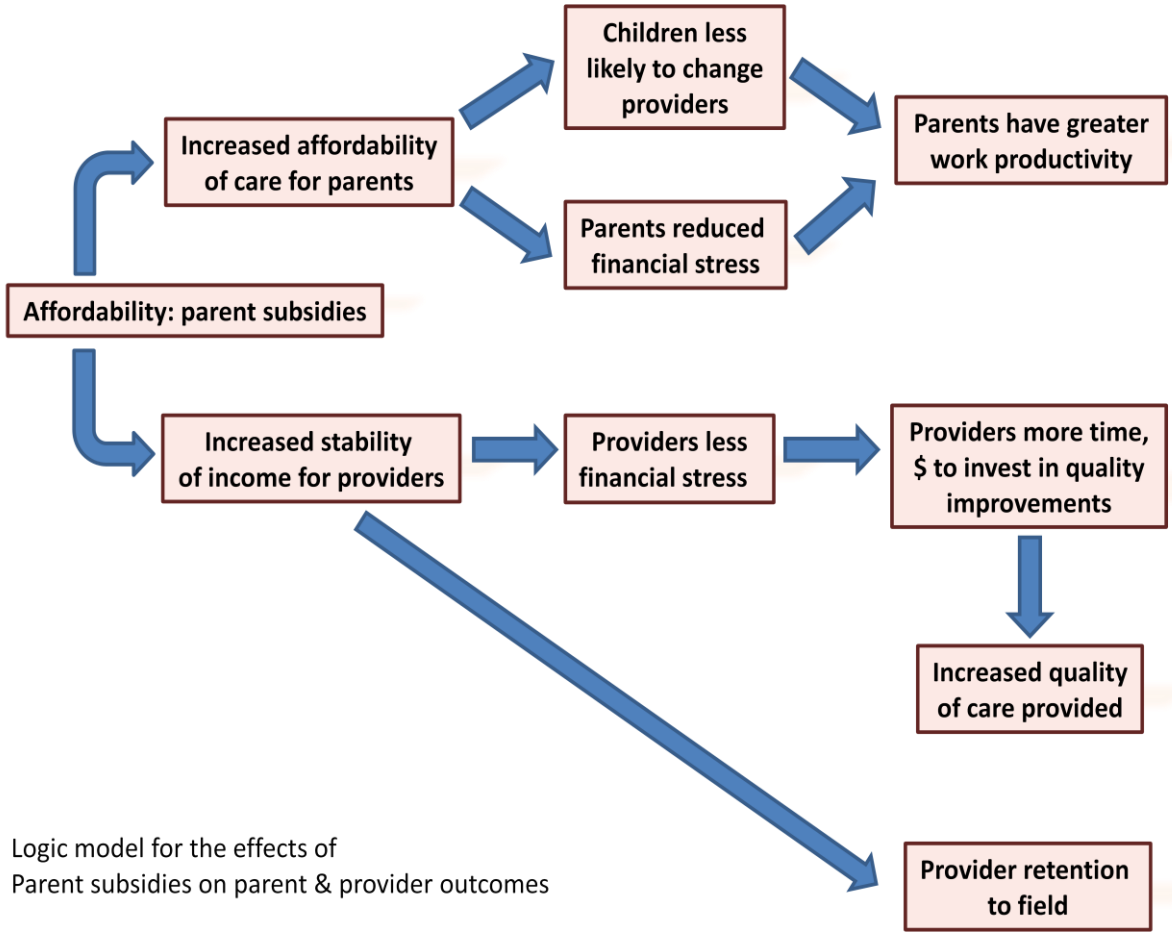
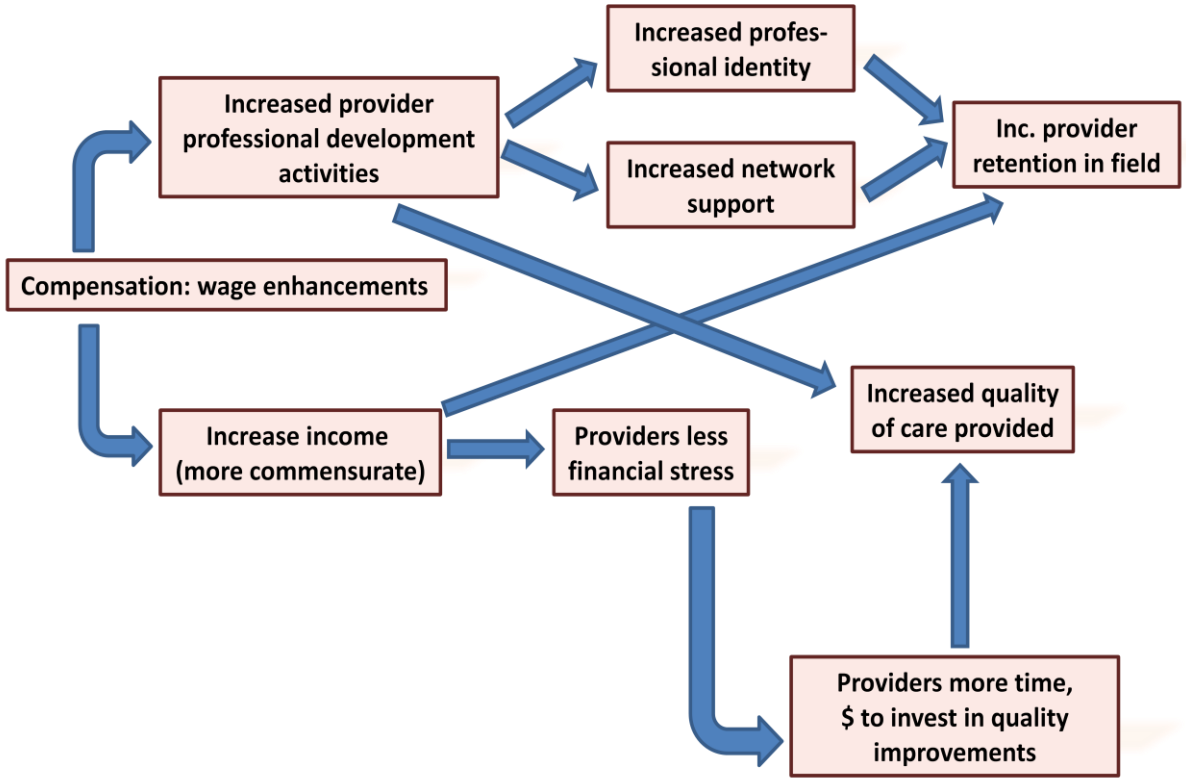
# APPENDIX A: LOGIC MODELS

# Logic Model for the Effects of Parent Subsidies on Parent & Provider Outcomes



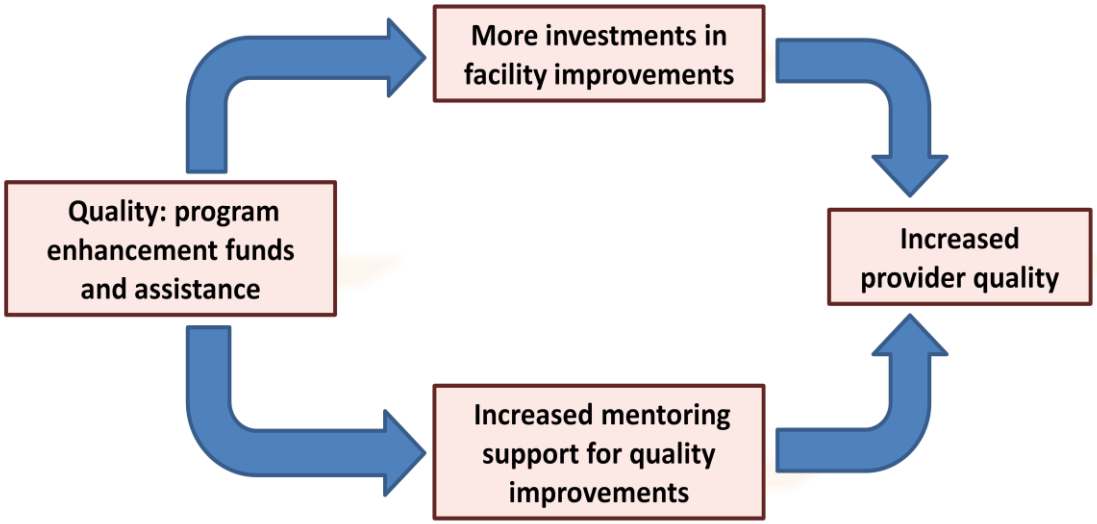

Logic model for the effects of
Parent subsidies on parent & provider outcomes

# Logic Model for the Effects of Wage Enhancements on Parent & Provider Outcomes




Logic model for the effects of
Wage enhancements on parent & provider outcomes

# Logic Model for the Effects of Program Enhancement Funds and Technical Assistance




CCEP Logic model for the effects of
Program enhancement funds and technical assistance

# APPENDIX B: LANE COUNTY QUALITY SUBSCALE MEANS

## Lane County Quality Subscale Means*

| | Family Providers | | Center Providers | |
|---|---|---|---|---|
| | CCEP (n) | Control (n) | CCEP (n) | Control (n) |
| **Environmental Quality** | | | | |
| Space & Comfort | (12) | (18) | (10) | (13) |
| Baseline | 2.66 | 2.60 | 2.85 | 2.57 |
| R2 | 2.69 | 2.66 | 2.85 | 2.73 |
| R3 | 2.93 | 2.87 | 2.83 | 2.93 |
| Equipment/Materials—Infants | (4) | (6) | (4) | (2) |
| Baseline | 1.88 | 1.67 | 2.40 | 1.05 |
| R2 | 2.28 | 1.86 | 2.57 | 1.73 |
| R3 | 2.19 | 2.26 | 2.33 | 2.00 |
| Equipment/Materials—Toddlers | (10) | (12) | (4) | (9) |
| Baseline | 2.19 | 1.97 | 2.37 | 1.87 |
| R2 | 2.50 | 1.97 | 2.23 | 2.02 |
| R3 | 2.58 | 2.33 | 2.50 | 2.32 |
| Equipment/Materials—Preschoolers | (12) | (18) | (6) | (7) |
| Baseline | 2.26 | 1.87 | 2.61 | 2.10 |
| R2 | 2.51 | 1.90 | 2.38 | 2,12 |
| R3 | 2.63 | 2.34 | 2.46 | 2.30 |
| Safety furnishings/materials | (12) | (18) | (10) | (13) |
| Baseline | 2.65 | 2.66 | 2.80 | 2.91 |
| R2 | 2.89 | 2.78 | 2.86 | 2.85 |
| R3 | 2.88 | 2.82 | 2.90 | 2.91 |
| Materials to support language/literacy | (12) | (18) | (8) | (13) |
| Baseline | 2.09 | 2.04 | 2.31 | 1.96 |
| R2 | 2.30 | 2.09 | 2.24 | 2.16 |
| R3 | 2.67 | 2.25 | 2.38 | 2.08 |
| **Quality of Interactions** | | | | |
| Caring/Responding (n) | (12) | (16) | (9) | (13) |
| Baseline | 2.57 | 2.33 | 2.67 | 2.28 |
| R2 | 2.76 | 2.54 | 2.44 | 2.51 |
| R3 | 2.90 | 2.84 | 2.86 | 2.82 |

*This table shows QUEST subscale scores for providers who had at least three complete rounds of data collection.

| | | | | |
|---|---|---|---|---|
| Positive Guidance | (12) | (18) | (10) | (13) |
| Baseline | 2.42 | 2.21 | 2.47 | 1.92 |
| R2 | 2.62 | 2.50 | 2.44 | 2.32 |
| R3 | 2.79 | 2.67 | 2.62 | 2.58 |
| Supervision | (12) | (18) | (10) | (13) |
| Baseline | 2.80 | 2.42 | 2.74 | 2.52 |
| R2 | 2.76 | 2.60 | 2.93 | 2.92 |
| R3 | 2.75 | 2.66 | 3.00 | 3.00 |
| **Social Emotional Supports** | | | | |
| Supporting social-emotional development | (12) | (18) | (10) | (13) |
| Baseline | 2.29 | 2.18 | 1.94 | 1.78 |
| R2 | 2.52 | 2.22 | 2.04 | 1.99 |
| R3 | 2.50 | 2.47 | 2.30 | 2.32 |
| Supporting Play | (12) | (18) | (10) | (13) |
| Baseline | 2.69 | 2.33 | 2.81 | 2.56 |
| R2 | 2.88 | 2.64 | 2.75 | 2.67 |
| R3 | 3.00 | 2.87 | 2.87 | 2.92 |
| **Supporting Cognitive & Language Development** | | | | |
| Supportive Instructional Style | (12) | (18) | (10) | (13) |
| Baseline | 2.31 | 2.31 | 2.46 | 2.03 |
| R2 | 2.62 | 2.37 | 2.24 | 2.31 |
| R3 | 2.78 | 2.61 | 2.70 | 2.68 |
| Supporting language development & early literacy | (12) | (18) | (9) | (13) |
| Baseline | 1.95 | 2.02 | 2.07 | 1.86 |
| R2 | 2.20 | 2.04 | 2.01 | 2.04 |
| R3 | 2.63 | 2.03 | 2.35 | 2.24 |
| Learning activities & opportunities | (12) | (12) | (10) | (13) |
| Baseline | 2.18 | 1.87 | 2.11 | 2.00 |
| R2 | 2.39 | 1.94 | 2.15 | 2.03 |
| R3 | 2.66 | 2.18 | 2.28 | 2.21 |