



Colorado Evaluation & Action Lab

UNIVERSITY OF DENVER

Using data to drive action

Final Evaluation Report

Colorado Child Care Assistance Program (CCCAP) Teacher Salary Increase Pilot

REPORT HIGHLIGHTS:

- A **mixed-methods approach** was used to evaluate the implementation and effects of a salary increase Pilot provided to teachers at selected early care and education (ECE) centers that accept CCCAP in Colorado.
- The findings suggest positive trends in **teacher retention and job satisfaction among Pilot teachers and more stable staffing and favorable working conditions among Pilot centers.**
- Pilot teachers experienced **reductions on some measures of material hardship like food insecurity and also experienced less job stress and were less likely to report symptoms of depression.**
- **The cost to centers of administering the pilot program was relatively low,** especially when compared with the estimated costs of teacher turnover.
- The results **support sustained investment in salary increases for teachers** potentially coupled with additional supports to address the needs of ECE teachers.

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Abstract

The Colorado Child Care Assistance Program (CCCAP) Teacher Salary Increase Pilot (Pilot) implemented by the Colorado Department of Early Childhood (CDEC) aims to bring pay for early care and education (ECE) teachers equal to or close to a livable wage by providing a wage subsidy to eligible teachers. Year 1 findings of a Pilot evaluation indicate that Pilot teacher wages from their teaching jobs increased in comparison to control group teachers. However, on average, Pilot teachers did not have higher overall monthly incomes (which could include income outside of their teaching jobs) compared to control group teachers. This may be because Pilot teachers were significantly more likely to stop working a second job and reduce their public benefits after the wage increase. Seventy-six percent of Pilot teachers remained at their center 1 year after the pay raise compared to 69% of control group teachers. By the end of the second year, 56% of Pilot teachers remained at their centers compared to 53% of control group teachers. Pilot centers had a 4-percentage point higher teacher retention rate than control group centers by the end of the second year. Although these differences are not statistically significant at conventional levels, they are promising trends. The Pilot also appeared to have stronger impacts on retention for lead teachers, teachers who started out with higher salaries (more than \$17 per hour), and those who had a professional credential at the start of the Pilot. Pilot teachers also reported less food insecurity, fewer unpaid bills, and fewer depression symptoms in comparison to control group teachers. They also reported greater job satisfaction, better working conditions, less job stress, and more stable staffing in their centers. The cost of implementing the Pilot to centers was likely more than offset by potential savings from reduced director and staff time devoted to turnover-related recruitment and hiring, training and onboarding, and vacancy coverage. However, the lack of data infrastructure challenged the efficiency of implementing the Pilot.

Key Findings & Recommendations

- Pilot **teacher wages from their teaching jobs significantly increased** in comparison to control group teachers, yet their monthly income (from all sources) was not significantly higher than control group teachers.
- By the end of the first year of the Pilot, 76% of Pilot **teachers remained at their centers** compared to 69% of control group teachers. By the end of the second year of the Pilot, 56% of Pilot teachers remained at their center compared to 53% of control group teachers. These increases were not statistically significant but suggest promising trends.
- Pilot centers had a 4-percentage point **higher retention rate** than control group centers at the end of the second year of the Pilot. These increases were not statistically significant but again suggest promising trends.
- The Pilot also may have had **stronger impacts on retention** for lead teachers, teachers who started out with higher salaries (more than \$17 per hour), and teachers who had a professional credential prior to the Pilot.
- The Pilot increased **staffing stability** in Pilot centers by the end of the first year.

- There was evidence of **reduced material hardship for Pilot teachers**, including food insecurity.
- Evidence also suggests **increased job satisfaction, reduced job stress, improved perceptions of working conditions, and decreased self-reported depression symptoms** among Pilot teachers.
- **The cost to centers of administering the pilot program was relatively low**, especially when compared with the estimated costs of teacher turnover.
- **Continued investment in wage increases** for teachers, improved data systems for program monitoring, and continued evaluation of longer-term effects are promising strategies for Colorado's early childhood system.

Table of Contents

Abstract.....	i
Table of Contents.....	iii
Introduction.....	1
Study Description.....	2
Key Findings.....	5
Evaluation Question #1: What was the effect of the Pilot on teacher retention and center staffing?	5
Evaluation Question #2: What was the effect of the Pilot on teachers' economic well-being? ..	8
Evaluation Question #3: What was the effect of the Pilot on teachers' psychological well-being?	10
Evaluation Question #4: What was the effect of the Pilot on teachers' job satisfaction and perceptions of their work environment?	11
Evaluation Question #5: Why did Pilot teachers leave after a pay raise? Where did Pilot teachers go when they left?.....	13
Evaluation Question #6: What were the contextual, system, and infrastructure features that shaped implementation of the Pilot?.....	15
Evaluation Question #7: How did eligible centers and teachers learn about and experience the Pilot?	16
Evaluation Question #8: What were the costs associated with delivering the Pilot? Did the Pilot fully or partially offset costs for participating centers?	19
Making the Data Actionable	21
Recommendations	21
Lessons Learned	23
Conclusion	23
Appendix A: Theory of Change	24
Appendix B: Methods.....	26
Sample Characteristics	26
Qualitative Data	28
Quantitative Data.....	28
Randomized Controlled Trial Impact Analysis	30
Evaluation Indicators.....	30
Appendix C: Exit Interview Report.....	33
CCCAP Teacher Salary Increase Pilot: Why Teachers Leave After a Pay Raise	33
Endnotes	43

Introduction

Early care and education (ECE) teachers are one of the lowest paid occupations nationwide. This workforce has higher poverty rates than workers from other industries and often relies on public assistance or second jobs to make ends meet.¹ Low pay also makes it challenging for ECE programs to recruit and retain qualified professionals. Teachers serving children from low-income families and receiving Colorado Child Care Assistance Program (CCCAP) subsidies are often some of the lowest paid teachers in the field and experience the highest rates of turnover.² This affects the quality and continuity of care and education provided to children.³

“Most of my staff live within the poverty range. In [child care], you cannot give your best if you’re worried about how you’re going to make it.”

- Center director

In 2023, The Colorado Department of Early Childhood (CDEC) launched a [CCCAP Teacher Salary Increase Pilot](#) (Pilot) for teachers serving children from low-income families to bring pay closer to a livable wage by providing a wage subsidy to eligible teachers. This Pilot was designed to support CDEC’s [strategic goal #2](#) to invest in Colorado’s ECE workforce. It also aligns with CDEC’s Wildly Important Goal of increasing the ECE workforce and directly contributes to the leading indicator of retaining at least 80% of ECE teachers across Colorado.⁴

The Pilot aims to bring pay for teachers equal to or close to a livable wage in their county. Teacher wages were increased by between \$3.00 and \$5.50 per hour for assistant teachers and by between \$5.00 and \$7.60 per hour for lead teachers.ⁱ

CDEC used federal Child Care Development Block Grant funding and American Rescue Plan Act stimulus funding to conduct the Pilot in licensed centers that had a Colorado Shines rating of 3 or higher and served at least 40% of children receiving CCCAP subsidies. Teachers in Pilot centers were eligible for the wage increase if they were lead teachers, co-teachers, or assistant teachers/classroom aides who worked 16 or more hours per week in infant, toddler, and/or preschool classrooms.

The current evaluation aims to study the impact and implementation of the Pilot. The evaluation was designed to build evidence for the Pilot’s theory of change (see [Appendix A](#)) and guide design improvements and policy efforts to bring teacher salary increase initiatives to scale in Colorado and progressed through Steps 1, 2, 3, and 5 on Colorado’s [Steps to Building Evidence](#). On behalf of CDEC, the Colorado Evaluation and Action Lab (Colorado Lab) coordinated the analysis of the first year of the Pilot through the [Early Childhood Stimulus Evaluation Hub](#). In this role, the Colorado Lab helped CDEC build theories of change for their investments, align evidence-building strategies, reduce evaluation burden and duplication, effectively translate findings into policy and practice

ⁱ The livable wage for a county is obtained from the MIT Living Wage Calculator (<https://livingwage.mit.edu>) and represents the hourly rate that an individual in a household must earn to support themselves and/or their family, working full-time, year-round. The livable wage used for this project is the livable wage for one adult with no children.

actions, and more efficiently build Colorado’s early childhood evidence base. The Colorado Lab’s new [Early Childhood Workforce Evidence-Building](#) Hub supports Year 2 analysis for the Pilot evaluation.

The Colorado Lab engaged MDRC to evaluate the Pilot. MDRC’s evaluation was also funded by the Office of Planning, Research, and Evaluation (OPRE), within the Administration for Children and Families, in the U.S. Department of Health and Human Services, as part of a larger Building and Sustaining the Child Care and Early Education Workforce (BASE) project led by MDRC.ⁱⁱ The [BASE project](#) sought to examine factors that drive recruitment, retention, and advancement within the child care and early education (CCEE) workforce. The project included a literature review of the existing knowledge base on CCEE workforce retention and turnover; an environmental scan of strategies currently in use to build and sustain the workforce; a scan of existing data sources that could be used to address key questions about the workforce; and development of a conceptual framework depicting factors related to entry, retention, recruitment, and advancement in CCEE.ⁱⁱⁱ

A report on the Pilot was published by OPRE in late 2025.^{iv} That report included more detail on the Pilot’s impact on a range of teacher and center outcomes and more information on the methodology used to estimate impacts, implementation and cost. This chapter prepared for the Colorado Lab presents key findings from the Pilot to inform the CDEC Workforce Division’s ongoing efforts related to compensation.

Study Description

In 2023, CDEC invited all ECE centers across Colorado that met Pilot eligibility criteria (e.g., served at least 40% of children receiving CCCAP subsidies and earned a Colorado Shines quality rating of 3 or higher) to learn about the wage increase Pilot and to submit an enrollment application. In total, 122 centers across Colorado met Pilot eligibility criteria and among this group, 74 centers completed required applications to enroll. Given limited funding for the Pilot, a lottery was used to select 22 centers for the Pilot (“Pilot centers”), with the remaining 52 centers serving as a control group (“control centers”).

The 22 centers participating in the Pilot are located across 18 Colorado counties, with just under 60% located in Denver, Arapahoe, and El Paso counties. The counties where providers operate can also be characterized by the Child Opportunity Index (COI), an indicator of the quality of resources for children’s healthy development and made up of a range of indicators in the areas of education, health, and environment.^v Thirty-two percent of Pilot centers are in counties with a very low or low COI rating and 59% are in counties with a moderate COI rating. In addition, all Pilot centers are located in counties that have moderately low or very low child care coverage for children aged birth

ⁱⁱ This chapter was not funded or reviewed by OPRE and therefore does not necessarily reflect the views of OPRE.

ⁱⁱⁱ See <https://acf.gov/opre/project/building-and-sustaining-early-care-and-education-workforce-base> for more information about the project and a list of publications.

^{iv} Link forthcoming.

^v Child Opportunity Index is calculated using Diversity Data Kids’ composite index of neighborhood features that help children thrive: <https://www.diversitydatakids.org/child-opportunity-index>.

through 5 years old. Child care coverage is defined as the percentage of children in a county that can be served by licensed providers in that county.^{vi}

Across the 74 Pilot and control group centers participating in the evaluation, 1,003 individuals were identified as eligible teachers, and they made up the study sample.^{vii} Teachers in both samples were similar to one another pre-wage increase. Almost all teachers in the study sample were female (95%), the majority were either White (39%) or Hispanic (43%), and 26% held an associate's degree or higher at study start. The majority of study teachers identified as lead teachers (53%) who earned, on average, about \$17 per hour just prior to the start of the study; 37% identified as assistant teachers at the start of the study and earned, on average, just under \$15 per hour. On average, teachers had been at their centers for about 5 years.

Impact Study. Because centers were assigned to the Pilot group at random, the impact of the salary increase can be estimated by comparing key outcomes for Pilot teachers and centers with control group teachers and centers. Teacher outcomes include retention at the end of the first year of the Pilot and at the end of the second year of the Pilot, and teacher economic well-being, psychological well-being, job perceptions, and commitment to the field at the end of the first year of the Pilot. Center-level outcomes include staffing dynamics related to staff stability and hiring challenges at the end of the first year of the Pilot and 25 months later.

This portion of the evaluation use data^{viii} collected from:

1. Twelve-month and 25-month director attestation forms on teacher wages, position, and turnover (N = 815 and 753, respectively);
2. Baseline and 12-month follow-up director surveys on staffing challenges (N = 53 and 55, respectively);
3. Baseline and 12-month follow-up teacher surveys on background characteristics, workplace dynamics, and dimensions of teacher well-being (N = 512 and 665, respectively); and
4. State administrative data on employment in ECE, public benefits receipt, and wages (N = 866) facilitated through the [Linked Information Network of Colorado](#) (LINC).^{ix}

^{vi} Child Care Coverage shows the percentage of children per age group that could be served by licensed providers in a particular county assuming optimal conditions (e.g., staffing and demand). Methodology was co-developed by CDEC and the Colorado Lab, and it is modeled from the CDEC capacity map (to open, download the code and then re-open as a webpage): https://drive.google.com/file/d/17-7FdF802qvsvs-ifANnBHkT8M2CWJP6/view?usp=drive_link

^{vii} Both teachers and assistant teachers are henceforth identified as “teachers” unless otherwise noted.

^{viii} Attestation data were collected 11–12 months and 25 months post salary increase, teacher follow-up surveys were collected 10–14 months post salary increase, and director follow-up surveys were collected 12–14 months post salary increase. For ease of reading, all timeframes are referred to as 12-month and 25-month post follow up.

^{ix} LINC data on employment in ECE and wages are available through year 2. Data on benefit receipt, staffing challenges, teacher well-being, and perceptions of financial well-being are available through year 1.

A small subset of Pilot teachers (N = 10) who left Pilot centers within 12-months of receiving the pay raise were also interviewed about their job demands and resources, including wages, to understand the extent to which wages and other factors influenced their decisions to leave.

Implementation Study. The implementation study explores center directors' experiences with the Pilot and the cost of implementation to ECE centers. Interviews with Pilot directors (N = 10) and teachers (N = 21) were also used to support and contextualize quantitative findings. The implementation study was also informed by key informant interviews with CDEC and the contracted implementation partner, MetrixIQ (N = 3), and the cost workbooks were completed by directors to inventory resources allocated to the Pilot.

Impact Study Questions

1. What was the effect of the Pilot on teacher retention and center staffing?
2. What was the effect of the Pilot on teachers' economic well-being?
3. What was the effect of the Pilot on teachers' psychological well-being?
4. What was the effect of the Pilot on teachers' job satisfaction and work environment?
5. Why did Pilot teachers leave after a pay raise? Where did they go after they left, and why?

Implementation Study Questions

6. What were the contextual, system, and infrastructure features that shaped implementation of the Pilot?
7. How did eligible centers and teachers learn about and experience the Pilot?
8. What were the costs to centers participating in the Pilot? Did the Pilot fully or partially offset costs for Pilot centers?

[Appendix B](#) provides a full description of study methodology.

Key Findings

Evaluation Question #1: What was the effect of the Pilot on teacher retention and center staffing?

One-Year Post Wage Increase

Data on teacher retention 1-year post wage increase were obtained from two sources. First, retention was calculated using responses from director attestations completed at 12 months post-salary increase. At the teacher level, these data showed that, after 1 year, **76% of Pilot teachers were still at their original centers compared with 69% of control group teachers.**^x While the 7-percentage point difference in retention among Pilot and control group teachers was not statistically significant at conventional levels ($p = 0.19$), this is likely due to the small sample size that prevents a statistically significant finding unless impacts of 10-percentage points or higher are found. Nonetheless, a 7-percentage point increase in retention may represent substantively meaningful improvements and is considered a positive and promising trend.

Second, teacher retention was calculated using responses from the 12-month teacher follow-up survey.^{xi} These data showed a larger effect of 11 percentage points on retention, with an **89% retention rate for Pilot teachers compared with a 78% retention rate for control group teachers. These differences are statistically significant** ($p = 0.01$) indicating strong evidence of program impact on teacher retention. Thus, two independent data sources presented a similar story of a positive trend in teacher retention 12-months post wage increase.

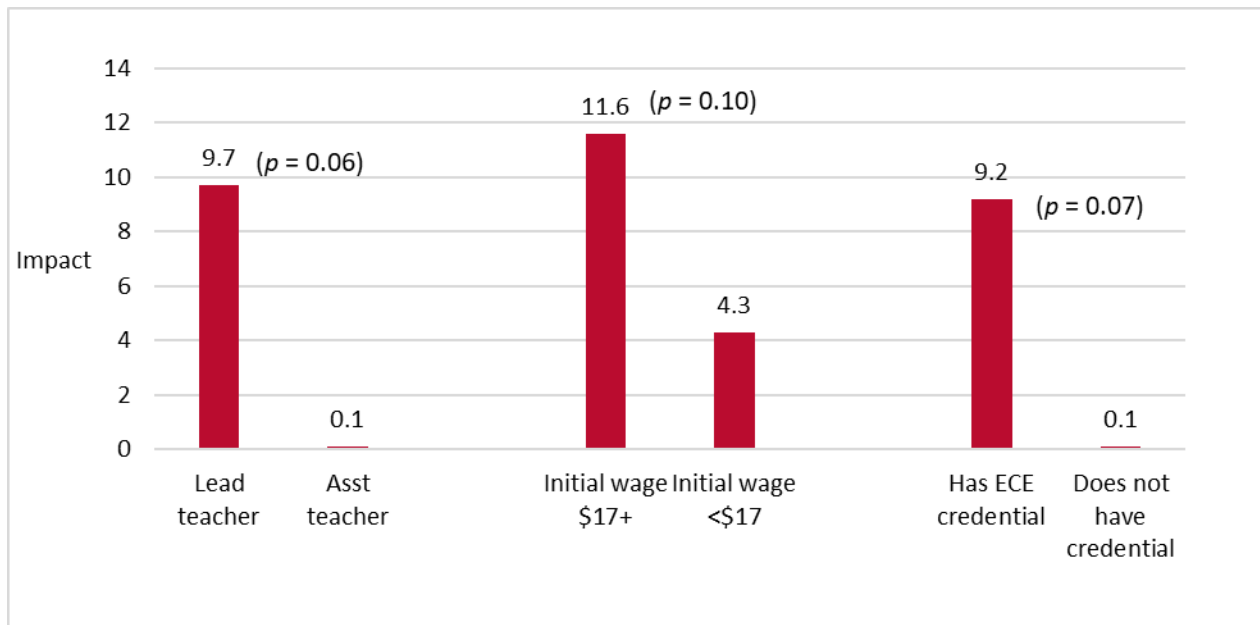
At the end of the first year of the Pilot, effects of the Pilot on teacher retention were also examined for different subgroups of teachers, such as lead versus assistant teachers, those with shorter versus longer tenure at their center, those with and without a professional credential, teachers of infants/toddlers versus preschool-aged children, and teachers with different initial base salaries. The effects of the salary increase on retention differed for three subgroup comparisons. Retention rates were higher for:

- Lead teachers compared to assistant teachers,
- Teachers with a Colorado Early Childhood Professional Credential at the start of the Pilot compared to those without one, and
- Teachers earning \$17.00 or more per hour at the start of the Pilot compared to lower wage earners.

^x Attestation information was provided for 81% of all study teachers after 1 year and 75% of teachers after 2 years, with similar rates for the Pilot and control groups.

^{xi} The response rate to the teacher survey was 66% (69% for Pilot teachers and 65% for control teachers).

Figure 1: Effects on Retention Rates through Year 1 for Selected Subgroups of Teachers



These results indicate that the Pilot may have had larger effects for Pilot teachers who may be more committed to the ECE field. For example, the estimated impact on retention was 9.7 percentage points for lead Pilot teachers compared with 0.1 percentage points for assistant Pilot teachers, with similar differences in Pilot impacts found for Pilot teachers with a credential versus those without one. Likewise, the estimated impact on retention for Pilot teachers who had a wage of over \$17.00 an hour prior to the Pilot was 11.6, compared to 4.3-percentage point impact on retention for Pilot teachers who had an initial salary lower than \$17.00 an hour. Importantly, while these findings are statistically significant, they should still be considered suggestive given the small sample sizes of subgroups.

Center-level teacher retention was also examined by considering differences in the retention and turnover rates of teachers within Pilot and control group centers at the end of the first year of the Pilot. Results continue to show a positive trend in center-level retention rates among Pilot centers compared to control group centers, but differences were not statistically significant. **Pilot centers had a 4-percentage point higher teacher retention rate at the end of the first year compared to control group centers (71% vs. 67%, respectively).**

In addition, 12-month follow-up director attestation data indicate that Pilot centers had **fewer unfilled teacher vacancies** and hired more staff since the Pilot started than control group centers, suggesting that the **Pilot may have helped facilitate teacher recruitment**. Findings from the director 12-month follow-up survey further suggest **fewer staffing problems and fewer staffing adjustments were needed for Pilot centers compared to control group centers**. While these findings are encouraging yet suggestive given the small sample size, Pilot directors provide further support that the wage increase may have facilitated staffing improvements and stability. Most directors interviewed referenced improvements in teacher retention and reduction in staff

turnover after the Pilot began. Directors commented that this was true for both longer-tenured teachers and for newer staff. One director explained that **the Pilot improved retention not just directly through increased compensation, but indirectly through center-level changes related to better teacher-to-child classroom ratios and staff scheduling flexibility.**

2 years Post Wage Increase

Data from the 25-month director attestation forms indicate that the differences in retention between Pilot and control group centers persisted through year 2, although both groups experienced sizable turnover over a 25-month period. After 2 years of the Pilot, 56% of Pilot teachers were still at their original centers compared with 53% of control group teachers. This difference of 3 percentage points was not statistically significant ($p = 0.57$). Center-level retention was also higher for Pilot centers at the 2-year point. Results indicate a **4-percentage point difference in teacher retention among Pilot and control centers with the 2-year retention rate among Pilot centers calculated at 55% compared to 51% for control group centers.**

The year 2 findings for subgroups were consistent with the 1-year findings. **Increases in retention were larger for lead teachers, those earning higher initial wages, and teachers with an ECE credential.** By the end of year 2, increases in retention were also larger for **teachers who started the Pilot with longer tenure at their center compared with those who had been there for less than 2 years.**

Key Evaluation Findings & Indicators

- At the end of the first year of the Pilot, **76% of Pilot teachers remained at their center** compared to 69% of teachers in control group centers. By the end of the second year of the Pilot, 56% of Pilot teachers remained at their center compared to 53% of control group teachers. These differences were not statistically significant.
- At the end of the first year of the Pilot, Pilot centers had **fewer unfilled teacher vacancies** and hired more staff than control group centers and Pilot directors reported **fewer staffing problems.**
- Twelve months post wage increase, **Pilot centers had a 4-percentage point higher within center teacher retention rate than control group centers; by the end of the second year of the Pilot, this advantage was similar, at 4 percentage points.** While not statistically significant, findings suggest positive trends.
- Trends also suggest that retention was higher for **lead teachers, for teachers earning higher initial wages, for teachers with an ECE credential, and for teachers who started the Pilot with longer tenure at their center.**

Evaluation Question #2: What was the effect of the Pilot on teachers' economic well-being?

Salary increases also hold the potential for reducing teachers' economic strain and increasing their overall quality of life. As expected, average hourly wages from teaching were higher for Pilot teachers working at the time of the 12-month teacher follow-up survey. The average wage for Pilot teachers was \$20.40 an hour compared to \$17.27 an hour for control group teachers. At the end of the first year of the Pilot, more Pilot teachers reported earning \$20.00 or more an hour (29%) compared with control teachers (16%). The positive impact on wages was also reflected in quarterly Unemployment Insurance wage records from the Colorado Department of Labor and Employment (CDLE) via LINC. These data showed an increase in Pilot teacher earnings, relative to earnings for teachers in the control group, in several quarters after study start. Increases ranged from 13% to 20%, although they only approached statistical significance in quarter 3 of 2023 ($p = 0.07$), quarter 4 of 2023 ($p = 0.13$), and quarter 1 of 2024 ($p = 0.10$). In these three quarters, average earnings for Pilot teachers were 20% higher than earnings for control group teachers.

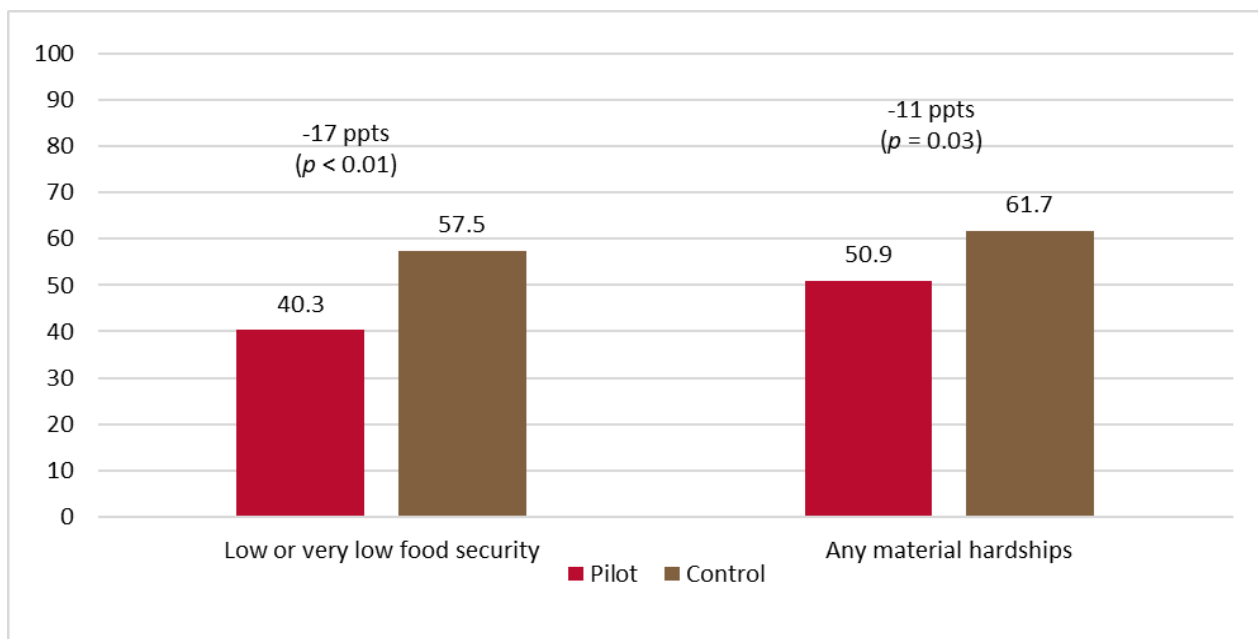
However, despite higher hourly wages, **the Pilot did not significantly increase overall monthly income earned by teachers** as reported on the 12-month teacher follow-up survey, nor did it lead to an increase in income as a percentage of the federal poverty line (see Table 1). The lack of an impact on teachers' overall income may be due to several other effects observed in the study. First, **fewer Pilot teachers compared to control group teachers reported holding a second job at the time of the 12-month survey (9% vs. 17%, respectively)**. While speculative, this may mean that Pilot teachers were able to quit their second job due to the salary increase, a potential positive effect of the Pilot. Second, somewhat fewer Pilot teachers than control group teachers reported being employed at the time of the 12-month survey (92% vs. 96%, respectively). Finally, Pilot teachers were less likely to report receiving Supplemental Nutrition Assistance Program (SNAP) benefits (16% vs. 23%) and child support (6% vs. 11%) at the 12-month survey compared to control group teachers.^{xii} This finding was supported using administrative records on SNAP receipt from the Colorado Department of Human Services (CDHS) via LINC, where control group teachers showed slightly higher rates of SNAP receipt than Pilot teachers, though the difference was not statistically significant. Altogether, it is reasonable to suspect that teachers' monthly income was not improved for Pilot teachers because they were more likely to eliminate their second job, stop working all together, or receive lower SNAP benefits as compared to control group teachers.

^{xii} A wage increase should not alter the amount of child support owed, suggesting that some teachers may have decided not to pursue child support, perhaps to avoid potential stress or conflict. See <https://childsupport.state.co.us/calculating-payments>.

Table 1. Monthly Household Income for Pilot and Control Teachers

Outcome	Pilot Group	Control Group	Difference	P-Value
Monthly income	\$3,266	\$3,174	\$92	0.81
Income as percent of the poverty line	161%	151%	9.6%	0.66

Importantly, even though the Pilot did not lead to a significant increase in monthly income for teachers, **fewer Pilot teachers compared with control teachers reported experiencing material hardships** over the past 12 months (see Figure 2). For example, 8% fewer Pilot teachers than control group teachers reported that they were unable to fill a prescription drug due to cost. Pilot teachers were also significantly more likely to report **being able to pay the full amount of bills on time compared to control group teachers (a difference of 11 percentage points)**. Compared to control group teachers, **Pilot teachers were significantly less likely to report food insecurity** (a difference of 17 percentage points). The latter outcome was assessed by the frequency of behaviors such as eating less, skipping meals, or not eating balanced meals due to a lack of money.

Figure 2. Teachers' Experience of Material Hardships Over the Past Year


Interviews with Pilot teachers confirmed these findings. Almost all Pilot teachers shared that once the salary increase began, they were no longer worried about whether they would be able to pay utilities or other bills on time. **Most teachers said that they were overall in a better and more comfortable place**, several teachers shared that they **stopped working a second job to focus on**

teaching, some teachers reported a decrease in government benefit amounts, and a few were glad to not have to rely on government assistance.

Key Evaluation Findings & Indicators

- Pilot teachers had significantly higher wages from their teaching jobs compared to control group teachers; however, there is little evidence to suggest that the Pilot led to significant **increases in teachers' average monthly incomes or to their income-to-poverty ratio**. This may be because some Pilot teachers made choices to leave a second non-teaching job to focus on teaching and due to reductions in selected public benefits.
- Pilot teachers reported **greater financial security, greater food security, and less material hardship** than control group teachers.

Evaluation Question #3: What was the effect of the Pilot on teachers' psychological well-being?^{xiii}

Higher wages and less material and financial hardship may also mean that teachers experience reduced stress and improved psychological well-being. Results indicated that the Pilot did have a positive effect on teachers' self-reported depressive symptoms by the end of the first year of the Pilot with **Pilot teachers scoring significantly lower than control teachers** on a widely used scale to measure depressive symptoms.^{xiv} **Pilot teachers were also less likely to be at risk for clinical depression** 1 year post wage increase compared to control teachers (2.4% vs. 6.4%). **Pilot teachers also reported less job stress than control group teachers** (an effect size difference of 0.24 on a job stress scale). Prior research has found that less stress and fewer self-reported depression symptoms among teachers were also related to higher levels of instructional, emotional, and behavioral support for children, higher levels of work engagement, and greater gains in children's social-emotional and early math skills.^{5,6}

While the Pilot led to lower self-reported depression symptoms and to lower job stress, there were no effects from the Pilot on teachers' general psychological distress. These results are somewhat surprising given that some Pilot teachers were able to stop working a second job, and many reported that they were more financially comfortable, experienced better working conditions, and less job stress. It is, however, possible that the detrimental effects of chronic low wages on teacher stress may take more time to alleviate as teachers may still be playing catch up with their finances. Consequently, as teachers' financial and work lives become more stabilized over time as a function of the Pilot, it is possible that more reductions in psychological stress may be observed. Alternatively, many teachers may have understood that the wage increase was likely time limited, which may have constrained its impact on teachers' general psychological distress.

^{xiii} The remaining analyses focus on year 1 findings, since outcome measures were not collected in year 2.

^{xiv} Pilot teachers scored 4.7 on the depression scale compared with 5.9 for control teachers ($p = 0.06$).

Key Evaluation Findings & Indicators

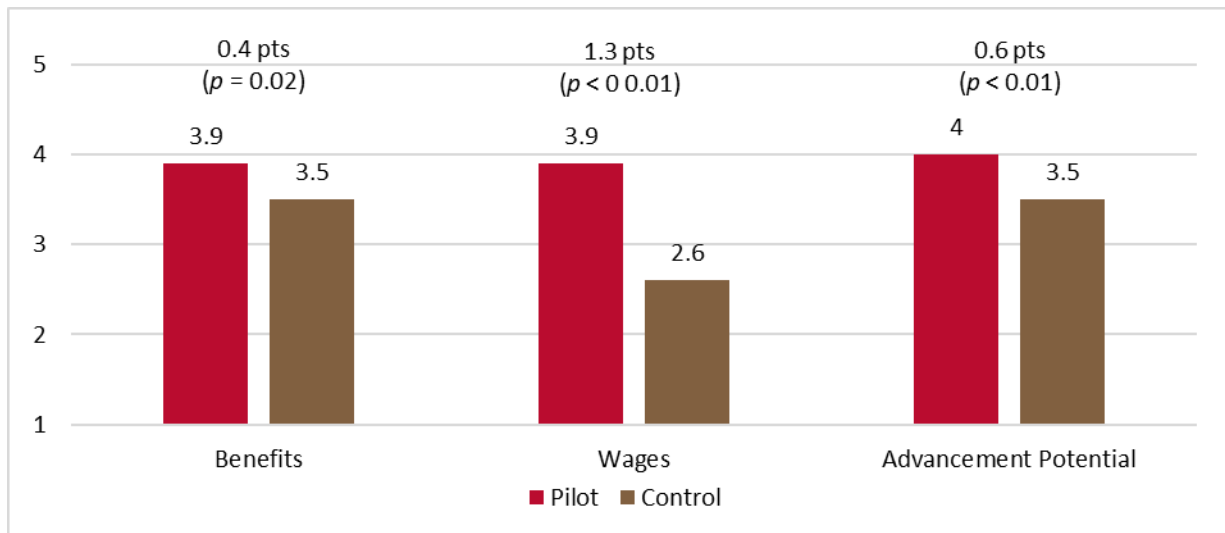
- Pilot teachers reported experiencing **fewer depressive symptoms, were less likely to be at risk for depression, and experienced less job stress** compared with control teachers.
- There were no effects on teachers' reports of their **general psychological distress**.

Evaluation Question #4: What was the effect of the Pilot on teachers' job satisfaction and perceptions of their work environment?

The 12-month follow-up survey also asked Pilot and control teachers a range of questions about their perceptions of their work environments. These questions were guided by prior research which suggested that increased pay is an important job reward that helps teachers to feel valued and more satisfied in their work. In addition, low wages that cause teachers to leave often create a constant churn of teachers. This churn can pull directors into classrooms, leaving administrative duties unattended and creating a less predictable, more chaotic, and less satisfying work environment for teachers.^{7,8}

Although the Pilot did not seek to change teachers' work environments explicitly, the data paint a picture of teachers' perceptions of working conditions that appear to have become more positive in response to the Pilot. For example, Pilot teachers still working in ECE at the time of the 12-month survey reported **higher overall job satisfaction** than control teachers and specifically more satisfaction with benefits, advancement potential, and wages (Figure 3). Related to this finding, more Pilot teachers compared to control group teachers reported **having more sufficient staffing in their center**. Potentially as a result, fewer Pilot teachers reported being moved in and out of different classrooms due to staffing shortages, getting sent home without pay due to child absences, or having to change personal time off plans, indicating **increased stability and less staffing chaos in their centers**. While Pilot teachers were not more likely to report an increase of employer benefits compared to control teachers, they did have more positive perceptions of their benefits. While speculative, this may be because staffing stability facilitated by the Pilot enabled Pilot teachers to be more able to rely on benefits, such as personal time off, compared to control teachers or because more teachers were able to afford to opt-in to their centers' benefits package.

Figure 3. Teachers' Reported Job Satisfaction (1 = Dissatisfied; 5 = Satisfied)



Survey results also suggest that the Pilot may have had cascading effects on the experiences of children and families. For example, Pilot teachers perceived their center leadership to be stronger, their center to have **more effective staffing**, and the support services available to meet the needs of children and families more positively than control group teachers. These findings were confirmed through interviews with both Pilot teachers and directors who shared that the quality of services they provide might have indirectly improved by increasing the consistency of staff within each classroom and by **improving teacher morale**. Pilot directors reported that the **increased staffing consistency improved their centers' ability to serve children day-in and day-out and improved relations with families**.

When comparing Pilot teachers with control teachers, no differences were found in the extent to which they viewed themselves as early learning professionals. Yet, when prompted further during interviews, **Pilot teachers reported feeling more respected and stated that the wage increase improved their feelings of professionalism and self-worth**.

Key Evaluation Findings & Indicators

- Pilot teachers reported **more stable and positive working conditions, stronger job satisfaction, reduced job stress, and better perceptions of center leadership** than control group teachers.
- Pilot directors and teachers attributed **improved quality of services provided to children and families to better job morale and more consistent and effective staffing enabled by the Pilot**.

Evaluation Question #5: Why did Pilot teachers leave after a pay raise? Where did Pilot teachers go when they left?

Within any given industry, a degree of employee turnover should be expected. Another sign of Pilot effectiveness may be when wages are not the primary factor prompting teachers to leave. To explore this, interviews were conducted with 10 Pilot teachers who left their jobs after receiving the pay raise (see [Appendix C](#) for a full report on exit interview findings). Interviews were conducted approximately 10–13 months post-pay raise and explored exiting teachers' perceptions of their job demands and resources (including wages) in the job they left and the factors that shaped their decisions to leave. Interviews suggested that **teachers' reasons for leaving were not generally related to wages, and instead typically fell into two categories: personal/family reasons or job dissatisfaction.**

Personal and Family Reasons

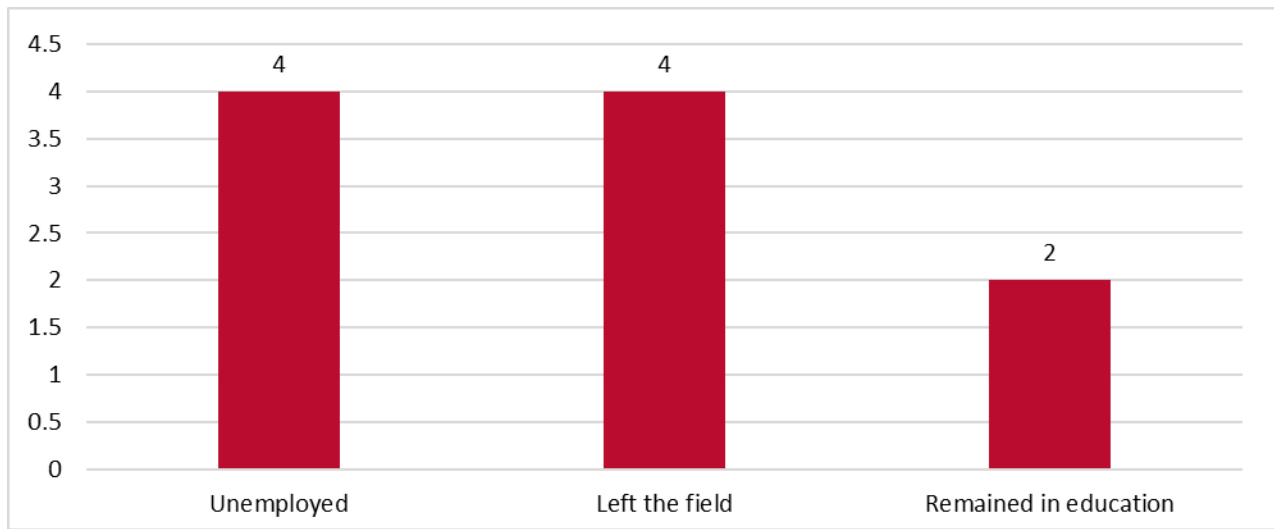
Half of the sample ($n = 5$) indicated that they enjoyed teaching and generally felt that they worked in centers with a positive organizational culture and were provided with job resources that they needed to be effective, but they chose to leave for personal reasons. For some, the reasons had nothing to do with the pay or the work itself and were exclusively driven by their career motivations. For example, several teachers who left did not consider ECE their chosen profession and briefly took a job in a Pilot center as a needed source of income as they pursued other opportunities. These findings aligned with quantitative findings that the Pilot had a potentially stronger impact on the retention of teachers who were more committed to the field and profession.

Others, however, experienced work-family conflicts that often intersected with the cost of child care. For these teachers who left, balancing their own child care needs while working a 40-hour per week, 12-month a year teaching job was a significant stressor. For teachers with elementary school children, several suggested that they did not want to sacrifice time away from their own children and often could not justify the cost of after-school and summer care. For one assistant teacher with a preschool aged child who worked in a Pilot center that did not provide free or reduced rate child care for teachers' children, low pay was the primary reason for leaving because the pay raise was not enough to cover child care costs.

Job Dissatisfaction

Alternatively, the other half of the sample who left their jobs in Pilot centers indicated that they left due to job dissatisfaction. When teachers left due to job dissatisfaction, they were generally dissatisfied with multiple facets of work life, **including not having resources to support children with behavioral challenges**, and most frequently because of **conflict with other teachers or program leaders**. For three teachers who initially “fell into the job” but who were increasingly viewing teaching in ECE as a long-term profession, **conflict with program leaders** emerged over not supporting them to pursue a Child Development Associate (CDA) or not providing them with promotional opportunities after completing a CDA.

Figure 4. Current Employment



Pathway After Exiting

Pilot teachers pursued several different paths after leaving their teaching positions (Figure 4). At the time of the interview, eight of 10 teachers were no longer in the profession. Of the six who were employed, only two initially pursued new jobs in education.^{xv} One remained in ECE taking a lateral position as an assistant teacher in another community-based center, while the second lead teacher took a paraprofessional position in an elementary school to align her schedule with her children's. Of teachers who were unemployed, all appeared to be actively making the decision to be able to better meet the needs of their own families, to take a mental health break, or to pursue education in their desired field. **When considering what drew teachers to a new job, better pay did not emerge as the primary motivator; instead, the most frequent response was a better work schedule.** Improvements in paid time off, job autonomy, workplace climate, and classroom group sizes were nominated once each as a new benefit of current employment situations.

Key Evaluation Findings & Indicators

- **Low pay did not emerge as a primary driver of turnover for most Pilot teachers who left their jobs.**
- Pilot teachers who left their jobs reported that **family-unfriendly work schedules, workplace conflict (especially with program leaders), and not enough resources to support children with challenging behaviors** were reasons for leaving.
- Most Pilot teachers who left their teaching jobs **exited the field.**
- **Better work schedules, and not better pay, drew Pilot teachers to their new jobs.**

^{xv} A third teacher was about to re-enter ECE at their former Pilot center at the time of the interview.

Evaluation Question #6: What were the contextual, system, and infrastructure features that shaped implementation of the Pilot?

Context

To understand the larger context for the Pilot, interviews were conducted with state leaders, center directors, and teachers. In interviews, each type of respondent characterized the ECE labor market in Colorado as facing challenges on both the supply side (e.g., educator labor) and demand side (e.g., ECE centers). For teachers, consistent and satisfying employment in the ECE industry was thwarted by barriers such as low wages, limited benefits in compensation packages, a societal lack of respect for teachers, and rising cost of living. For directors, inadequate funding and revenue streams that facilitated low wages and labor market competition from other industries challenged their recruitment and retention of teachers with appropriate qualifications. State leaders suggested that, together, this workforce supply and demand problem was the impetus for the Pilot.

Design

Consequently, CDEC initially brought together three groups to inform the design of the Pilot: leaders from the Workforce Division at CDEC, the evaluation team, and the Compensation and Benefits Taskforce (Taskforce). As a separate process, the Taskforce developed salary scales for the state based on the cost of living across regions and with the goal of creating job role salary targets for “livable wages” for the ECE workforce that could eventually be supported through ongoing policy advancement. Close collaboration with this Taskforce informed Pilot design. Evaluation partners, including MDRC, the Colorado Lab, and the University of Colorado Denver, provided input at many of the design meetings. These groups helped model different wage increase model possibilities based on the available funding and prior research on similar effective efforts. **The final scale used for the Pilot wage increase was informed by MIT’s Livable Wage Calculator and was not overly complex. This was both helpful for setting up the disbursement mechanisms and well received by center staff.** Once the model was selected, these groups also worked with CDEC to develop a Pilot theory of change and evaluation plan. A fourth partner, MetrixIQ, was engaged during the planning stage to inform the on-the-ground implementation as MetrixIQ was later responsible for building the database that housed the application data, building and administering the application process, handling customer service, and administering payments on behalf of CDEC. **Interviewees shared that wide-ranging collaboration facilitated Pilot design and implementation.**

CDEC, the Taskforce, and evaluation team partners brought breadth and depth of their backgrounds, leading to “a ton of cumulative knowledge” present at the design table. The team pulled in MetrixIQ for implementation questions and interviewed other state agencies, such as leaders at CDLE, to ask what they would like to learn from the Pilot to help inform the evaluation design. CDEC also worked with a workforce center and a local non-profit to create an informational video for teachers, along with handouts illustrating how key benefits, such as SNAP, change with increased earnings; and to provide benefits counseling to teachers to help them decide whether to accept the salary increase.

Implementation

Application for the Pilot consisted of two steps. First, eligible centers submitted an initial application providing basic program data. After review by CDEC, eligible centers were asked to submit a second application, which was prepopulated with classroom and teacher data from the state's workforce registry. Directors were asked to remove teachers that had left and add any new teachers to the roster. Once selected for the Pilot, directors were required to submit monthly attestations by the 15th of each month, updating the list of eligible teachers with name, position, rate of pay, and indicating any teacher who left the program the prior month. **Payments were distributed by MetrixIQ to the centers at the beginning of each month rather than as a reimbursement at the end of the month. This helped reduce the budget burden and ensure that centers were able to meet payroll expenses.**

One challenge noted by a number of interviewees was a lack of an efficient data system. While prepopulating the Pilot application with workforce registry data intended to minimize burden on center directors, available teacher-level data was outdated and required a fair amount of back-and-forth between MetrixIQ and directors to determine an accurate teacher list. Another data challenge stemmed from using Google Sheets for the monthly attestations, including overwritten data, lack of historical record on staffing changes, and lack of information on when the sheets were updated. CDEC staff highlighted the importance of a proper database for this type of data tracking and payment disbursement in the future.

Key Evaluation Findings & Indicators

- The current landscape of low wages in the ECE field **provided the rationale for the Pilot.**
- **Collaboration and partnerships were integral** to creating a high-quality design and plan for Pilot implementation. **Simplification of the model** also facilitated take up and implementation.
- Payments distributed at the beginning of each month **helped ensure that centers were able to meet payroll expenses.**
- **Inadequate data systems posed challenges** to implementation.

Evaluation Question #7: How did eligible centers and teachers learn about and experience the Pilot?

Learning of and Deciding about the Pilot

Directors that did and did not apply for the Pilot reported in interviews that they primarily learned about the Pilot via email, though many could not pinpoint the exact sender or source. Some directors mentioned emails from the Denver Early Childhood Council, Joint Initiatives, or Alliance for Kids as “those types of organizations are great at keeping us informed.” Another director mentioned CDEC or MetrixIQ. A CDEC interviewee suggested that communication flowing directly from the state to centers, rather than through another partner organization, during the application

process helped increase application rates. “Folks just tended to sometimes see the ‘@.gov’ or ‘@.state,’ or whatever it was, and pay attention to those a little bit more . . . we found that layering in bits from the state really helped push participation over the edge.” News of the Pilot also spread through informal communication pathways as well. One director noted that she heard about the Pilot before it was formally announced to her center because she often attends community meetings about advocacy in childcare.

Directors reported being excited by the potential to support staff who were struggling financially. Directors discussed how underappreciated ECE staff are across the industry, and that the ability to more fairly reward loyal and committed staff was key motivation in their decision to apply to the Pilot. Several directors explicitly noted that they hoped the wage increases would improve retention and recruitment efforts of qualified staff. Ninety-six of the 122 eligible centers submitted the first application for the Pilot, indicating initial interest. As noted earlier, 74 centers submitted both required applications and entered the study.

The most common hesitation about participating in the Pilot among directors was the time-limited nature of the Pilot. Some directors also reported concern about the potential for the Pilot to disrupt or add costs associated with their benefits programs, such as Federal Insurance Contributions Act (FICA), Family Medical Leave Act (FMLA), and 401k contributions. Additionally, directors expressed concern that the salary increase did not apply to everyone in the center (e.g., teachers working less than 16 hours a week), or if an agency oversaw multiple centers, that not all centers in an agency were eligible, creating equity challenges.

Teachers reported in interviews that they and their coworkers were excited when they learned of the Pilot. Many discussed low wages in the ECE industry and a lack of appreciation for their work as persistent problems that made the wage increase particularly appealing and appreciated. They also raised concerns about the temporary nature of the salary increase and its potential effect on government benefits. When deciding whether to participate, most interviewed teachers reported receiving adequate support from their directors and from information in the Pilot benefit handouts. Among respondents to the 12-month teacher follow-up survey, 80% reported receiving guidance from their directors and 65% reported using the benefit handout. Most teachers reported receiving enough information to decide whether to opt in, and 92% did so. As noted earlier, the impact findings from the survey show a small reduction in SNAP receipt and child support among Pilot teachers.

Director Experience with Application and Implementation

Directors described Pilot implementation as relatively straightforward and simple. In interviews, directors reported that they had sufficient information to complete the application and that the state was responsive to any questions they had during the application period. One frequently cited theme was the ease of completing the monthly attestations. This finding was corroborated by the 12-month director follow-up survey in which directors rated how burdensome the monthly staff attestations reports were on a scale of 1 (not at all burdensome) to 5 (extremely burdensome); the

directors' average response was 1.6. Directors also shared that the state promptly disbursed money to their centers, which eased budgetary concerns related to implementation.

Finally, there is evidence from the monthly attestation data collected by CDEC that some directors increased the number of lead teachers on their staff, either through internal promotions or hiring, to make them eligible for the higher wage increase. This pattern is corroborated by data from the survey, **showing an increase in the percentage of teachers who report that they are lead teachers (an increase of 16 percentage points)**. Further analysis of data suggests that there were no differences between Pilot teachers (51%) and control group teachers (52%) in obtaining professional credentials or advancing their professional credential. **Consequently, the wage increase, perhaps because it was not linked to credentials, did not appear to promote credential advancement**, nor can greater credential advancement explain why more Pilot assistant teachers advanced to lead teachers. Thus, the more likely explanation is that directors promoted assistant teachers to enable them to have access to higher wage supplements. Reports from MetrixIQ staff show that **the wage increase funding needs for centers were higher than projected as the Pilot progressed**.

Likewise, some directors interviewed also reported that the salary increase prompted some teachers to request changes to their schedule. Some teachers wanted to work more hours. Other teachers wanted to reduce the hours they worked since the salary increase would allow them to maintain the same amount in their weekly paycheck. Of Pilot teachers, 17% reduced their hours post wage increase, 38% increased their hours worked, and 46% maintained their initial teaching hours worked. These changes made it difficult to balance teachers' workloads and distribute salary increases, yet these changes in hours worked were similar to teachers working in control group centers.

Key Evaluation Findings & Indicators

- Directors were excited about the Pilot as a way to support their staff and improve retention and recruitment. They reported that the **application process was easy** to complete.
- Hesitations among directors were influenced by the Pilot's **temporary nature** and the potential loss of government benefits for teachers. Some directors who did not apply cited **costs that they might incur with higher benefits rates as a result of higher salaries** and the **inequities of providing a wage increase only to teachers** and not all staff.
- Teachers were excited about the wage increase given the increasing cost of living and low wages for teachers. Some teachers were **concerned about the loss of government benefits**.
- **92% of Pilot teachers** in participating sites **opted to receive the salary increase**.
- Some directors **increased the number of lead teachers** on their staff, either through internal promotions or hiring, to make them eligible for the higher wage increase that led to challenges with the budget.
- Increases in professional credential attainment or credential levels could not explain increases in lead teachers among Pilot centers, and **professional credential attainment and advancement were no different between Pilot and control group teachers**.

Evaluation Question #8: What were the costs associated with delivering the Pilot? Did the Pilot fully or partially offset costs for participating centers?

Costs of the Pilot

To understand the time and financial demands participating in the Pilot necessitates for program staff, Pilot participation costs were calculated. Because center sizes ranged from seven to 31 employed lead and assistant teachers, the costs are reported per teacher to facilitate comparisons. The average cost per teacher included center personnel time spent on the Pilot application, administering the wage supplement, counseling teachers on their decisions including whether the wage increase might affect any public subsidy receipts, and reporting requirements. Based on the cost workbooks collected from Pilot directors, **the cost of participation for the first year in the Pilot for centers was calculated at approximately \$200 per employed teacher** (presented in 2023 USD and rounded to the nearest \$10). Notably, the full \$200 per employed teacher cost is attributable to staff time, largely director time, and no center reported any non-personnel monetary expenses from the Pilot (e.g., materials purchased or fees paid). An average per center cost was calculated by multiplying the average number of teachers employed in Pilot centers (13 teachers) by the per teacher cost, which yielded an estimated **cost of \$2,600 per center to participate in the Pilot during the first year**. Importantly, these costs are also likely to decrease during subsequent years of center participation.

Costs of Turnover

To understand whether the cost of implementing the Pilot could be offset by costs associated with reductions in teacher turnover, cost workbooks completed by directors were used to calculate the cost of turnover. Costs associated with teacher turnover were estimated in three categories: departure- and vacancy-related costs, recruitment- and hiring-related costs, and training- and onboarding-related costs. Further, these costs were broken out by staff time; inclusive of director, teacher, and other staff time; and expenses, which included job posting fees, contracting with temp agencies, and new supplies and materials.

The total costs associated with a single instance of teacher turnover, from vacancy to a fully onboarded replacement, including expenses and staff time, is currently estimated at \$6,960.

These costs are predominantly made up of vacancy-related costs (departure costs and vacancy coverage), which were estimated at about \$2,800 each. While recruitment and hiring costs represented a lower share of the total cost at \$1,320, it was reported by directors as a particularly time-intensive portion of their role. These costs also likely represent a lower bound on the total costs of turnover because they do not include the costs of closing a classroom due to teacher turnover and not being able to recruit and hire replacement teachers.^{xvi}

Potential Savings

The cost of the Pilot to centers of approximately \$200 per employed teacher, or \$2,600 for a center with 13 teachers, is lower than the cost of a single instance of teacher turnover, estimated at nearly \$7,000 inclusive of staff time and expenses.^{xvii} Taken together, should the Pilot result in a reduction of one instance of teacher turnover for this hypothetical center, the potential savings to the center of participating in the Pilot would represent about \$4,400.

^{xvi} For ease of interpretation, cost of turnover without classroom closures are presented. Estimates on potential lost revenue from a classroom closure of 2 weeks was estimated by calculating the tuition revenue for a classroom of 10 toddlers using a federally estimated average tuition rate subtracted by the average cost of wages for two teachers. Based on this calculation, the cost of 2 weeks of lost revenue from one closed classroom is \$1,340. This estimate is a lower bound as it does not account for potential externalities, such as the permanent withdrawal of families from the center, increased administrative costs from the closure, reputational costs to the center, or costs to families from missed work.

^{xvii} This figure does not include classroom closure. Should an instance of teacher turnover result in a 2-week classroom closure, that estimate of total costs conservatively exceeds \$8,000.

Key Evaluation Findings & Indicators

- The **cost of the Pilot to centers** is approximately \$200 in center time spent per employed teacher.
- Centers spend a substantial amount of time and money on turnover related costs, estimated at a **value of nearly \$7,000 per occurrence of teacher turnover**.
- Increases in teacher retention, eased recruitment efforts, and reductions in hiring times and administrative burden have the potential to **fully or partially offset the costs** of the Pilot to centers.

Making the Data Actionable

Recommendations

Continue the investment in increasing teacher salaries. The breadth of positive effects across multiple domains—economic well-being, material hardship, psychological well-being, working conditions, job satisfaction, and positive trends in retention, at least by the end of the first year of the Pilot—underscore the promise of the Pilot beyond simply an increase in pay. Findings demonstrate that continuing this investment in increasing teacher salaries to livable wages can have cascading effects for teachers, programs, children, and families. For instance, teachers who received the salary increase reported reductions in depressive symptoms, less job stress, and more positive perceptions of their working conditions. Directors also reported more stability in their staffing. Collectively, these positive changes for both teachers and the centers’ work environment may lead to positive improvements in the quality of care and learning experiences for children in these centers.

Consider additional strategies combined with salary increases to promote teacher retention. The modest increases in retention and the sizable turnover rates at the end of the second year of the Pilot suggest that wage increases, at least of this size, are not a silver bullet to address the problem of low retention in the field. Data from the exit interviews indicate that teachers leave their jobs for numerous reasons beyond pay, suggesting the need for family-friendly workplace initiatives, increased behavioral health support for children and professional development for teachers to be better equipped to support children with challenging behaviors, director leadership training to improve workplace culture and climate, and induction mentoring programs for new teachers (see [Appendix C](#)). Trends in this study also suggest that wage increases might have a larger impact on retention for lead teachers, credentialed teachers, and those with longer tenure in the field. These findings call for additional research into whether larger wage increases have greater impacts on retention, how the effects differ across types of teachers, and how they might work when combined with other strategies that improve working conditions.

Expand the salary increase to other roles within ECE centers to promote equity. Qualitative findings highlighted one deep concern about the Pilot for centers and teachers, which was that the salary increase did not apply to everyone in the center. Current findings suggest that the Pilot had

positive effects on working conditions, but in the long run, inequities in staff salaries within centers may result in resentment and harm the work culture and environment.

Continue to educate directors and teachers of potential benefits cliffs. Although the percentage of staff who lost their benefits was small, some teachers did lose SNAP benefits as their wages increased. It will be important for any type of salary increase to educate teachers and plan for the potential loss in benefits or provide pay increases at levels that offset benefit reductions.

Create procedures to limit the changing of staff titles. The larger wage increase provided to lead teachers may have contributed to some assistant teachers being promoted, leading to an increase in required funding. Future wage increase programs might consider setting credential level thresholds for different job roles and related wage increases to promote higher wages linked to higher education levels and to prevent promotions in name only, which may lead to higher-than-expected expenditures. Auditing systems or safeguards should be created to limit this response. Alternatively, specific job role numbers could be pre-specified at the outset of a wage increase program and set for a period of time to better contain costs.

Continue to collect attestations over time to assess longer-term effects on retention and stability. Ongoing collection of attestations from directors can allow for the tracking of retention rates over time. Such information can inform quality improvement by articulating where retention rates may be lower (e.g., in certain counties or for assistant teachers) and can inform the extent to which goals are being achieved.

Improve implementation and data systems. CDEC collected monthly attestations from Pilot centers and a one-time attestation from Pilot and control centers, but it was challenging to get high response rates and high-quality information. Recommendations to help improve Pilot implementation and bolster CDEC's data collection systems include:

- Allow directors to create (or to have the option to create) their own staff list rather than confirming and editing pre-populated lists.
- Reconsider the platform (Google Sheets) used to collect these data and/or remove directors' ability to overwrite data and view data for other centers.
- Designate certain timepoints to solicit attestations from all Pilot and control centers. This would allow for ongoing assessment of the effects of the Pilot, and a select point in time can promote increased response rates.
- Embed ongoing quality assurance systems into the data collection to ensure that the funds are being used as intended and to limit the extent to which staff can be moved into higher positions solely for the larger wage increase.

Lessons Learned

- Frequent tracking of ECE center staff is complicated, and strong data systems need to be in place to support collection of high-quality information and high response rates.
- Colorado's workforce registry, the Professional Development Information System (PDIS), represents a potentially important and low-cost data source to evaluate effects on employment and retention instead of relying on expensive surveys of teachers and directors. However, to be useful for monitoring retention in particular, the accuracy and timeliness of PDIS data updates must be improved.
- It may have been helpful for centers to indicate their ideal classroom staffing by job role (e.g., lead or assistant teacher) at the onset of the Pilot to ensure predictability and accuracy in budgeting to avoid more expensive staffing patterns (e.g., more lead teachers) than originally anticipated.

Conclusion

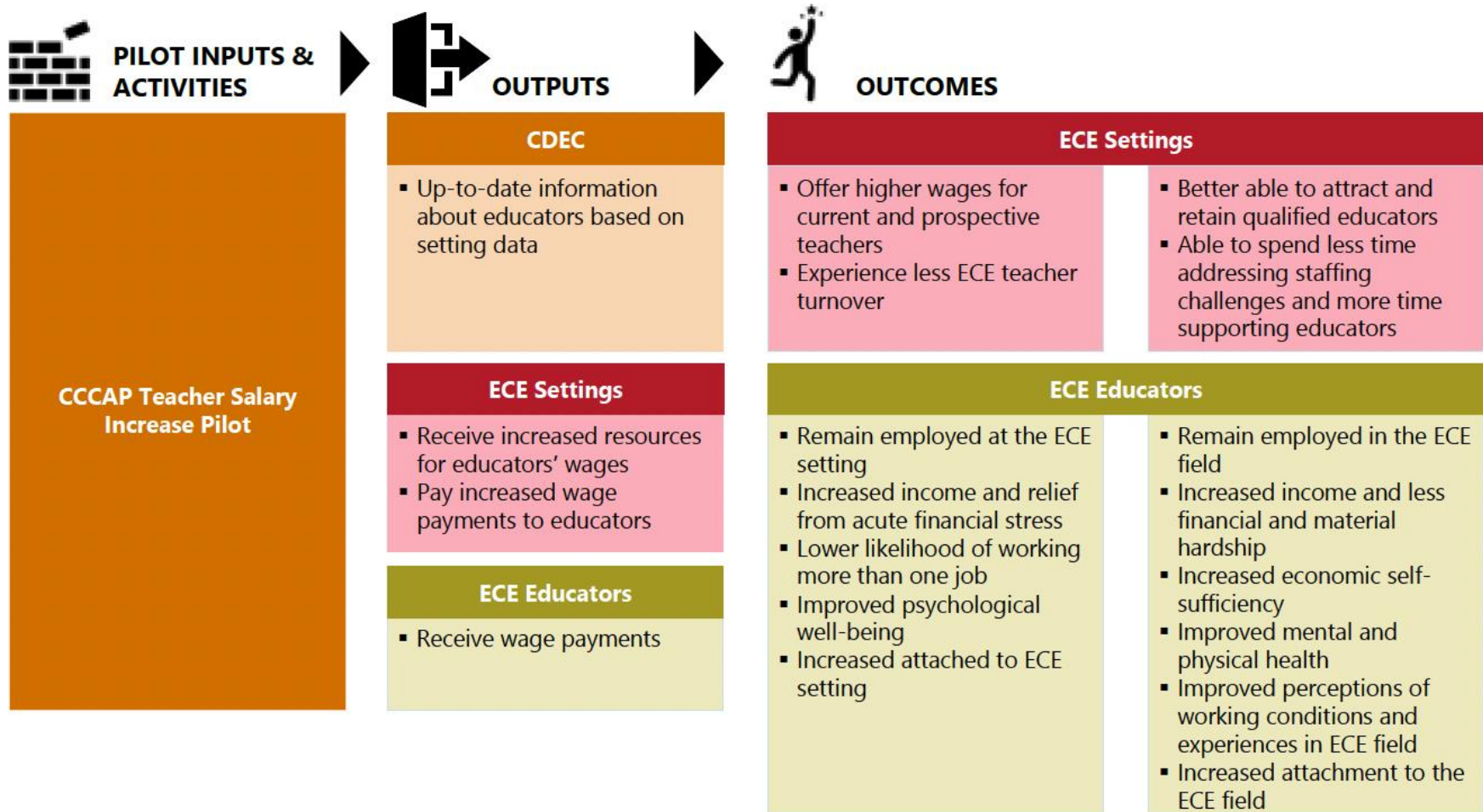
The CCCAP Teacher Salary Increase Pilot sought to address a pervasive issue in the ECE field—low pay and high turnover rates. Compared with teachers in the control group, retention rates for teachers in the program group were 7 percentage points higher through year 1 and 3 percentage points higher through year 2. Although neither difference was statistically significant, they are notable and warrant further research. Although Pilot teachers did not have notably higher incomes than those in the control group, they earned higher wages, were less likely to work two jobs, and reported improvements on several markers of financial well-being, including less food insecurity and fewer unpaid bills.

Teachers reported more stable and better working conditions, greater job satisfaction, less job stress, and higher intentions to stay at their current center. Directors and teachers also noted positive effects on a center's working conditions, which may have led to improved services and relationships with families. More research is needed to understand the mechanisms for these changes.

The findings suggest that the continued investment in wage increases is warranted, perhaps paired with other supports to further increase retention, and expansion of the Pilot to other roles within centers will help ensure equity of compensation. In addition, continued follow-up with these centers and teachers using improved data systems can help track retention rates over time and assess the longer-term effects of the Pilot.

Appendix A: Theory of Change

Figure A1. CCCAP Teacher Salary Increase Pilot Theory of Change



The Colorado Child Care Assistance Program (CCCAP) Teacher Salary Increase Pilot's theory of change suggests that a teacher salary increase can benefit both teachers and centers in ways that will eventually cascade to children and families. For teachers, a salary increase may facilitate retention and more responsive classroom practices through improvements to teachers' well-being. That is, when teachers receive a pay raise, teachers may experience a reduction in their financial strain and in their need to take a second job. This may result in a reduction in their overall stress and improvements to their well-being, including to their job satisfaction. Reductions in teacher stress and increased job satisfaction and fulfillment with work may then enable teachers to be more open and responsive to children's needs and help fortify teachers' commitment to the job and the profession.

From the perspective of centers, increased staffing stability associated with increased teacher retention may provide directors more time to complete their administrative duties and ensure quality environments for children. At the same time, increased staffing stability may reduce classroom chaos caused by teacher turnover, which may contribute to reduced challenging behaviors among children. This, in turn, may further reduce teacher stress, thereby continuing to support teacher retention. Higher teacher pay may also enable centers to attract and hire qualified teachers who are better prepared to facilitate enriching learning environments for children.

Appendix B: Methods

Sample Characteristics

Based on directors' survey responses at baseline, participating Colorado Child Care Assistance Program Teacher Salary Increase Pilot (Pilot) and control centers had been open for an average 16.1 years, and 68.6% of centers are for-profit.^{xviii} The average enrollment was about 71 children. See Table B1 for more information on participating centers from the directors' baseline survey.

Table B1. Characteristics of Participating Centers

Characteristics	All	Pilot	Control	P-Value
Organization				
Years in operation at current address	16.1	16.1	16.1	0.99
Organization type (%)				
Non-profit affiliated with larger agency	5.3	5.4	5.3	0.98
Non-profit not affiliated	26.4	33.3	22.9	0.42
For-profit chain	5.3	0.0	8.2	0.21
For-profit individual	63.3	61.8	64.1	0.86
Schedule (%)				
Academic year, no summer	1.9	0.0	2.9	0.48
Academic year, summer camp	15.1	11.1	17.1	0.57
Year round	83.0	88.9	80.0	0.42
Children served				
Total number of children enrolled	71.2	79.9	66.6	0.14
Number of infants/toddlers enrolled (%)	25.9	26.2	25.6	0.87
Number of preschool age children enrolled	31.0	34.3	29.3	0.39
Number of school aged children enrolled	14.5	19.7	11.9	0.07
Sample size	53	18	35	

^{xviii} 72% of directors completed a baseline survey.

Among participating teachers, nearly all (96%) were female, with an average age of 39. About 40% were White; 40% were Hispanic; and 18% were African American. On average, teachers worked at their centers for 5 years and earned a \$17/hour wage at study entry. See Table B2 for more information on the teacher sample from the Professional Development Information System (PDIS) data.

Table B2. Characteristics of Participating Teachers

Characteristics	All	Pilot	Control	P-Value
Female (%)	95.2	95.6	94.9	0.65
Age (years)	39.2	39.6	39.0	0.66
Hourly wage (\$)	16.4	16.4	16.4	0.86
Tenure at current center (years)	4.9	4.6	5.1	0.54
Currently holding more than one job (%)	16.1	15.1	16.9	0.63
Race/ethnicity (%)				
White	40.7	45.8	33.4	0.26
Hispanic (listed under race)	34.1	26.9	37.3	0.12
African American	17.8	20.6	16.6	0.52
Other	7.4	7.3	7.4	0.93
Role (%)				
Lead teacher	52.8	51.1	53.7	0.59
Assistant teacher	36.4	37.3	36.0	0.78
Director	5.4	5.4	5.3	0.96
Other	5.5	5.6	5.4	0.94
Ages of children in classroom (%)				
Infants/toddlers only	43.3	40.2	44.8	0.34
Preschool only	39.8	43.0	38.3	0.31
Both	9.2	8.9	9.4	0.87
Sample size	1,003	314	689	

Qualitative Data

The qualitative implementation analysis relies on data from interviews with a subset of directors, lead and assistant teachers, and key informants from the Colorado Department of Early Childhood (CDEC) and the implementation vendor, MetrixIQ. The implementation interviews were analyzed to identify themes in the data using Nvivo, a secure software platform for qualitative research.

Interviews

Between October 2023 and January 2024, qualitative interviews were conducted with 10 directors at Pilot centers, 13 lead teachers at these centers, and eight assistant teachers at these centers across a range of cost-of-living regions and geographic locations. Interviews covered topics such the broader early care and education (ECE) context, awareness and application experiences with the Pilot, and perceptions of Pilot effects. The research team also interviewed directors of three eligible centers that did not apply for the Pilot.

Quantitative Data

Quantitative data were collected using baseline and follow-up surveys from teachers and directors, cost workbooks from center administrators, and administrative data.

Baseline Teacher and Director Surveys

Baseline surveys were fielded to eligible directors and teachers within eligible centers from mid-December 2022 through mid-January 2023.^{xix} The surveys collected information on demographic and professional credentials, job characteristics, center characteristics (for directors), income, material well-being, job demands and supports, job stress, and job satisfaction. Response rates were 51% for the teacher survey and 72% for the director survey.

Follow-up Teacher and Director Surveys

Follow-up surveys were fielded to participating directors and teachers in Pilot and control centers from October 2023 through February 2024, starting at about 10 months after the wage increases began. The follow-up surveys collected similar information as the baseline surveys, plus information on physical and mental health and additional measures of job demands and supports and job satisfaction and stress. Response rates were 66% for the teacher survey and 74% for the director survey.

Baseline Attestations Completed by Directors

As part of their application for the Pilot, directors completed a baseline attestation where they listed the names of teachers in their center that would be eligible for the salary increase if the center was selected for the Pilot group. All 74 directors completed the baseline attestation.

^{xix} Random assignment occurred in December 2022.

Follow-up Attestations Completed by Directors

In November and December 2023 (11–12 months after the first wage increase funds were issued), participating directors were sent a list of teachers who were working at their centers in December 2022 and eligible for the salary increase prior to random assignment into Pilot or control groups. Directors were asked whether each teacher was still at the center and, if not, when they left. Information was also collected from directors on the number of new hires since December 2022 and the current number of unfilled positions. Attestations were completed by 92% of directors (68 of the 74 directors).^{xx} In January 2025, participating center directors completed another attestation, providing updated information on teachers currently working at their centers. These attestations were completed by 81% of directors (60 of 74 directors).

Cost Workbooks

Between November 2023 and January 2024, a one-time cost workbook was collected from a subset of center administrators to inventory the resources allocated to the Pilot and document the costs of operation. A total of 13 workbooks were collected, seven from Pilot centers and six from control centers.

Administrative Data

This study uses data from three sources that were connected through the Linked Information Network of Colorado (LINC):

1. CDEC provided ECE professional user profiles including demographics, professional roles, employment status, and credential information. Snapshots were provided for September 2022, September 2023, April 2024, and April 2025, covering employment status over the prior year and demographics and credentials through the point of the snapshot, which were 4 months prior and then 9, 15, and 27 months after the start of additional funding distribution, respectively. CDEC also provided Quality Rating and Improvement System (QRIS) records, covering selected characteristics of licensed providers, such as licensed capacity and QRIS rating covering the period January 2021 through September 2023.
2. CDLE provided quarterly Unemployment Insurance (UI) employment and wage records, covering work at employers required to report to the UI system, from Quarter 1 in 2014 through Quarter 2 in 2024.
3. CDHS' Office of Economic Security provided Supplemental Nutrition Assistance Program (SNAP) program data, including monthly benefit amounts from April 2016 through July 2023.

LINC is a collaborative effort of the Colorado Lab and the Colorado Governor's Office of Information Technology (OIT) that safely and securely connects and anonymizes data across state agencies and systems to fully inform solutions to specific societal challenges. The data used for this report came

^{xx} Two of the 74 centers closed after random assignment.

from a LINC project approved by participating data partners. The findings do not necessarily reflect the opinions of OIT, the Colorado Lab, or the organizations contributing data.

Randomized Controlled Trial Impact Analysis

The impact of the salary increase was rigorously examined by comparing outcomes for teachers in centers randomly assigned to the salary increase with teachers in centers randomly assigned to the control group. These comparisons were conducted using a multi-level regression analysis to account for the fact that random assignment was at the center level once centers were grouped by county group and size. Statistical models for teacher-level outcomes account for the hierarchical structure of the data (classrooms nested within centers), the experimental design (block random assignment), and controlled for teacher age, race/ethnicity, gender, presence of another adult earner in the household, credential level, tenure at center, role, and initial wage, as well as number of staff at the center.

Differences in outcomes, or impacts, are estimated using a statistical model that also indicates their level of statistical significance, or the strength of the evidence that the observed difference is a true program impact and not a difference due to chance. The level of significance is indicated by the p -value, or the probability that the observed difference is due to chance. In the evaluation field, differences are typically discussed as program impacts if the p -value is less than 10%. However, there is also growing recognition in the evaluation field that the “strength of the evidence” runs along a continuum and does provide a yes/no answer for program impact. In this evaluation, impacts are typically discussed only if their p -value is less than 0.10, with exceptions noted when the p -value is somewhat higher than 0.10 but the impact is corroborated with other findings.

Evaluation Indicators

Table B3. Evaluation Indicators

Indicator	Description	Results
Teacher retention at original center	- November/December 2023 and January 2025 attestations: the percentage of study teachers at original center 11 months and 25 months after study start. - Follow-up teacher survey: the percentage of survey respondents who are still at original center 10 to 14 months after study start. - PDIS: the percentage of study teachers at original center at	7 percentage point increase in retention after 11 months, not statistically significant. 3 percentage point increase in retention after 25 months, not statistically significant. 10.4 percentage point increase in retention, statistically significant. 2.8 percentage point increase in retention, not statistically significant.

Indicator	Description	Results
	some point from April 2023 to April 2024 and from April 2024 to April 2025.	6.1 percentage point increase in retention, not statistically significant.
Center-level staffing and turnover	November/December 2023 and January 2025 attestations: the retention rate of teaching staff from December 2022 to November/December 2023 (January 2025), unfilled teaching positions as the percentage of total staff, new hires as a percentage of those that left, and turnover rate from December 2022 to November 2023 (January 2025).	4.2 percentage point increase in retention among teachers in center through year 1, 4.1 increase through year 2, both not statistically significant. 10.9 percentage point reduction in unfilled teaching positions, not statistically significant. 53 percentage point increase in new hires as a percentage of teachers who left, not statistically significant. 5.1 percentage point reduction in center turnover rate through year one, 4 percentage point reduction through year 2, both not statistically significant.
Teacher economic well-being	- Follow-up teacher survey: the reported family income, income relative to the poverty threshold. - Follow-up teacher survey: wages, whether have a second job, receipt of benefits, material hardship, food insecurity, and financial security scale. - SNAP receipt from LINC data.	- No effect on family income or on income/poverty ratio. - Significantly higher wages, less likely to be working at another job, less likely to report receiving SNAP benefits and child support, reduction in material hardship and food insecurity, and higher reported financial security. - Less likely to receive SNAP benefits in June and July 2023, although not statistically significant; no effect on average SNAP amount.
Teacher physical and mental health	Follow-up teacher survey: self-rated health, psychological distress, and depression.	Significantly fewer depressive symptoms, less at risk for depression.

Indicator	Description	Results
		Reduced job stress, no effects on psychological distress, and physical health.
Job satisfaction	Follow-up teacher survey: job satisfaction, SEQUAL scales, and intent to stay in field.	- Increased job satisfaction, better perceptions of center leadership, supports for teaching, and center staffing. - No effect on likelihood of working in the field 1 year from now or 2 years from now.
Experiences with Salary Increase Pilot	- Follow-up teacher survey: percentage of teachers who opted in awareness of Pilot. - Follow-up teacher survey: whether resources shared were used.	92% of Pilot teachers opted to receive salary increase. - Slight majority of Pilot teacher reported using the video (52%) and handouts (65%) offered, with over 85% reporting them as helpful.
Salary Increase Pilot costs for centers	Cost workbook: quantity, units, and costs related to center administrator time, teacher time, and state resources.	- Costs to center to offer salary increase for 1 year: ~\$200 per employed teacher. - Potential net savings of over \$4,000 from an avoided instance of teacher turnover.

Appendix C: Exit Interview Report

CCCAP Teacher Salary Increase Pilot: Why Teachers Leave After a Pay Raise

Dr. Diana Schaack, University of Colorado Denver and Lindsay Shields, University of Denver

Key Findings

- Teachers who left their jobs after receiving a wage increase from the Colorado Child Care Assistance Program (CCCAP) [Teacher Salary Increase Pilot](#) (Pilot) worked in their center an average of 11 months before leaving, worked in urban and suburban areas, and tended to work in high cost of living counties.
- Teachers' reasons for leaving were multifaceted but generally fell into one of two categories: personal/family reasons or job dissatisfaction.
- When teachers left for personal reasons, it was typically because they did not view teaching as their chosen profession and left to pursue other professional opportunities outside of early care and education (ECE).
- When teachers left for family reasons, it primarily was because working on a 12-month calendar year for 40 hours per week schedule did not allow them to be home with their own children after school or during summers, or because the compensation was still too low to pay for child care for their own children.
- When teachers left due to job dissatisfaction, they were generally dissatisfied with multiple facets of work life, including not having resources to support children with behavioral challenges, conflict with other teachers or program leaders, or due to a lack of pay and promotion opportunities.
- Half of the teachers who left are currently employed, and only two are employed in an education field. For those employed, higher pay did not emerge as a factor for pursuing a different job. Instead, a better schedule appears to be the main benefit of their new job.

Recommendations

To improve teacher retention in programs serving a high proportion of children receiving CCCAP subsidies, the Colorado Department of Early Childhood (CDEC) might consider:

- Continuing to advance policies that fund ECE, after-school, and summer tuition for the children of ECE teachers;
- Funding research into identifying staffing models effective at simultaneously supporting child development, teacher retention, and families' child care needs;
- Developing administrator competencies and enhanced administrator education requirements and investing in early childhood leadership development initiatives;
- Investing in induction mentoring programs for new teachers; and

- Expanding investments in mental health consultants and social-emotional well-being programs.

Why Teachers Leave After a Pay Raise

Over the past several decades, Colorado's policy attention has focused on expanding children's access to high-quality ECE for all children, and in particular for children experiencing poverty or other circumstances that have historically limited their access to high-quality ECE. This policy attention was spurred by research documenting the important role that high-quality ECE plays in promoting a range of positive social-emotional, language, and cognitive skills for young children, and in narrowing disparities in kindergarten readiness for children experiencing economic and social inequalities.⁹ ECE teachers are considered the key ingredient to high-quality programming.¹⁰ Yet many teachers, especially if they work in community-based centers, make such low wages that they receive public benefits, take a second job, or rely on credit to make ends meet.¹¹ Indeed, recent estimates in Colorado show that the average wage across early childhood job roles has not reached levels that enable economic self-sufficiency for a family of two.¹²

As a result, upwards of 30% of ECE teachers leave their jobs each year, with centers serving children experiencing poverty experiencing the highest rates of turnover.^{13, 14} Teacher turnover can have far-reaching consequences for children, families, and ECE programs. It can compromise the quality of relationships teachers have with children and families, the quality of classrooms and instruction, and can create additional workload for the teachers and directors who remain, prompting those who stayed to leave, creating a cycle of turnover.^{15, 16} Consequently, children in centers with higher rates of teacher turnover have been found to have lower social-emotional and early academic skills in comparison to children in programs with more stable teaching staff.¹⁷ Teacher turnover can also place additional financial strain on already cash-strapped programs as the average cost of replacing a teacher is approximately one-third of a teacher's annual salary.¹⁸

CCCAP Teacher Salary Increase Pilot Program

To help address low wages and retention among teachers serving children experiencing poverty, the State of Colorado invested tax revenue from the Child Care Development Fund into a CCCAP Teacher Salary Increase Pilot Program implemented by CDEC. This Pilot program provides a wage increase to teachers working in licensed community-based and Head Start centers. To be eligible to participate, centers must enroll at least 40% of children receiving CCCAP subsidies and have earned at least a Tier 3 on the state's quality rating and improvement system, Colorado Shines.

Of the 74 eligible centers that applied to participate in the Pilot, 22 were randomly selected to participate. The opportunity to participate was then extended to all eligible teachers in those centers. Teachers were eligible if they worked at least 16 hours per week and if they held a position of lead teacher, co-teacher, or teaching assistant assigned to an infant, toddler, or preschool classroom. The amount of wage increase was determined by the cost of living in the county in which the center was located and the position of the teacher (see Table C1). At the onset of the program, approximately 300 early childhood lead and assistant teachers received an 18%–44% wage increase as a result of their participation in the Pilot.

Table C1. Per Hour Wage Increase

Type of County	Lead teachers	Assistant teachers
Lower cost counties	\$4.99	\$2.99
Medium cost counties	\$4.43	\$3.61
Higher cost counties	\$7.58	\$5.51

The Current Study

The purpose of this study is to understand why teachers left after receiving a pay raise and where they went after they left. While prior research has found that wages have the strongest influence on teachers' turnover decisions and that improving teacher wages is essential to stabilizing the field,^{19, 20} other factors may exist that play into teachers' employment decisions. One useful framework for considering different aspects of teachers' jobs that they may consider in their turnover decisions is a job demands and resources framework.²¹ Job demands are aspects of jobs that require intellectual and emotional effort and energy or physical resources, and they are inherent in any job. Job resources, on the other hand, help teachers meet the demands of the job and can help mitigate job stressors. Job resources can also help teachers be more effective and feel more confident and satisfied in their jobs and fortified in their commitment to their job and profession. When job demands are overwhelming or are unaccompanied with adequate job resources, teachers can experience occupational stress and burnout, which can eventually lead to teachers leaving their jobs.²²

Consequently, this study was designed to explore:

- Teachers' perceptions of their job demands and resources to understand how they may factor into their decisions to leave their jobs after a pay raise; and
- Where teachers go after leaving and why.

Study Methodology

Sample

The sample for this exploratory study included 10 teachers who were employed at centers randomly selected into the Pilot and who left their centers after receiving a pay raise. To recruit teachers into the study, the research team received a list of all teachers participating in the program and each month, for 18 months, the list was updated to identify any teachers who left. Cumulatively, this list included 66 teachers that the research team attempted to email and call to participate in an exit interview. Of these teachers, 10 were reached and agreed to study participation. Table C2 provides information about the study sample.

Table C2. Interview Sample Characteristics

Employment Characteristics		n	Teacher Characteristics		n
Job Role			Education Level		
Lead teacher		5	High school diploma/GED		2
Assistant teacher		5	Some college		4
			Associate's degree		3
			Bachelor's degree		1
Age Group			Higher Education Focus		
Infant/toddler		5	ECE Specific		4
Preschool		5	Not ECE Specific		4
Schedule			Tenure in ECE		
Full-time		9	Less than a year		2
Part-time		1	1–3 years		3
			4–6 years		2
			7–10 years		2
			10+ years		1
Center Tenure			Race/Ethnicity		
Less than a year		7	BIPOC		4
1–3 years		3	Not BIPOC		4
N/A			Declined to answer		2
Center Location					
Low-cost county		2			
Medium-cost county		2			
High-cost county		6			

Although small, the sample included variation across a number of employment and teacher characteristics. The sample varied in terms of teacher race and ethnicity and educational background, although the majority of teachers in the sample took at least some college coursework in ECE. While there was variation in the sample with respect to tenure in the field, most teachers were new to their center, averaging 11 months of employment before they left. This was similar to the population of teachers who left their jobs after the wage increase, where teachers averaged 13 months at their center before leaving. The sample was evenly distributed across job roles and child age groups served. While there was some variation in the county cost of living where teachers were employed, most worked in high cost of living counties, and all worked in urban or suburban areas. This is consistent with the population of teachers who left their jobs in which 92% worked in urban or suburban areas and 64% worked in high cost of living counties.

Instrumentation

Each of the 10 respondents participated in a semi-structured interview via phone that was audio-recorded and transcribed. The first part of the interview asked teachers about their educational, teaching, and socio-cultural backgrounds; motivations for initially pursuing a job in ECE; and whether and where they were currently employed and their motivations for pursuing the new job.

Participants were further asked about the ECE teaching job that they left including their perceptions of their job demands and stressors and the availability and supportiveness of job resources related to: 1) teaching supports, 2) shared vision of teaching and learning, 3) job rewards, 4) positive workplace community, 5) effective program leadership, 6) organizational equity, and 7) job autonomy.

Analytic Technique

All interviews were coded using a priori codes related to the job demands and resources framework. On occasion when codes did not fit the data, transcript snippets were reviewed by the research team and emergent codes were generated, defined, and added to the coding protocol.

Key Findings

Why Did Teachers Leave?

The reasons why teachers left were multifaceted. Regardless of job role, age group served, tenure in the field, and teacher characteristics, the primary reasons for teachers leaving tended to fall into two general categories: 1) personal/family reasons that often intersected with job demands, and 2) dissatisfaction with work environments. For teachers who left for personal reasons, they tended to indicate one primary reason for leaving their jobs, while teachers who left due to job dissatisfaction typically noted a constellation of factors that shaped decisions to leave.

Personal and Family Reasons

Half of the sample ($n = 5$) indicated that they left their jobs due to personal reasons. For some, the reasons had nothing to do with the work itself and were driven by their career motivations, while for others the job did not work with their family life. Of the five teachers who left for personal reasons, all expressed pleasure teaching in ECE, and all but one indicated that they worked in centers with a positive organizational climate that provided them with many job resources that they needed to be effective teachers and to feel satisfied in their jobs. Instead, their primary motivations for leaving focused on:

Different career motivations. One unintended consequence of low professional preparation requirements to work as teachers in community-based settings is that individuals may briefly pursue teaching positions in ECE as a placeholder job as they seek positions in their desired field. Indeed, within the current sample, three teachers did not consider ECE their chosen profession but instead as a needed source of income as they pursued other opportunities. As a result, they left to pursue education or other employment outside of ECE.

Not being able to balance family life, work schedules, and low pay. Teaching in ECE is a profession that is almost exclusively populated with a female-identifying workforce, many of whom are mothers. Yet despite gains made by women in employment settings, many women still hold primary child care responsibilities in their home and are juggling the dual roles of teacher and parent against the backdrop of a full-time, low-paying job, which factored into several teachers' turnover decisions. For instance, one job demand that prompted two teachers to leave, despite

loving their jobs, was having to work a 40-hour a week, 12-month calendar year schedule; the difficulties of balancing their own child care needs with work life was a significant stressor. For teachers with school-aged children who lived in medium- to high- cost of living counties, the compensation and pay raise was not enough to justify the costs of needed child care for their own children or to sacrifice time with their children during after-school hours and during the summer.

"I love the job, it was heartbreaking to leave, but it was one of those [things where I was] going, 'My family is more important than my job.'"

- Lead teacher

Similarly, another teacher in a high cost of living county with young children left because her center did not have a key job resource- tuition benefits for teachers' children—even after the pay raise, she could not manage child care tuition.

Job Dissatisfaction

The remaining half of the sample (n = 5) indicated that the primary reason for leaving their job was dissatisfaction with their work environment. While the reasons for their dissatisfaction were multifaceted, they generally fell into categories of not having key job resources related to: 1) teaching supports for children with challenging behaviors, 2) a positive workplace community, and 3) effective leadership.

Lack of support for children with challenging behaviors. Prior research has consistently indicated that child behaviors that teachers find challenging are a significant job stressor.²³ In this sample, four-fifths of teachers who left due to job dissatisfaction shared that they did not have access to key job resources to support children's behavioral health needs. Teachers offered that they: 1) lacked the necessary training related to supporting children's social-emotional health and children with disabilities, 2) worked in classrooms with group sizes too large to be able to effectively manage the whole group and attend to children's behavioral health needs, 3) lacked access to mental health consultants, or 4) felt dismissed by program leaders about their concerns related to children's social-emotional health. While different teachers nominated different issues, they all converged on the idea that the high volume of children with behavioral challenges without needed resources to effectively support them contributed to their job dissatisfaction and was the key reason driving one teacher to leave.

"I got kicked. I got hit. I got bit. I got cussed at. And I was told by the owner of the daycare, 'Oh, that's just three-year-olds.'"

- Lead teacher

Conflict with other teachers. Given the communal nature of teaching in ECE classrooms, teachers are tasked with working closely together. When relationships with other teachers are positive, these relationships can buffer job stress and enhance job satisfaction and classroom quality; when they are negative, they can be a significant source of stress.²⁴ In this sample, four-fifths of teachers

who left due to job dissatisfaction and one who left primarily due to family reasons cited conflict in their relationship with other teachers. For instance, one lead teacher focused on conflict across teachers in the program and expressed feeling judged and excluded or noted a general lack of professionalism across teachers that created conflict. Alternatively, one lead teacher and one assistant teacher noted problematic relationships within the classroom teaching team. From the lead teacher, conflict emerged from a lack of responsibility sharing among the teaching team and feeling frustrated that teachers in their classroom did not have the necessary training needed for the job, particularly to effectively support children with challenging behaviors. From the assistant teacher, some dissatisfaction emerged from limited job autonomy stemming from feeling micromanaged and working with an uncollaborative lead teacher. Overall, conflict among teachers was the key reason driving two teachers to leave.

“The other lead teacher would not help me do lesson plans, and the aide was just . . . very uncooperative.”

- Lead teacher

“When I was working with [the teacher] that was always micromanaging stuff, some days, I would just feel like I'm not doing anything for children because of her . . . and it kind of made me want to search for something else.”

- Assistant teacher

Leadership Challenges. Program leaders play a significant role in setting workplace climate, culture, and human resource management policies that can either support or undermine teacher well-being and retention.²⁵ All teachers who left due to job dissatisfaction noted challenges with program leaders. The types of conflict with program leaders varied across teachers and included perceptions of leaders displaying favoritism, being dismissive of children’s behavioral issues, creating a punitive work environment, not following program policies and procedures, and conflict over program mission, including whether the work was “*babysitting or educating*.” For three teachers who initially “fell into the job” but who were increasingly viewing teaching in ECE as a long-term profession, conflict with program leaders emerged over not supporting them to pursue a Child Development Associate (CDA) or not providing a pay increase after completing a CDA, which served as the primary driver for two teachers to leave.

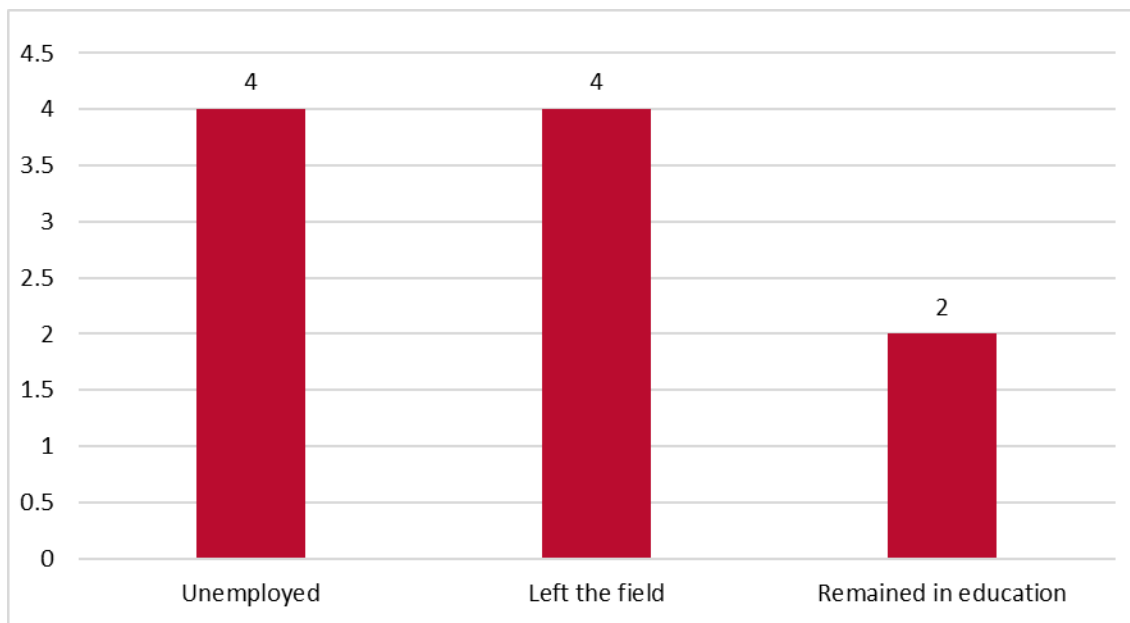
Where Did Teachers Go?

Teachers pursued several different paths after leaving their teaching positions (see Figure C1). Of the 10 teachers interviewed, four are currently unemployed. Of the six who are currently employed, only two initially pursued new jobs in education. One remained in ECE taking a lateral position as an assistant teacher in another community-based center, while one lead teacher took a

paraprofessional position in an elementary school. Of the four who left the field, all took new jobs that required little or no specialized or pre-preparatory training.

When considering what drew teachers who are currently employed to their new job, the most frequent response (four out of six respondents) was a better work schedule. Better pay did not emerge as a trend across respondents who are currently employed; one experienced a pay increase, three took a lateral pay move, and two decreased in pay. Improvements in paid time off, job autonomy, workplace climate, and classroom group sizes were nominated once each as a new benefit of teachers' current employment situation.

Figure C1. Pilot Teachers' Current Employment Status



Recommendations

The emerging findings of this exploratory study suggest that teachers are not leaving their jobs to pursue jobs that pay better, but to pursue work in their desired field, work that fits the needs of their family, or are leaving because of challenging psychosocial work environments. These emerging findings point to some possible ways in which CDEC can support this critical sector of the ECE workforce to aid in their retention.

Early Educator Family Friendly Work Initiatives

One of the challenges facing the ECE workforce is that the field has been designed to support working families and is staffed by many teachers who are themselves parents and need their own family-friendly work arrangements. Across the P–20 education continuum, community-based ECE is the only part of the system where teachers work 12 months a year, 40 hours a week with arguably one of the most physically demanding age groups. Other studies, too, have found that many teachers are increasingly unable to justify time away from their own families or the cost of child

care for their own children when considering the low pay in the field.²⁶ To help address this issue, CDEC might consider:

- **Advancing knowledge of effective staffing models** by: 1) identifying centers, potentially through stimulus [CIRCLE Grant and Stabilization Grant evaluations](#), with effective staffing models that are simultaneously developmentally supportive of children, meet family child care needs, and promote teacher retention; 2) providing funding to seed innovative staffing approaches; and 3) creating and providing technical assistance on developing staffing models.
- **Continuing to advance policies such as [Colorado House Bill 24-1223](#) that would provide tuition for teachers' own children to attend ECE programs, and advancing policies to fund after-school and summer tuition for ECE teachers' elementary school children** while targeting these policies to programs serving a high density of children receiving CCCAP subsidies.

Leadership Development Initiatives

Despite the fact that ECE directors are essential to setting the culture and climate of a program, providing instructional leadership, ensuring the quality children's experiences, and overseeing the business operations of a center,²⁷ there are no educational pathways for the position in Colorado aside from two introductory community college courses often taken as individuals are preparing to be teachers. As a result, program directors are often thrown into the job with little background and training needed to effectively lead programs and retain teachers. To address this, CDEC might consider:

- **Developing administrator competencies and credentials** separate from early childhood teacher competencies and credentials;
- **Investing in higher education to develop administrator specific courses of study** aligned to administrator competencies;
- **Investing in leadership professional learning for lead teachers** to support them in deepening collaboration skills, leading classroom teams, and coaching assistant teachers; and
- **Continuing to build a more robust set of non-credit bearing professional learning experiences for directors**, building from the stimulus-funded [Director Training](#) sequence.

Supporting New Teachers Initiatives

One of the starkest findings from this exploratory study is that the average tenure in centers was 11 months for the sample of teachers interviewed and 13 months for the population of teachers who left. Half of the teachers in this sample were also in the field for less than 3 years. Prior studies have shown that teachers who are new to the field are the most vulnerable to turnover as they often receive little support in their transition to becoming a teacher.²⁸ This transition might be particularly hard for teachers without a strong background in ECE who work in centers with

children experiencing vulnerable life circumstances. To address the turnover of teachers new to both their centers and the field, CDEC might consider:

- **Developing induction mentoring programs** or targeting existing mentoring programs to new teachers working in programs accepting CCCAP funding to orient and acclimate new teachers or those with little experience in ECE into the profession and to develop their skills through consistent guidance and guided reflection.
- **Creating professional learning for directors in developmentally supportive onboarding practices** targeted toward programs serving a high proportion of children receiving CCCAP subsidies.

Social-Emotional Well-Being Initiatives

Like the emerging results of this study, other studies have consistently found that children's behaviors that teachers find challenging are a significant source of job stress.²⁹ When teachers do not have the knowledge and skills to support children with behavior concerns, or allied support from mental health professionals or program leaders, the job stress can become overwhelming and prompt teachers to leave their jobs.³⁰ Job stress can spill over into other relationships in the workplace, fostering negative work environments that further factor into teachers' decision to leave. To address this, CDEC might consider:

- **Increased investments into [mental health consultants](#)** and targeting funding to programs serving children with a high density of children receiving CCCAP funding;
- **Continuing [mental health investments](#) initially funded by American Rescue Package dollars to expand access to evidence-based positive behavior support and intervention frameworks**, such as the Pyramid Model, that grow staff knowledge and skills and center capacity to support children's positive social-emotional well-being and target grants to programs serving children with a high density of children receiving CCCAP subsidies; and
- **Developing a quality fund at Early Childhood Councils** where centers might apply for one-time funding to facilitate staff development in areas such as conflict management, effective communication, problem-solving, and resilience.

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