



Training and Retaining Early Care and Education Staff

Bay Area Child-Care Retention Incentive Programs: Evaluation

Year One Progress Report
2001-2002

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POLICY BRIEF

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Nationally, more than half of children under the age of five are in non-parental care while their parents work.¹ Research indicates that children benefit from being with well-trained, consistent early care and education (ECE) staff.^{2,3,4} Sensitive and responsive caregiving—characteristic of staff with a high level of training in child development—is associated with children’s positive cognitive, social, and emotional development.^{5,6} Staff retention is crucial, as frequent turnover impedes the formation of these positive, nurturing relationships and their benefits to children.⁷ However, there is evidence of an educationally bifurcated workforce, clustered between those who have high levels of training and those who have little. Furthermore, in both groups, the rates of turnover are high; estimates range from 20-42% annually.⁸

First 5 California Children and Families Commission (First 5 California), local First 5 Commissions, and many counties have made a commitment to improving the quality of services for young children by increasing the retention and training of ECE staff. Specifically, they have funded child-care retention incentive (CRI) programs, interventions that award stipends—ranging from \$475 to

\$5,100—to ECE staff based on tenure and education.⁹ Given the relationship between high turnover and low wages,¹⁰ professional development stipends are provided to participants to reward their investment in training, and to encourage retention and continuing education.

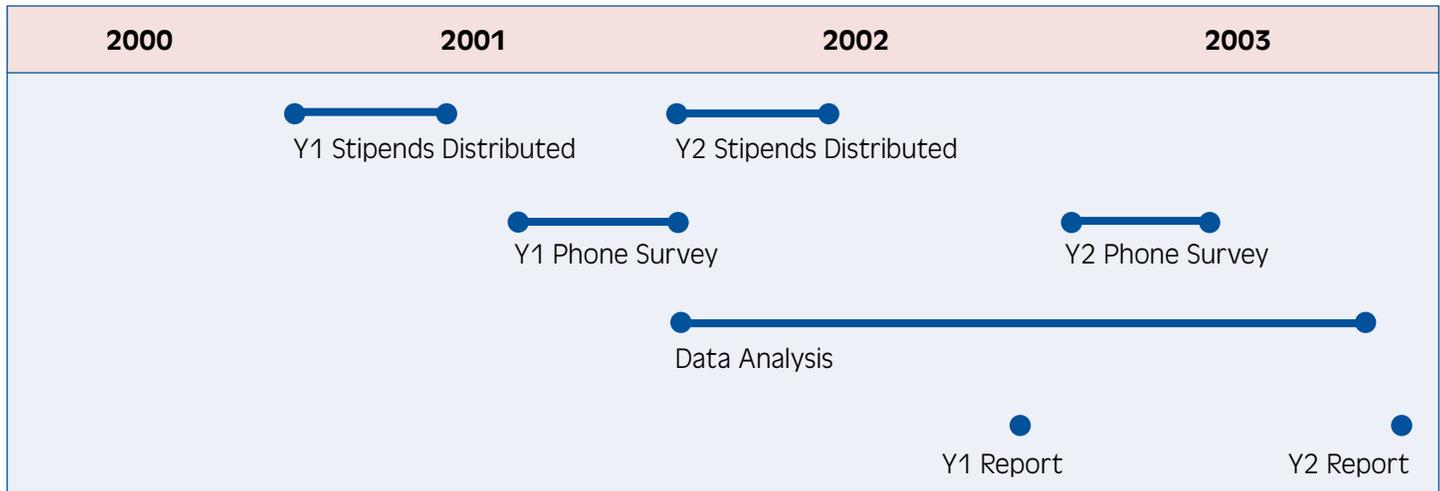
The CRI programs in Alameda and San Francisco counties began in 2000, and were followed by 40 other CRI programs supported by matching funds, which were made available by First 5 California the subsequent year.

Evaluation Overview

First 5 California funded an evaluation designed by PACE to examine the efficacy of CRI interventions in San Francisco and Alameda counties (hereafter referred to as the Bay Area CRI programs). Specifically, the evaluation assesses how CRI programs affect the training and retention levels of participating ECE staff by comparing them to those of non-participating staff in San Mateo, the comparison county.

This progress report summarizes findings from 2000-2001, the first year of the Alameda Child Development Corps (CDC) and San Francisco CARES (SF CARES). The project timeline is included in Figure 1.

FIGURE 1. Timeline of Evaluation



Preliminary Findings

Preliminary findings suggest that the CRI programs in Alameda and San Francisco included a diverse group of center-based ECE staff. In terms of initial training effects, one year after receiving their stipends, significantly more of these CRI recipients had taken ECE college courses and workshops than staff in the comparison group. In addition, retention rates were high in both counties, although only recipients in San Francisco stayed in their centers and in the ECE field at a significantly higher rate than those in the comparison group. These findings will be discussed in more detail below.

Preliminary data addressing the following research questions will be presented in this report:

- Who is participating in Year One of the Bay Area CRI programs?
- In Year One are CRI recipients more likely than other ECE staff to participate in training and professional development?
- In Year One are CRI recipients more likely than other ECE staff to be retained (to stay in their centers and the ECE field)?

This evaluation, running from July 2000 to October 2003, started shortly after the first stipends were distributed in the CRI programs in Alameda and San Francisco. Survey data were collected twice, approximately one year following stipend awards in 2001, and again in 2002. Because the survey assesses whether or not CRI recipients are completing coursework and being retained, a substantial time lag—approximately

one year—between stipend receipt and data collection is optimal. This progress report includes the first wave of data collection (2001) only. The final report analyzing all evaluation data will be completed in the Spring of 2003.

Methodology

This progress report is focused primarily on data gathered from the Year One telephone survey of center-based Alameda CDC and SF CARES recipients, and of center-based ECE staff from the comparison county, San Mateo, which did not initiate a CRI program until 2001. Information from other evaluation activities was used to provide context for the survey findings and will be incorporated into the final report.¹¹

Sample. The CRI participant survey included a sample of center-based stipend recipients in Alameda and San Francisco counties, and an ECE

center-based staff sample from San Mateo county, the comparison group. San Mateo was chosen as the comparison county due to its proximity and relative demographic similarity to Alameda and San Francisco, as well as the key factor that it did not have a CRI program in Year One.¹² The evaluation was focused on center-based staff because their greater numbers (in comparison to family child-care providers) allowed comparative analyses to be conducted with those in the comparison group.

County CRI programs provided lists of consenting recipients from which to draw the sample, which included 2,436 ECE staff members in Alameda, and 389 in San Francisco. Consenting recipients were stratified according to education levels and the type of center in which they worked (federally-subsidized, state-subsidized, or non-subsidized) to capture the range of staff involved in the CRI programs. In Alameda, given the large size of the program, a random sample of 750 recipients was drawn according to the stratification scheme. All recipients were invited to participate in San Francisco.

To build a comparison sample in San Mateo, PACE requested a list of all centers from the local Resource & Referral agency. Research staff then visited each center and invited ECE staff who had been working as of May 2000 to participate in the survey as part of the evaluation. Those who had been working in May 2000, but had left the center since, were mailed

information about the project and invited to participate. Through this process a sample of 587 staff from 65 centers in San Mateo was obtained.

Survey response rates varied across counties. Approximately 60% of the Alameda CDC sample, 80% of the SF CARES sample, and 70% of the comparison sample in San Mateo completed the survey. This rendered a Year One survey sample of 453 CRI recipients from the Alameda CDC, 312 from SF CARES, and 411 ECE center-based staff from San Mateo County.

Telephone Survey. Each member of the sample was called by phone, and asked to participate. All who agreed were administered a 25-minute telephone interview, which contained both closed-and open-ended questions on demographics regarding age, ethnicity, education, and marital/relationship status; on working conditions, such as current employment, hourly wage, ages of children served, and satisfaction with job factors; on participation in concurrent programs or interventions; and on outcomes, such as training and retention. Participants were paid \$25 for their time.

Analysis. Researchers examined demographic data and determined differences between the CRI program participants and the comparison group. For primary analyses, all demographic variables on which the CRI recipients differed significantly from the comparison group were used as control variables. To assess the impact of these CRI programs, regression analyses were used.

Potential differences among county samples, such as age, education, or wage, were controlled for in analyses to examine whether the retention-incentive programs affected interim training and retention outcomes beyond any systematic differences between Alameda CDC and SF CARES recipients and the participating ECE staff in San Mateo County. Subsequently, county membership—connoting program participation or not—was used to predict outcomes.

Limitations of Year One Findings

The determination of whether these interventions are effective is based largely on measuring the amount of training recipients completed and the length of time they stayed in their jobs after receiving stipends. Thus, for comparative *annual* training and retention data, evaluation of the programs is most effectively done one year after stipend receipt. These findings are preliminary, based on the initial 12 months of program implementation in Alameda and San Francisco, and may reflect particular circumstances that are best understood when multiple years of implementation are considered. The final report of the Bay Area CRI program evaluation, available in the Spring of 2003, will provide results based on two years of retention and training information in these counties.

These data represent CRI programs in two counties; in 2001, 40 additional counties across the state

(including San Mateo) implemented CRI programs, through the Matching Funds for Retention Incentives Program. Several of these Matching Funds counties are being evaluated in a similar manner and may enhance our understanding of the effectiveness of these retention-incentive programs.¹³ The Year One progress report for the Matching Funds for Retention Incentives for Early Care and Education Staff: Evaluation will be available in the Spring of 2003, and the final report will be available in 2004.

Year One Findings

■ Who is participating in Year One of the Bay Area CRI Programs?

In the first year, these programs drew from a more established group of ECE staff—in terms of education and tenure—than has been described in past studies of county ECE staff.¹⁴ This is important because if these programs are designed to retain and train the ECE workforce, it is imperative to understand for whom, and under what conditions, they have effects.

Tables 1-4 highlight the characteristics of CRI recipients in Alameda and San Francisco in comparison to data on other samples of ECE staff from each county. In addition, these tables provide characteristics of the comparison group in San Mateo County with similar information for a general sample of ECE staff.

As shown in Table 1, Year One CRI recipients were ethnically diverse—in fact, more so than other recent estimates of the ECE workforce in these counties. This is particularly true for recipients at the teacher and assistant teacher levels in Alameda and San Francisco counties. This tendency—for greater ethnic diversity in the survey sample than in other recent samples—also holds for the comparison group.

In terms of education level, it appears that the CRI recipients had higher levels of education than the general ECE staff in the counties (see Table 2). For example, among recipients in the Alameda CDC and SF CARES, 90% of assistant/associate teachers had at least some college (but no B.A.) compared to 76% for the counties' ECE staff generally. Recipients were required to have at least six units to be eligible for SF CARES and 12 units for the Alameda CDC, which may account for this difference between the samples within counties.¹⁵ In the San Mateo comparison group, participants had approximately the same level of education as a general sample of county ECE staff.

As indicated in Table 3, the hourly wages of CRI recipients generally is close to or above (for assistant/associate teachers) the “average highest wage” as reported by county center directors.¹⁶ This may, in part, reflect the relatively higher levels of education held by CRI recipients.

In comparison with the general ECE sample, both the CRI recipients and

the San Mateo comparison group were more likely than the general ECE staff samples to have worked in their centers for one or more years (see Table 4). CRI program eligibility requirements included “tenure at the center” for the previous nine months. However, the phone surveys were conducted approximately one year after stipend receipt, which could account for some recipients having started new jobs in the interim (i.e. reporting tenure of “less than 6 months”).

In terms of tenure in the field, CRI recipients reported working in ECE for an average of 15 years. This average held across job titles and is higher than has been reported in previous studies. The comparison group reported working in ECE for an average of 12 years.

Remaining questions. In assessment of the Year One CRI program participants, several questions remain: Do these Year One recipients look similar demographically—that is, are they of a similar ethnicity, age, and educational status, and earning similar hourly wages as recipients in Years 2 and 3?¹⁷ Programmatic changes, in part attributable to funding and the greater amount of time with which the programs had to conduct outreach and implementation, may affect the composition of the CRI programs in subsequent years. With administrative data made available through the Matching Funds for Retention Incentives program evaluation, we will be able to address this question in the final report.

TABLE 1. Ethnicity: Comparison of Participants with County ECE Staff

	Alameda County		San Francisco County		San Mateo County	
	CRI Recipients	ECE Staff*	CRI Recipients	ECE Staff**	Comparison Group	ECE Staff***
Assistant/Associate	(n = 342)	(n = 93)	(n = 74)	(NA)	(n = 94)	(NA)
White	24%	35%	8%	23%	36%	41%
Black	35%	23%	22%	18%	3%	7%
Asian	15%	10%	47%	37%	20%	14%
Hispanic	16%	28%	18%	12%	29%	34%
Other	5%	3%	2%	7%	4%	4%
Multi-Ethnic	4%	1%	4%	(NA)	7%	(NA)
Teacher	(n = 1033)	(n = 122)	(n = 184)	(NA)	(n = 189)	(NA)
White	43%	43%	24%	37%	52%	61%
Black	21%	25%	16	13%	3%	5%
Asian	15%	13%	38%	31%	15%	13%
Hispanic	14%	14%	13%	12%	20%	16%
Other	5%	2%	5%	7%	4%	6%
Multi-Ethnic	3%	3%	3%	(NA)	6%	(NA)
Teacher-Director	(n = 385)	(n = 86)	(n = 59)	(NA)	(n = 48)	(n = 77)
White	53%	46%	34%		58%	69%
Black	29%	24%	21%		6%	5%
Asian	5%	9%	30%		10%	12%
Hispanic	10%	17%	11%		15%	13%
Other	3%	2%	0%		4%	1%
Multi-Ethnic	1%	2%	4%		6%	0%
Admin. Director	(n = 184)	(n = 79)	(n = 35)	(NA)	(n = 19)	(n = 58)
White	43%	56%	22%		74%	75%
Black	26%	22%	22%		11%	9%
Asian	10%	7%	39%		0%	5%
Hispanic	12%	13%	14%		0%	6%
Other	1%	1%	0%		5%	3%
Multi-Ethnic	9%	1%	4%		11%	3%

NOTE: Due to rounding, cells may not sum to 100%.

For this report, PACE combined the Center for the Child Care Workforce’s categories “American Indian” and “Other” to match the CRI ethnicity categories.

* Burton, A., Duff, B., & Laverty, K. (2001). *A Profile of the Alameda County Child Care Center Workforce: 1995-2001*. Washington, DC: Center for the Child Care Workforce.

** Burton, A., Whitebook, M., & Sakai, L. (2000). *A Profile of the San Francisco Child Care Center Workforce: 1999*. Washington, DC: Center for the Child Care Workforce.

*** Bellm, D., Burton, A., & Duff, B. et. al. (2002). *A Profile of the San Mateo County Child Care Workforce: Findings from the 2001 Survey of Family Child Care Homes and Child Care Centers*. Washington, DC: Center for the Child Care Workforce.

TABLE 2. Education Level: Comparison of Participants with County ECE Staff

	Alameda County		San Francisco County		San Mateo County	
	CRI Recipients	ECE Staff*	CRI Recipients	ECE Staff**	Comparison Group	ECE Staff***
Assistant/Associate	(n = 354)	(n = 103)	(n = 75)	(n = 50)	(n = 95)	(n = 70)
Up to HS/GED	10%	24%	23%	14%	33%	32%
Some College	67%	67%	38%	67%	36%	54%
AA+	16%	2%	28%	4%	19%	5%
BA+	7%	7%	11%	14%	12%	9%
Teacher	(n = 1057)	(n = 133)	(n = 192)	(n = 62)	(n = 192)	(n = 96)
Up to HS/GED	5%	3%	3%	1%	6%	1%
Some College	34%	52%	30%	54%	29%	41%
AA+	24%	18%	28%	10%	27%	20%
BA+	37%	27%	39%	36%	38%	37%
Teacher-Director	(n = 407)	(n = 96)	(n = 61)	(n = 32)	(n = 49)	(n = 79)
Up to HS/GED	3%	1%	0%	0%	4%	0%
Some College	24%	30%	18%	20%	25%	20%
AA+	31%	17%	30%	19%	33%	28%
BA+	42%	52%	52%	61%	38%	52%
Admin. Director	(n = 186)	(n = 81)	(n = 38)	(n = 41)	(n = 19)	(n = 60)
Up to HS/GED	4%	3%	3%	0%	5%	0%
Some College	13%	25%	8%	2%	11%	15%
AA+	21%	15%	24%	6%	37%	12%
BA+	62%	56%	65%	92%	47%	73%

NOTE: Due to rounding, cells may not sum to 100%.

* Burton, A., Duff, B., & Laverty, K. (2001). *A Profile of the Alameda County Child Care Center Workforce: 1995-2001*. Washington, DC: Center for the Child Care Workforce.

** Burton, A., Whitebook, & M., Sakai, L. (2000). *A Profile of the San Francisco Child Care Center Workforce: 1999*. Washington, DC: Center for the Child Care Workforce.

*** Bellm, D., Burton, A., & Duff, B. et. al. (2002). *A Profile of the San Mateo County Child Care Workforce: Findings from the 2001 Survey of Family Child Care Homes and Child Care Centers*. Washington, DC: Center for the Child Care Workforce.

■ In Year One are CRI recipients more likely than other ECE staff to participate in training and professional development?

Recipients in the Alameda CDC and SF CARES were significantly more

likely to take ECE college coursework and other training than ECE staff in the comparison group. This is of particular importance because of the link between more education and the provision of higher quality care.

One year after stipends were first distributed, CRI recipients in the Alameda CDC and SF CARES reported taking significantly more ECE college classes than did ECE staff in the comparison group.

Similarly, these CRI recipients reported participating in ECE workshops at a significantly higher rate than did ECE staff in the comparison group. However, participation in general education (GE) college courses did not differ between groups.

Remaining questions. These findings regarding training raise several additional questions. First, what particular classes are these CRI recipients taking? Data are being gathered to assess the impact of the CRI programs on the local community colleges; anecdotal evidence indicates that enrollments in ECE courses are up substantially.¹⁸ Are

recipients enrolling in courses that allow them to move up on the Child Development Permit Matrix?¹⁹ By tracking CRI recipients' course completion and permit acquisition in Year Two of this evaluation, progression on the Matrix can be quantified and linked to stipend receipt.

■ In Year One are CRI recipients more likely than other ECE staff to be retained (to stay in their centers and the ECE field)?

The vast majority of recipients in the Alameda CDC and SF CARES stayed in their centers and the ECE field in the year following stipend receipt.

Although these data are preliminary, the retention of recipients is a positive indicator because of the evidence linking staff stability to the quality of care provided.

In overall terms, the retention rates of CRI recipients in Alameda CDC and SF CARES were higher than those in the comparison group. However, only for recipients of SF CARES were the retention rates significantly higher in comparison to ECE staff in San Mateo County. Relatively speaking, ECE staff in the comparison group also stayed in the field at a higher rate than has been reported previously. Stipend amount

TABLE 3. Average Hourly Wage: Comparison of Participants with County ECE Staff

	Alameda County		San Francisco County		San Mateo County	
	CRI Recipients	ECE Staff ^{†*}	CRI Recipients	ECE Staff ^{†**}	Comparison Group	ECE Staff ^{†***}
Assistant/Associate	(n = 321) \$8.31 - \$11.45	\$8.31 - \$10.17	(n = 63) \$7.78 - \$11.61	\$7.78 - \$9.37	(n = 88) \$10.79	\$9.19 - \$11.70
Teacher	(n = 894) \$10.42 - \$14.93	\$10.42 - \$14.86	(n = 173) \$10.02 - \$13.47	\$10.02 - \$14.21	(n = 169) \$15.01	\$12.58 - \$18.00
Teacher-Director	(n = 349) \$14.79 - \$17.59	\$14.79 - \$18.25	(n = 47) \$13.89 - \$15.80	\$13.89 - \$16.68	(n = 42) \$17.59	\$17.20 - \$21.75
Admin. Director	(n = 135) \$19.66 - \$22.08	\$19.66 - \$24.61	(n = 28) \$15.76 - \$17.60	\$15.76 - \$20.43	(n = 18) \$23.24	\$19.62 - \$24.79

[†] All "ECE Staff" wages represent the average lowest and average highest wage for each job title in each county, *not* a range of wages.

^{*} Burton, A., Duff, B., & Laverty, K. (2001). *A Profile of the Alameda County Child Care Center Workforce: 1995-2001*. Washington, DC: Center for the Child Care Workforce. No sample sizes were provided for these averages.

^{**} Burton, A., Whitebook, M., & Sakai, L. (2000). *A Profile of the San Francisco Child Care Center Workforce: 1999*. Washington, DC: Center for the Child Care Workforce. No sample sizes were provided for these averages.

^{***} Bellm, D., Burton, A., & Duff, B. et. al. (2002). *A Profile of the San Mateo County Child Care Workforce: Findings from the 2001 Survey of Family Child Care Homes and Child Care Centers*. Washington, DC: Center for the Child Care Workforce. No sample sizes were provided for these averages.

did not predict retention for CRI recipients in Year One.

Remaining questions. Several key questions remain regarding the effects of the CRI programs on staff retention. First, of the CRI recipients in these counties, who is being

retained? Given the evidence that more training is associated with higher quality care, is staff with higher levels of ECE education being retained at a similar rate as those who have lower levels of education? With dramatically

changing economic conditions in the Bay Area in 2000-2001, examining retention rates at the end of the evaluation, approximately two years after the initial stipend receipt, is essential for a more valid estimation of staff retention.

TABLE 4. Average Center Tenure: Comparison of Participants with County ECE Staff

	Alameda County		San Francisco County		San Mateo County	
	CRI Recipients	ECE Staff*	CRI Recipients	ECE Staff**	Comparison Group	ECE Staff***
Asst/Associate	(n = 354)	(n = 95)	(n = 74)	(n = 46)	(n = 95)	(n = 68)
< 6 months	4%	17%	3%	13%	8%	24%
6 – 11 months	3%	16%	2%	9%	13%	20%
1 – 5 years	42%	43%	28%	48%	63%	46%
> 5 years	52%	25%	64%	30%	16%	11%
Teacher	(n = 1057)	(n = 123)	(n = 192)	(n = 48)	(n = 192)	(n = 95)
< 6 months	8%	10%	4%	20%	7%	10%
6 – 11 months	3%	9%	3%	17%	10%	11%
1 – 5 years	36%	45%	31%	30%	51%	45%
> 5 years	53%	36%	61%	18%	32%	35%
Teacher-Director	(n = 407)	(n = 87)	(n = 62)	(NA)	(n = 49)	(n = 79)
< 6 months	3%	2%	2%		4%	3%
6 – 11 months	2%	4%	8%		2%	4%
1 – 5 years	35%	45%	33%		33%	30%
> 5 years	59%	49%	57%		61%	63%
Admin. Director	(n = 186)	(n = 73)	(n = 38)	(NA)	(n = 19)	(n = 58)
< 6 months	1%	0%	0%		16%	4%
6 – 11 months	0%	3%	6%		5%	2%
1 – 5 years	40%	37%	21%		21%	29%
> 5 years	59%	60%	70%		58%	65%

NOTE: Due to rounding, cells may not sum to 100%.

* Burton, A., Duff, B., & Laverty, K. (2001). *A Profile of the Alameda County Child Care Center Workforce: 1995-2001*. Washington, DC: Center for the Child Care Workforce.

** Burton, A., Whitebook, M., & Sakai, L. (2000). *A Profile of the San Francisco Child Care Center Workforce: 1999*. Washington, DC: Center for the Child Care Workforce.

*** Bellm, D., Burton, A., & Duff, B. et. al. (2002). *A Profile of the San Mateo County Child Care Workforce: Findings from the 2001 Survey of Family Child Care Homes and Child Care Centers*. Washington, DC: Center for the Child Care Workforce.

TABLE 5. Year One Participation in Training and Professional Development

	Alameda	San Francisco	San Mateo
	CRI Recipients	CRI Recipients	Comparison Group
ECE Classes	63%*	64%*	50%
ECE Workshops	92%*	90%*	75%

*Significantly different from the comparison group at the p<.05 level.

TABLE 6. Year One Retention in the Center and ECE Field

	Alameda	San Francisco	San Mateo
	CRI Recipients	CRI Recipients	Comparison Group
Center Retention	93%	94%*	88%
Field Retention	95%	98%*	94%

*Significantly different from the comparison group at the p<.05 level.

Initial Policy Implications

This progress report provides initial findings, as well as raises important questions for program designers and policymakers as they work toward increasing the retention and training of the ECE workforce. Although these implications are derived from first-year findings only, there are several that may be relevant to program development and implementation.

CRI programs must specify their target populations for retention and training.

The CRI programs would be strengthened by targeting the intervention activities toward particular groups. Programs included many

ECE staff with relatively high levels of education and experience, which is consistent with the aim of retaining highly trained staff and continuing their professional development. Given the generally low levels of education and training among the ECE workforce, a fast expansion of the ECE workforce to meet current proposals for universal preschool will require inclusion of entry-level aides and classroom teachers with minimal experience. Developing a program component targeted at entry-level staff, to draw them into the field and increase their eligibility for the Child Development Permit, is essential. CRI programs could develop alternative components for entry-level staff to determine how to do this most effectively, while maintaining high training standards.

Providing accessible, affordable, high-quality training for CRI recipients is essential.

The CRI programs require coordination and cooperation with the community colleges, Resource and Referral agencies, and other ECE training facilities in their counties to train recipients and ECE staff (who may be future recipients). Developing the capacity to support recipients’ training activities through advising and coordination may be essential to program success in regards to training outcomes.

Streamlining retention program activities into existing systems may increase program success.

Some aspects of these training and retention programs could be streamlined into existing systems and infrastructure. Given budget concerns, creative solutions may help CRI programs to reach more ECE staff at a lower cost. For example, could the Commission on Teacher Credentialing, the organization that currently verifies coursework to award the Child Development Permit, assist in the cumbersome verification process counties use to determine stipend eligibility? Exploring potential coordination of services among the groups involved in ECE training and permitting may be a promising option for counties implementing CRI programs.

Areas for Future Research

In evaluating the effectiveness of the Bay Area CRI programs, many important questions remain about how we can train and retain ECE staff and provide higher quality care most effectively. Several of these questions are discussed briefly below.

How are the CRI programs affecting training and retention?

The vast majority of CRI recipients report staying at their centers—and in the ECE field—and being satisfied with their involvement in the Alameda CDC or SF CARES. Yet, questions remain about how these CRI programs affect retention and training. Is it primarily through the direct, financial impact of the stipend, through an increased sense of professional identity, or through increased availability of training and professional development? Are the current programs the most effective and efficient means to increase retention and training among ECE staff? With the current state budget shortfalls, resources are likely to be increasingly scarce. Ascertaining the most effective method of retaining and training ECE staff may be one of the most crucial lines of inquiry related to this evaluation.

Do CRI programs improve the quality of care provided by CRI recipients?

This evaluation will provide important data in addressing questions about

strengthening the ECE workforce through training and retention. However, the most basic issue is outstanding: what effect, if any, are these changes in the workforce having on the quality of care provided to children? An observational study of ECE staff is needed, including staff at a range of levels and working in a variety of types of centers, to assess them before and after they participate in a CRI program. Moreover, given each county's different program components, this work could include multiple program designs in an effort to specify the most promising practices of improving the quality of care.

Which aspects of training are most closely associated with improvements in ECE quality?

Additional research is needed to examine the types—and components of those types—of training that are most likely to benefit children. There is evidence that participating in a comprehensive ECE training program is more likely to improve the quality of care provided to children than is completing individual classes.²⁰ However, completing ECE trainings and workshops has been shown to improve the quality of care provided.²¹ How much training and coursework is needed to have an effect? Which classes and types of workshops have the most impact? Further research in this area is needed, as interventions like the CRI programs are developed to improve the quality of care provided to children in the most effective and efficient way.

Endnotes

¹ Lamb, M. E. (1998). Nonparental child care: Context, quality, correlates. In W. Damon, I. E. Siegel, & K. A. Renniger (Eds.), *Handbook of Child Psychology: Vol. 4. Child Psychology in Practice* 5th ed., 73-134. New York: Wiley.

² Cryer, D., Hurwitz, S., & Wolery, M. (2001). Continuity of caregiver for infants and toddlers in center-based child-care: Report on a survey of center practices. *Early Childhood Research Quarterly*, 15, 497-514.

³ Howes, C. (1997). Children's experiences in center-based child-care as a function of teacher background and adult child ratios. *Merrill-Palmer Quarterly*, 43, 404-425.

⁴ NICHD Early Child Care Research Network. (2000). Characteristics and quality of child care for toddlers and preschoolers. *Applied Developmental Sciences*, 4, 116-135.

⁵ Burchinal, M. R. (1999). Child care experiences and developmental outcomes. *The Annals of the American Academy*, 563, 73-97.

⁶ Lamb, M. E. (1998). Nonparental child care: Context, quality, correlates. In W. Damon, I. E. Siegel, & K. A. Renniger (Eds.), *Handbook of Child Psychology: Vol. 4. Child Psychology in Practice* 5th ed., 73-134. New York: Wiley.

⁷ Cryer, D., Hurwitz, S., & Wolery, M. (2001). Continuity of caregiver for infants and toddlers in center-based child-care: Report on a survey of center practices. *Early Childhood Research Quarterly*, 15, 497-514.

⁸ Center for the Child Care Workforce (2001). *Current data on child care salaries and benefits in the United States*. Washington, DC.

⁹ Caspary, K. (2002). California's pioneering training and retention initiatives for early childhood educators: lessons from San Francisco and Alameda counties. *PACE Policy Brief 02-1*. Berkeley, CA: UC Berkeley.

¹⁰ Whitebook, M., Howes, C., & Phillips, D. (1998). *Worthy Work, Unlivable Wages: The National Child Care Staffing Study*. Washington, D.C.: Center for the Child Care Workforce.

¹¹ Additional sources of data for the evaluation include: 1) a Qualitative Implementation Study (QIS) centered around a series of focus groups and interviews with Alameda CDC and SF CARES program planners,

community stakeholders, and CRI program participants; 2) cost analyses of the CRI programs; 3) a retrospective overview of community college course enrollment in the program counties; and 4) a summary of Child Development Permit applications from the relevant counties over the past seven years.

¹² San Mateo implemented a CRI program in 2001, which changed the nature of their involvement as a comparison county. Subsequently, the non-participating staff from the original sample in San Mateo will be used as the comparison group, holding differences between the staff in the counties constant. Additionally, in Year Two of the evaluation, analyses will be conducted to determine which factors, if any, predict whether or not ECE staff in San Mateo became CRI recipients.

¹³ Hamre, B., Grove, R., & Louie, J. (2003). Matching Funds for Retention Incentives for Early Care and Education Staff: Evaluation Year One Progress Report: 2001-2002. *PACE Policy Brief*. Berkeley: UC Berkeley.

¹⁴ Burton, A., Duff, B., & Laverty, K. (2001). *A Profile of the Alameda County Child Care Center Workforce: 1995-2001*. Washington, DC: Center for the Child Care Workforce. Burton, A., Whitebook, M., & Sakai, L. (2000). *A Profile of the San Francisco Child Care Center Workforce: 1999*. Washington, DC: Center for the Child Care Workforce.

¹⁵ Caspary, K. (2002). California's pioneering training and retention initiatives for early childhood educators: lessons from San Francisco and Alameda counties. *PACE Policy Brief 02-1*. Berkeley, CA: UC Berkeley.

¹⁶ In Year One, SF CARES included low wages (within each qualification level) as a prioritization factor for awarding stipends.

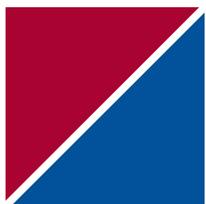
¹⁷ Year 3 data will be available through the Matching Funds Evaluation administrative data.

¹⁸ Caspary, K. (2002). California's pioneering training and retention initiatives for early childhood educators: lessons from San Francisco and Alameda counties. *PACE Policy Brief 02-1*. Berkeley, CA: UC Berkeley.

¹⁹ Initial data indicate that there was a 237% increase in permit-holders from 2000-2001 in Alameda county.

²⁰ Howes, C. & Brown, J. (2000). Improving child care quality: A guide for the Proposition 10 commissions, in E. Shulman, M. Shannon, and M. Hochstein, eds., *Building Community Systems for Young Children*, UCLA Center for Healthier Children, Families and Communities.

²¹ Burchinal, M.R., Cryer, D., Clifford, R. M., & Howes, C. (2002). Caregiver training and classroom quality in child care centers, *Applied Developmental Science*, 6, 2-11.



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