



Working in Early Care and Education in North Carolina

2019
**Workforce
Study**

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Introduction

Years of research focused on early brain science, young children’s social emotional health, toxic stress, teacher education, and more, make the convincing argument for the critical need for high quality, accessible, and affordable early childhood care and education for children birth to five. Enrollment in such programs launch children on the best life trajectory, with opportunities to grow, learn, and flourish. Because children are the future of North Carolina, we all need to ensure children have the opportunity to participate in an early childhood setting where their cognitive, social-emotional, physical, and language development are nurtured and stimulated. While significant challenges face the early childhood education field, North Carolina continues as a leader among states in its efforts to support young children, their families, and the teachers, directors, family child care providers, and others working with the children. A few highlights include:

- ▶ North Carolina has regularly invested in early care and education workforce studies since the 1980s;
- ▶ The T.E.A.C.H. (Teacher Education And Compensation Helps) Early Childhood® Scholarship Program began in 1990 to support the early childhood workforce’s need for college education;
- ▶ Smart Start was created in 1993, and expanded by 2000, to provide local funding to all 100 counties across the state;
- ▶ The Child Care WAGE\$® Program issued the first supplements to early early care and education teachers in 1994;
- ▶ The star-rated licensing system began in the early 2000s to recognize higher quality programs and to help parents make informed choices about programs for their young children;
- ▶ The launch of North Carolina’s public pre-k for four year old high-need children occurred in 2001; and
- ▶ The Infant-Toddler Educator AWARD\$® began in 2018 to provide education-based salary supplements specifically to infant and/or toddler teachers.

With these efforts and many others, North Carolina established itself among the states that want and invest in a brighter future for children, families, and the early childhood workforce.

The *2019 Working in Early Care and Education in North Carolina* report examines the state of early childhood education, through the lens of the directors, administrators, teachers, assistants, and family child care providers who work with North Carolina’s youngest children. The report endeavors to shine a light on the multiple challenges faced by the workforce. The report also demonstrates why everyone concerned about young children and their families must continue to advocate for a strong, robust early childhood system that is not subsidized by the low wages and poor working conditions of many child care educators.

Data collection for the 2019 Early Care and Education Workforce Study was largely completed prior to the shut-down due to the coronavirus pandemic. As such, this report paints a picture of the early care and education workforce pre-COVID-19. At the time of this report, the landscape of child care is unsettled. Fallout from the pandemic continues with no clear or even blurred picture of a post-COVID world. One thing we have already learned from this period, however, is that early care and education is an essential service for communities across the nation; indeed the very lynchpin for a healthy, growing national economy providing parents the support vital to returning to work. The early care and education workforce who provide the crucial care and early learning, for children statewide and across the nation prior to, during, and after the pandemic are true heroes.

With funding from the Division of Child Development and Early Education, Child Care Services Association (CCSA) conducted a statewide survey of the early care and education workforce in North Carolina from March 2019 through March 2020. This study provides comprehensive data on teachers, assistant teachers, and directors in early care and education centers, family child care providers, and on the licensed early care and education programs in which they work. Licensed child care centers include programs operated by public schools, for-profit entities, and not-for-profit entities and include Head Start/Early Head Start and programs with NC Pre-K classrooms. Family child care homes are owned and operated by an individual providing early care and education within their home. Additional information from similar studies conducted by CCSA in 2014 and 2015 is also provided. Comparison of the data from these surveys enables readers to learn about the continuities and changes in the early care and education (ECE) system and workforce that may have occurred over the approximately five year time period. This report also references data from the 2001 and 2003 CCSA workforce studies to provide a perspective on changes over a longer period of time.

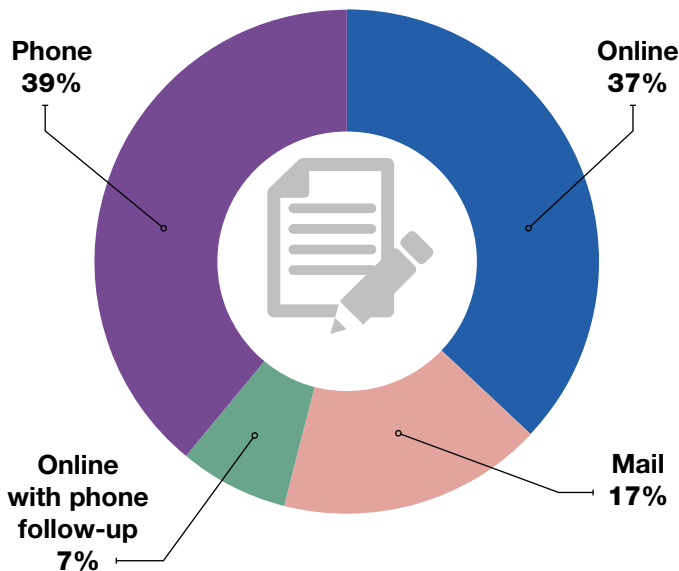


METHODOLOGY

Data for the center-based workforce report were collected through two linked surveys of samples of early childhood program directors and of the teachers and assistants working in those programs conducted from March 2019 through March 2020 (based on the Division of Child Development and Early Education (DCDEE) information as of February 2019¹). Useable surveys were obtained from 2,249 directors who constituted 74% of a stratified random sample (n=3,053) of all directors of licensed child care programs in North Carolina that serve children birth to five. This response constitutes about 58% of the population of all early care and education programs serving children birth through five in the state (N=3,902). High response rates were achieved for directors and family child care providers by providing a variety of means and opportunities for participants to respond. Figure 1 breaks down the response methods specifically for directors and shows the importance of providing multiple avenues for survey completion. This high response rate ensures representation of the total statewide population as well as disaggregation to each of the 100 counties in North Carolina.

Figure 1:

Director Method of Survey Completion



The early care and education center sample was designed to include various percentages of programs based on the number of centers in each county that serve children birth to five. School age only programs were excluded from the study. In the smallest 85 counties in the state, 100% of the centers were included. These counties had fewer than 60 centers in the county serving children birth to five. A stratified random sample was created

for the remaining 15 counties to ensure that the sample closely resembled the overall population based on star level and size. For the nine counties that had between 60 and 99 programs serving this age group, an 85% sample was created. Three counties had between 100 and 199 centers serving children birth to five, and 65% of these programs were included in the sample. Finally, for the largest three counties in the state, those with more than 200 early care and education centers serving children birth to five, a 35% sample was drawn.

Directors in the sample were asked to distribute surveys to their teaching staff. For those directors who returned their surveys, multiple efforts were made to secure surveys from their teaching staff. Useable surveys were returned by 6,642 of those teachers and assistant teachers out of an estimated 16,084 teachers and assistants in the participating centers (41%). This estimate of total teachers and assistants was adjusted up to 16,761 to account for those programs that were listed in the DCDEE data as having no caregivers and who responded to the question about staffing on the workforce study leading to a final adjusted participation rate of 40%. This teacher participation rate fell below the goal rate for this study of 50% statewide and within several counties. Although teacher survey collection began in the summer of 2019, surveys continued to be collected into 2020 with the final push occurring concurrent to the chaos into which the state fell as a result of the COVID-19 pandemic. This situation, as well as changes in funding disallowances (such as not allowing funds to be spent on token thank-you gifts) and methodology changes (such as requiring direct contact with past as well as present teachers) required by the funder, contributed to a lower participation rate than desired. Data weighting at the statewide, and more specifically at the county level, helps alleviate bias resulting from a lower participation rate. An additional 476 surveys were returned from teachers and assistants whose directors did not return surveys. These surveys are used for analysis of caregiver data overall, but not for analysis that involves information tied to directors' surveys.

Program level and teacher level data have been weighted to reflect the statewide populations of centers and teaching staff respectively, adjusting for known individual, program, and community characteristics associated with response bias. These factors include the location, size, sponsorship, and star rating of a program. Most percentages and other values reported in text, tables, and graphs incorporate these sampling weights, permitting extrapolation to the population of centers (N=3,902) serving children under six who are not yet in school. In addition, the teaching staff survey data were weighted in such a way as to account for the effects of non-response, not only at the teaching staff level, but also to account for non-response among centers.

Data for family child care providers included in this report were collected through a survey of a sample of family child care providers conducted from March 2019 to December

2019 (based on information as of February 2019²). Because the number of family child care providers has decreased significantly over the last two decades leaving many counties with none of this type of care, sampling and reporting of this data is limited to statewide and within three geographic areas. A stratified random sample (n=426) of all licensed family child care providers in North Carolina that serve children birth to five was drawn based on this geographic area (urban, suburban and rural) and on star level. To achieve this sample, each county in the state was assigned a geographic area as defined by the North Carolina Rural Center (www.ncruralcenter.org). This sample constituted about 28% of the population of all family child care homes serving children birth through five years old, with an oversampling in suburban areas to ensure adequate representation.

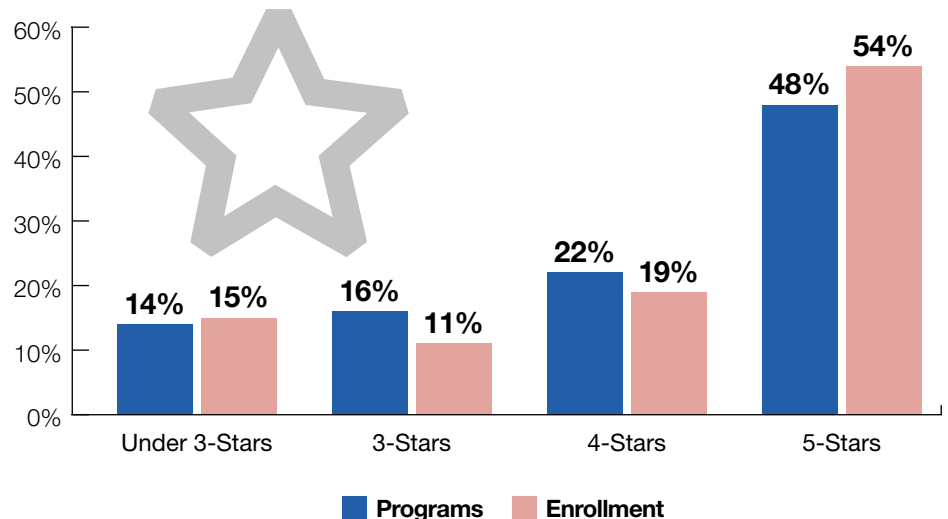
Useable surveys were obtained from 303 programs, or 71% of those attempted. Program data have been weighted to reflect the statewide population of family child care providers, adjusting for known program and community characteristics associated with response bias. Percentages and other values reported in tables and graphs incorporate these sampling weights, permitting extrapolation to the population of family child care programs (N=1,533) serving children birth to five. Responding family child care home providers mirrored all segments of the overall population of home providers in the state with only slight differences. Homes with fewer than 3-stars were slightly under-represented in responding (21% in the state vs. 18% responding). Twenty-nine percent (29%) of the 3-star programs in the sample responded which exactly mirrors the overall population and 53% of 4- and 5-star programs responding vs. 50% of the overall state population of homes. Overall, homes with higher star levels were increasingly more likely to respond as homes in the sample with fewer than 3-stars had a 59% response rate, 3-star homes had a 71% rate, 4-star homes returned their surveys at a rate of 75% and 77% of 5-star programs returned their surveys. Sampling weights have been adjusted to compensate for this bias.

More information about the sampling design and survey execution is contained in Appendix A to this report.

Throughout this report, the median value is usually reported as the measure of central tendency, e.g., for hourly wages and time intervals. As such, “average” is used interchangeably with “median” unless specifically noted otherwise. Other definitions relevant to this report can be found in Appendix B.

County assigned geographic areas can be found in Appendix C and was based on information from the NC Rural Center.

Figure 2: **Centers and Enrollment by Star Level**



EARLY CARE AND EDUCATION CENTERS

Statewide, early care and education centers had a median of 8.0 teachers and assistants for the 14 infants and/or toddlers and 26 three to five year olds enrolled in their programs. Great variability existed across the state, however, as centers reported a range of no teaching staff (other than themselves) to nearly 140 teaching staff educating from 1 to over 300 birth to five year olds. More than a third (35%) operate without an assistant director and over half (57%) have no educational support staff (behavioral support, curriculum support, etc.).

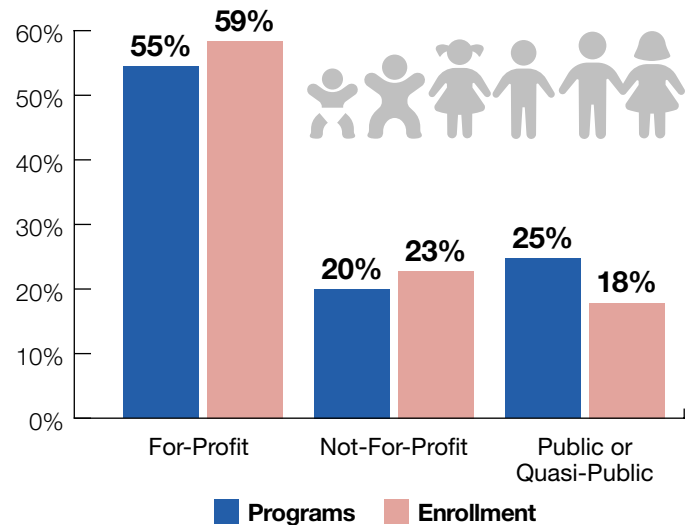
Star Rating and Organizational Structure. Across the state, the distribution of early childhood programs varies considerably by star rating levels and sponsorship. At the time of this study (which was prior to the start of the COVID-19 pandemic), statewide there were just over 3,900 centers serving around 180,000 children birth through five. (An additional nearly 1,500 centers serve only school age children and were beyond the scope of this project.) Only about 14% of licensed centers serving about 15% of the total enrollment of birth to five year olds in center-based care were rated as having 2-stars or fewer. (A higher percentage of programs, 17%, served a similar 15% of birth to five children in 2015 in programs with 2-stars or lower. This group includes not only 1- and 2-star licensed centers, but also GS-110 notice of compliance centers and those with a temporary, provisional, or probationary license.) Another 16% of programs in the state had 3-stars and served about 11% of children birth through five enrolled in centers. (In 2015, 3-star centers were 18% of centers and about 13% of enrollment.) Four-star programs constituted about 22% of programs in the state and served 19% of the birth to five years olds enrolled in centers. (In 2015,

4-star centers comprised a higher 24% of programs and 23% of the enrollment.) Finally, just under half of centers, 48%, had 5-stars but served over half, 54%, of the birth to five year old enrollment in centers. (In 2015, fewer programs, 42% had 5-stars and a similar lower percentage, 50%, of children were enrolled in these programs.) See Figure 2.

North Carolina programs leaned heavily towards for-profit centers with 55% of programs being of this type. Non-profit programs accounted for 20% of centers and the remaining 25% of programs were public programs. The make-up of programs was similar in 2015, with 56% classified as for-profit, 21% non-profit and 23% public programs. Enrollment in North Carolina programs was slightly different with 59% of children in for-profit programs, 23% in non-profit centers and the remaining 18% of children attending public programs. See Figure 3. Enrollment in 2015 followed a similar pattern as the current one with 58% of children in for-profit programs, 24% in non-profits and 18% attending public programs.

Family child care providers by definition are all for-profit businesses. Differences in star ratings, however, exist. Because family child care providers are licensed for a maximum of eight children, program percentages and enrollment numbers track similarly. In 2019, twenty-one percent (21%) of family child care providers were under 3-stars (20% of birth to five children enrolled in these programs). Three star programs accounted for 29% of homes (28% enrollment). The largest percentage of family child care providers and enrollment were 4-star programs with 38% of programs and enrollment in this star-rating. Finally, 12% of family

Figure 3: Centers and Enrollment by Auspice



child care providers were 5-star with 13% of enrollment of birth to five year olds. Examining programs and enrollment by geographic areas show just slight differences to the statewide breakdown. See Tables 1 and 2.

Though fewer in number, the over 1,500 family child care providers in the state enrolling nearly 6,300 young children not yet in kindergarten serve a vital role for families across our state. North Carolina continues the trend of losing family child care providers that began in the early 2000s. In 2003, nearly 5,000 home providers served around 25,000 children in the state. By 2014, that number had dropped to just over 2,500 providers serving birth to five year olds.

NC Pre-K. Nearly one in three early care and education programs in North Carolina had at least one NC Pre-K classroom (31%). In many counties, close to half of the programs had at least one NC Pre-K classroom. In some counties, far more than half of the programs had an NC Pre-K classroom. (For example, 80% of Davie County centers and 2 of 3 centers or 67% of Hyde County centers had an NC Pre-K classroom.) Table 3 delineates percentages of NC Pre-K programs based on specific characteristics. Examining the table reveals that publicly sponsored programs, especially public school programs,

Table 1: Family Child Care Programs by Star Level

	Programs	Under 3-Star	3-Star	4-Star	5-Star
Statewide	1533	21%	29%	38%	12%
Rural	603	20%	31%	41%	9%
Suburban	284	21%	28%	37%	14%
Urban	646	22%	28%	37%	14%

Source: DCDEE licensing data 2/19

Table 2: Family Child Care Birth to Five Enrollment by Star Level

	Enrollment	Under 3-Star	3-Star	4-Star	5-Star
Statewide	6272	20%	28%	38%	13%
Rural	2417	20%	31%	40%	9%
Suburban	1147	21%	28%	35%	16%
Urban	2708	20%	27%	37%	16%

Source: DCDEE licensing data 2/19

were more likely to have an NC Pre-K program than non-publicly sponsored programs. In fact, 90% of school programs had an NC Pre-K classroom while nearly half of Head Start programs (43%) and “other public” programs (48%) also had NC Pre-K classrooms. (The percentage of school programs with an NC Pre-K program only include those elementary schools with licensed programs serving children birth to five. This percentage is not reflective of all public schools. “Other” public programs include sites such as state funded mental health sites or those run by public universities.) On the other hand, the far more prevalent in numbers for-profit and not-for-profit centers were much less likely to have NC Pre-K classrooms. Only 17% of for-profit centers and 14% of non-profit centers had an NC Pre-K classroom.

Further, there was a positive correlation between a program’s star rating and the likelihood of having an NC Pre-K classroom: more than half (56%) of 5-star programs in the state had at least one NC Pre-K classroom, while very few of the 3-star or below programs had these classrooms (3%). Fourteen percent (14%) of 4-star programs had an NC Pre-K classroom. This star rating breakdown is to be expected because the state’s NC Pre-K standards are related to license type. Thus, there appears to be mutually reinforcing relationships between centers’ star ratings,

Table 3: **Percentage with NC Pre-K Classrooms**

		Percentage NC Pre-K
Statewide	All Programs	31%
Type of Organization	For-Profit	17%
	Not-For-Profit	14%
	Public	75%
Sponsoring Agency	Proprietary or Corporate	17%
	Community Board or Faith	14%
	Head Start Programs	43%
	Public Schools	90%
	Other Public	48%
Location	Urban	21%
	Suburban	30%
	Rural	38%
Star Rating	No stars through 3 Stars	3%
	Four Stars	14%
	Five Stars	56%

2019 Director surveys

Table 4: **Median Hourly Wages in Centers Statewide and by NC Pre-K Classroom Designation**

		2015 Wage in 2015 Dollars	2015 Wage in 2019 Dollars	2019 Starting Wage	Real Change (2015 -2019)	Percent Change 2015-2019
All Centers	Starting Teacher Wage	\$10.00	\$10.73	\$10.50	98%	-2.1%
	Highest Teacher Wage	\$12.50	\$13.42	\$15.00	112%	11.8%
	Starting Assistant Teacher Wage	\$9.00	\$9.66	\$10.00	104%	3.5%
	Highest Assistant Teacher Wage	\$10.00	\$10.73	\$12.00	112%	11.8%
Centers with NC Pre-K classrooms	Starting Teacher Wage	\$15.00	\$16.10	\$20.19	125%	25.4%
	Highest Teacher Wage	\$21.31	\$22.87	\$36.60	160%	60.0%
	Starting Assistant Teacher Wage	\$11.25	\$12.08	\$12.13	100%	0.4%
	Highest Assistant Teacher Wage	\$15.16	\$16.27	\$19.26	118%	18.4%
Centers without NC Pre-K classrooms	Starting Teacher Wage	\$9.00	\$9.66	\$10.00	104%	3.5%
	Highest Teacher Wage	\$11.00	\$11.81	\$13.00	110%	10.1%
	Starting Assistant Teacher Wage	\$8.00	\$8.59	\$9.00	105%	4.8%
	Highest Assistant Teacher Wage	\$9.50	\$10.20	\$11.00	108%	7.8%

2015 & 2019 Director surveys

https://www.bls.gov/data/inflation_calculator.htm

public sector (specifically public school) sponsorship, and the presence of an NC Pre-K designation.

Geographically, programs in rural areas were more likely to have NC Pre-K classrooms than in other areas of the state. In these rural areas, 38% of programs had at least one NC Pre-K classroom. By contrast, in urban areas one in five programs were NC Pre-K sites. Finally, in suburban areas, approximately 30% of programs had at least one NC Pre-K classroom.

Staffing. The early childhood education staff that participated in the director survey represented a wide variety of positions in the early childhood field. Weighting those responses to represent the total director population yielded results that show titles such as: director (65%); director/owner (25%); principal (4%); and various other titles (6%) such as manager, coordinator, and administrator.

Among staff who completed a teacher survey, nearly three quarters identified themselves as teachers or lead teachers. Nearly a quarter were assistant teachers, teacher’s aides, or floaters. Grouping these differing titles, along with the small percentage of “other” titles such as group leader, assistant,

etc. resulted in about 75% grouped as “teachers” and 25% grouped as “assistant teachers.” Respondents to the teacher survey included a small number of other staff (<1%) with a wide variety of self-reported job titles including closer, support, non-specified, PRN, etc. Although these individuals reported that they teach or work with classrooms of children, on the basis of available information, they could not be reliably classified as either a teacher or an assistant teacher. These individuals are included in aggregate results describing the “teaching staff” but they are omitted from those analyses where “teachers” and “assistant teachers” are reported as two separate groups.

All teaching staff in the survey work with some combination of birth to five year olds at least some of the time. Respondents who indicated that they only work with the school-age population were excluded from the study. Just over half (54%) of those filling out the teacher survey indicated that they work with infants, toddlers, or twos at least some of the time. A lower 43% only teach infants, toddlers, or twos. Also just over half (56%) indicated that they work with preschool children (three to five year olds) at least sometimes, with 43%

Table 5: **Median Wages of ECE Staff by Program Characteristics**

		Starting Teacher Wage	Highest Teacher Wage	Starting Asst Wage	Highest Asst Wage	Assistant Director*	Director*
Statewide	All Programs	\$10.50	\$15.00	\$10.00	\$12.00	\$14.52	\$19.23
Type of Organization	For-Profit	\$10.00	\$13.00	\$9.00	\$11.00	\$14.42	\$17.11
	Not-For-Profit	\$10.00	\$13.00	\$9.00	\$11.00	\$13.70	\$17.68
	Public	\$20.19	\$36.60	\$12.13	\$19.26	\$24.04	\$29.72
Sponsoring Agency	For-Profit, single site	\$9.50	\$12.98	\$9.00	\$10.00	\$14.00	\$16.00
	For-Profit, multi-site	\$10.00	\$14.00	\$9.50	\$11.50	\$15.17	\$20.00
	Not-For-Profit, community board	\$10.00	\$15.00	\$9.00	\$12.00	\$14.00	\$19.23
	Not-For Profit, faith based	\$10.00	\$12.00	\$9.00	\$10.00	\$13.46	\$17.00
	Head Start Programs	\$14.00	\$18.69	\$11.00	\$14.00	\$22.02	\$22.00
	Public Schools	\$20.19	\$36.60	\$12.13	\$19.26	\$26.22	\$32.69
	Other Public	\$12.98	\$16.37	\$11.00	\$12.30	\$15.38	\$25.00
Location	Urban	\$11.75	\$15.00	\$10.00	\$12.50	\$16.00	\$21.00
	Suburban	\$10.00	\$14.00	\$9.50	\$11.50	\$14.00	\$18.75
	Rural	\$10.00	\$14.50	\$9.01	\$12.00	\$12.50	\$17.50
Star Rating	No stars through 3-Stars	\$9.00	\$12.00	\$8.92	\$10.00	\$12.75	\$16.00
	Four-Stars	\$10.00	\$13.00	\$9.00	\$10.00	\$13.46	\$17.00
	Five-Stars	\$13.46	\$18.72	\$11.51	\$14.25	\$16.00	\$23.00

2019 Director surveys

* Assistant Director and Director median salaries are actual salaries, not median starting/highest salaries

only working with this age group. A small percentage of the teaching staff did not indicate the age group with which they work. These respondents are included in overall analysis but are excluded in discussions broken down by age group taught.

Wage Scales. Center directors reported compensation scales for center teaching staff that included low starting wages and limits on the highest wages paid to teachers and assistants (upper 4 rows of Table 4). In 2019, starting teachers in the state earned a median \$10.50 per hour compared to the 2015 starting teacher statewide amount of \$10.00 per hour. The median starting wage for assistant teachers in 2019 was \$10.00 per hour compared to \$9.00 per hour statewide in 2015. The 2019 median highest paid teacher wage of \$15.00 per hour compares to the \$12.50 per hour highest teacher wage statewide in 2015. Finally, the 2019 median highest wage for assistant teachers was \$12.00 compared to the 2015 statewide median highest wage of \$10.00 per hour. Although all wages have increased since 2015, the percentage increase as well as the buying power of these dollars has changed to varying degrees and, in fact, the buying power for starting teachers has slightly decreased over the past four years. (Throughout the report, past wages are adjusted to account for inflation and are reported in 2019 dollars to show this adjustment. Buying power is the change after accounting for inflation and reflects the ability to buy more or less than in the past.)

Typical starting and highest salaries for classroom staff, as well as actual salaries for assistant directors and directors, varied by auspice and star rating. As shown in Table 5, working in the public sector, whether in a public school, in a Head Start/Early Head Start program or another public setting, resulted in higher salaries. Not-for-profit and for-profit programs had similar pay structures. However, differences can be found within these two groups. In not-for-profit programs, those that were sponsored by community boards tended to pay higher wages overall than those sponsored by faith based organizations. In the for-profit community, multi-site programs tended to pay higher wages than those that are single site owned. These wage findings reflect similar national findings from the Government Accountability Office, which found low wages among all child care providers but higher pay for individuals working in publicly funded programs such as Head Start.³

The geographic location in which early care and education staff worked plays a role in salaries as was expected. Not surprisingly, for all staff, from assistant teachers through directors, working in an urban setting resulted in higher levels of pay than working in either a rural or suburban setting. Outside of the urban setting, however, no clear pattern exists. For teachers, regardless of whether they worked in rural or suburban areas, the starting median wage was \$10.00 per hour. However, more seasoned teachers in rural areas could expect a higher median salary at the top of the pay scale, \$14.50 per hour compared to \$14.00 per hour in the

Table 6:
Employment Benefits in ECE Centers

	2015	2019
Fully Paid Health Insurance	19%	15%
Partially Paid Health Insurance	30%	33%
Free Child Care	13%	10%
Disability Insurance	33%	32%
Parental Leave	56%	64%
Reduced Child Care Fee	52%	57%
Retirement Benefits	39%	43%
Paid Sick Leave	72%	71%
Paid Vacation	83%	87%
Paid Holidays	90%	93%

2015 & 2019 Director surveys

suburbs. For assistant teachers, though they may start at a lower wage in rural programs (\$9.01 per hour vs. \$9.50 per hour), the median highest wage in rural areas outpaced that in suburban communities (\$12.00 per hour vs \$11.50 per hour). Wages in administrative positions were higher in suburban programs with assistant directors making a median \$14.00 per hour compared to \$12.50 per hour in rural programs and directors making a median \$18.75 per hour compared to \$17.50 in rural communities. See Table 5.

When looking at the star rating of programs, the higher the star rating, the higher the wage scales for classroom staff and the higher the actual salaries for administrative personnel. See Table 5. For assistant teachers, salaries in 5-star programs ranged from a median \$11.51 per hour for starting assistant teachers to \$14.25 per hour for the highest paid assistants. In 3-star programs or below, this median salary dropped to a range of \$8.92 per hour to \$10.00 per hour. For teachers, 5-star programs paid a median starting salary of \$13.46 per hour to a high of \$18.72 per hour compared to just \$9.00 per hour to \$12.00 per hour in 3-star or below programs. Actual median salaries for assistant directors were \$16.00 per hour in 5-star programs yet just \$12.75 in 3-star or below programs. Finally, for directors in 5-star programs they could expect a median salary of \$23.00 per hour compared to \$16.00 per hour in 3-star or below programs. Given that the 2019 living wage in the state was \$11.80 per hour for a single person,⁴ the wage range for assistant teachers, even in the highest quality programs only allows for those at the very top to meet this standard. Many teachers, similarly, fall below the living wage.

Despite these overall trends, there were important wage scale and wage progression differences for teaching staff

depending on whether or not they worked in a program that had an NC Pre-K classroom on site. Licensed early care and education programs with NC Pre-K classrooms had substantially better compensation at all levels than did those without such classrooms, as shown in the lower portions of Table 4. For both starting and highest paid teachers and assistant teachers, working in settings with an NC Pre-K classroom resulted in higher compensation. Median starting teacher salary in programs with at least one NC Pre-K classroom was more than double the median starting teacher wages in programs without NC Pre-K classrooms (\$20.19 vs. \$10.00). The median highest paid teachers working in settings with an NC Pre-K classroom made far more than double the highest paid teachers in settings without an NC Pre-K classroom (median highest wage of \$36.60 vs. \$13.00 per hour). There was also a wage premium for assistant teachers who were just starting out: \$12.13 in settings that had an NC Pre-K classroom vs. \$9.00 in other settings. This difference was also significant with seniority, as highest paid assistant teachers were reported to have a median wage of \$19.26 in settings with NC Pre-K classrooms compared to only \$11.00 per hour in other settings. Outside of the classroom, actual wages for assistant directors were also higher in programs with at least one NC Pre-K classroom (\$16.00 vs. \$14.00) as well as for directors (\$26.44 vs. \$17.00).

Employment Benefits. Employment benefits offered by centers in North Carolina are shown in Table 6. In 2019, nearly

half, 48%, of programs provided at least some help with health insurance, which is similar to 49% in 2015. However, fewer programs offered fully paid health insurance in 2019 (15% in 2019 vs. 19% in 2015). Although relatively few programs offer free child care to employees (10%), over half of programs (57%) offer reduced child care fees. A larger percentage of programs statewide offered parental leave in 2019, 64% compared to 2015 (56%). Overall, the majority of programs gave their staff at least some paid time off, though the amounts of each may vary. Paid holidays were the most frequent paid time off given by programs at 93%. Eighty-seven percent (87%) of centers provided paid vacation days for employees and less than three-fourths, 71%, gave at least some paid sick leave. Though the percentage of programs offering sick leave was similar to 2015 (72%), a higher percentage of centers statewide offered paid holiday and vacation time in 2019 than in 2015 when 90% offered paid holidays and 83% offered paid vacation time. Forty-three percent (43%) offered their employees some type of retirement benefits in 2019 compared to a lower 39% in 2015.

Over the years since NC Pre-K's inception in 2001, public pre-k programs have contributed to increases in many types of benefits. Working in sites with an NC Pre-K classroom increased the opportunity to receive health insurance, parental leave, retirement, and disability. Working in a site with an NC Pre-K classroom, likewise, increased the chance for teachers to receive paid time off including sick, vacation, and holiday. See Figure 4. NC Pre-K programs have been the drivers for

Figure 4: **Benefits in Programs With and Without NC Pre-K Classrooms**

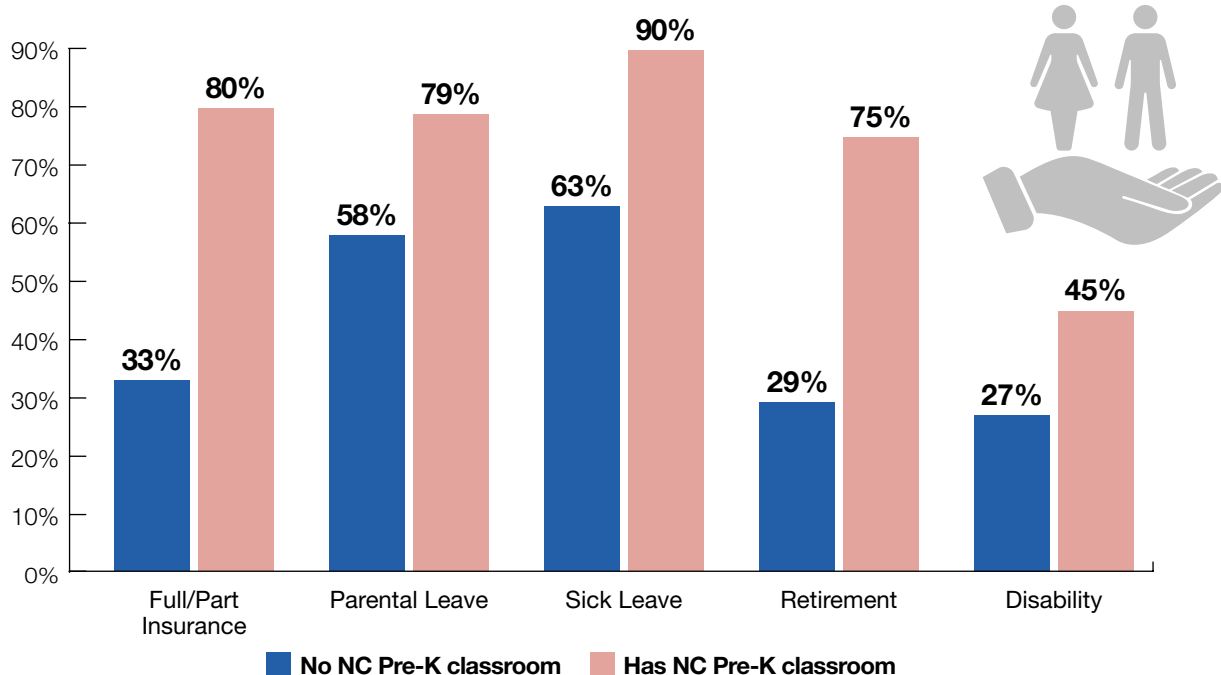


Table 7: **Health Insurance and Wages by Auspice**

Type of Center	Partly or Fully Paid Health Insurance	Median Starting Teacher	Median Highest Teacher
Private For-Profit (single center)	18%	\$9.50	\$12.98
Private Not-For-Profit (faith community)	29%	\$10.00	\$12.00
Private For-Profit (multi-center)	47%	\$10.00	\$14.00
Private Not-For-Profit (community/board sponsored)	54%	\$10.00	\$15.00
Public Program (mental health, community college)	100%	\$12.98	\$16.37
Public Head Start	100%	\$14.00	\$18.69
Public School	100%	\$20.19	\$36.60

2019 Director surveys

increasing the overall benefits provided by programs offering these benefits over the past two decades.

Whether or not a child care provider received any support with health insurance (as well as other benefits and their wages) relates to the organizational auspice of the program in which the teacher worked. See Table 7. All (100%) publicly sponsored programs offered their teachers either free or reduced health insurance, and in most of these programs, a teacher could expect a starting wage of at least \$12.98 per hour. Those providers who worked in non-profits (excluding those sponsored by faith communities) fell below public employees with 54% receiving fully or partially paid health insurance with a starting median wage of \$10.00 per hour and highest median wage of \$15.00 per hour. Fewer than half (47%) of employees in multi-center, for-profit programs received at least partially paid health insurance, and had a median starting wage of \$10.00 per hour (typically having a top wage of \$14.00 per hour). Twenty-nine percent (29%) of non-profit, faith based programs offered health insurance and a starting median wage of \$10.00 with a highest median wage of \$12.00 per hour. Finally, employees in single site, for-profit centers were not as likely to receive help with health insurance as just 18% of these program offered this benefit. Salaries in these programs were also on the low end with median starting wages of \$9.50 per hour and median highest wages of \$12.98 per hour. These types of centers were the most prevalent form of organization in the state with almost 39% of all centers in the state being single site, private, for-profit centers. On the other hand, about 7% were publicly sponsored Head Start/Early Head Start programs and 17% were publicly funded schools.

Overtime Pay. Among the 52% of the teaching staff who reported that they had ever worked over 40 hours per week,

the slight majority (55%) said that their centers paid them time and a half for the overtime hours that they worked. When directors were asked this same question about their teaching staff, a lower 48% said that their teachers sometimes work over 40 hours per week and 77% of these directors explained that teachers who are asked to work over 40 hours per week are compensated at one and a half times their regular hourly wage. Another 7% of employers report that their teachers are exempt from overtime requirements, while another 10% reported time off in lieu of additional compensation. Federal wage and hour law requires that non-exempt workers such as early care and education teachers receive time and a half for overtime hours.

This law does not apply to public sector employees who may receive time off in lieu of paid compensation. Regardless of setting, 16% of teachers reported that they have worked over 40 hours per week on occasion without receiving any type of compensation or time off.

FAMILY CHILD CARE (FCC) HOMES

Family child care providers constitute a relatively small, but nonetheless important sector of child care providers in North Carolina. At the time of this study, more than 1,500 family child care providers used their own homes as the site of care and education for nearly 6,300 birth to five year olds across the state. Enrollment for February 2019 for full and part time children ranged from zero to eleven children, with a median of five young children in each home.⁵ Although the most recent center-based study was completed in 2015, for family child care providers, 2014 provides the most current data to compare to this study.

The typical family child care provider was 55 years old in 2019, and had been running her family child care business for a median of 18 years (compared to a median 5.4 years in 2003 and an average 13.0 years in 2014). Nearly three out of four (73%) were persons of color. Providers typically worked long hours, 53.75 hours per week, which is slightly more than the 52.5 median hours worked per week in 2014. There is a great deal of variability in how long the home-based providers spent working (as estimated by the number of hours they were open). However, 96% of providers worked more than 40 hours per week, and one in five worked 60 hours or more each week.

Among the special services offered by the responding home providers were evening care (56%), overnight care (30%), drop-in care (71%), holiday care (27%), weekend

care (24%), and care for sick children (14%). The comparable figures reported in the 2014 survey overall were significantly higher: evening care (79%), overnight care (51%), drop-in care (69%), holiday care (43%), weekend care (39%), and care for sick children (20%). Nonetheless, availability of these services from family child care providers is similar to the percentages from the last county specific workforce study conducted in 2003 in some areas: 53% evening, 27% overnight, and 25% holiday though significantly more in other areas: 3% providing care for sick children and 53% drop-in care. See Figure 5.

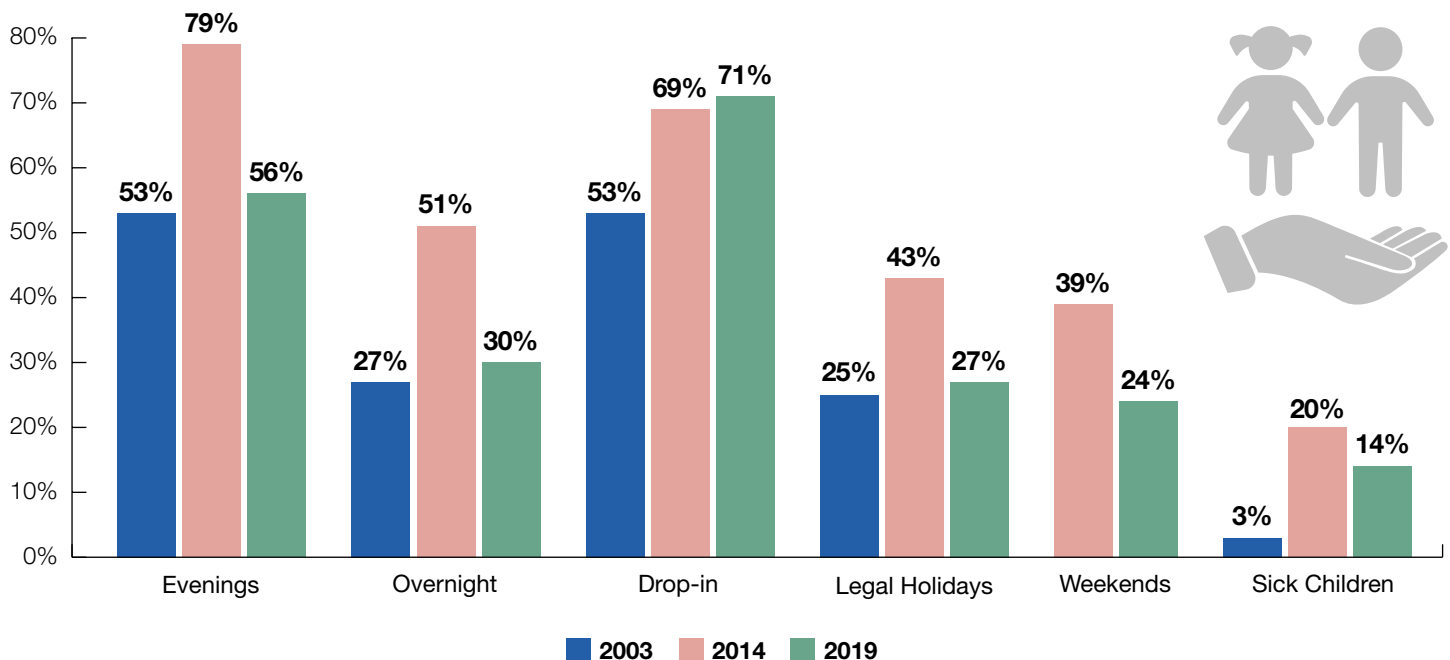
Earnings and Expenditures. Family child care providers' median gross monthly earnings come from a varying mix of child care tuition fees paid by parents, subsidy payments, and Child and Adult Care Food Program reimbursements. Their expenditures include items such as food, toys, substitute care, advertising, training fees, diapers, crafts, transportation, supplies, field trips, cleaning supplies, and gifts for the children. (Home occupancy costs such as utilities, home repairs, license fees, insurance, and rent or mortgage payments are not included in this analysis). Median food costs represented about half of providers' monthly expenditures, and 76% of family child care providers defrayed this expense by participating in the Child and Adult Care Food Program. In 2014, a similar percent, 77%, of providers participated in the Child and Adult Care Food Program. Currently, about six in ten (63%) family child care providers participated in the child care subsidy program and an additional 18% currently had no subsidized children in

the program, but were willing to take them. Based on these data, estimated gross yearly earnings were \$35,073.

Median hourly earnings in 2019 were \$9.09, estimated by subtracting monthly expenses from monthly earnings and dividing the result by the number of hours each home was open. (Calculations for median earnings was determined by using only those homes that supplied information on income, expenses, and hours. Those who provided incomplete information were not included in the calculations for earnings.) The bottom 25% of family child care providers earned less than \$5.67 per hour, and one in four family child care operators made more than \$12.32 per hour. However, the typical net earnings of a family child care provider seems to have improved from the time of our previous survey in 2014 when family child care providers netted \$7.05 per hour, which represents \$7.58 per hour in 2019 dollars.⁶ Thus, family child care providers seemed to have increased their buying power by about \$1.51 per hour over the last five years. Family child care providers in our survey in 2003 reported a median net income of \$5.71 per hour. Using data from the Consumer Price Index, \$5.71 per hour in 2003 translates to \$7.96 in 2019 dollars. This being the case, the median family child care provider earnings increased by 14% since 2003.

Benefits. Family child care providers usually worked alone or with the help of an unpaid or underpaid family member, and were less likely than centers to have established policies regarding paid benefits. Hence, family child care providers

Figure 5: Family Child Care Providers Types of Care Offered



were much less likely than early care and education center staff to receive any paid benefits. Child care tuition covered providers' vacation time in 62% of homes, and 57% of providers charged for days when they were sick. These numbers are higher compared to 2014 when 54% of providers charged for vacation days and 48% charged for sick days. In 2003, 43% of parents paid for vacation days and 51% paid for sick days. These measures help identify the extent to which providers run their child care programs using a business model designed to meet providers' personal and professional needs.

PROFILE OF THE EARLY CARE & EDUCATION WORKFORCE

The center-based early care and education workforce in North Carolina, along with the family child care provider population, was overwhelmingly female and included a large proportion of workers who had children of their own. Table 8 displays data for directors, the center teaching staff, and family child care providers in 2019 and compares all three groups to their statewide counterparts in 2015 (2014 for family child care providers).

Overall, the early care and education workforce reported being slightly older than they said in the 2015 (2014) study. Directors in the 2019 study were a median 48 years old, just one year older than they described themselves in the 2015 study. The teaching staff reported being two years older on average in 2019 (40 years old) compared to 2015 (38 years old). Finally, family child care providers in 2019 were a median 55 years old compared to 51 years old reported in the 2014 study.

In terms of gender representation, the teaching staff in the state in 2019 responded similarly to the teaching staff in 2015 with 99% indicating that they were women. Two new choices were added to the statewide survey in 2019 allowing respondents to select "non-binary" or "prefer not to answer" for the question on gender. For teachers, less than 1% expressed that they preferred not to answer or that they were non-binary. Directors less frequently chose the female option on the survey with 95% of directors indicating this gender. Slightly lower than 1% of directors indicated that they preferred not to answer the gender question. No directors indicated that they were non-binary. Family child care providers, similarly, were overwhelmingly female (99%) with less than 1% indicating

Table 8: **Demographic Profile of the ECE Workforce**

	Director		Teaching Staff		FCC	
	2015	2019	2015	2019	2014	2019
Median age	47 yo	48 yo	38 yo	40 yo	51 yo	55 yo
Female*	95%	95%	99%	99%	99%	99%
People of color⁺	44%	45%	47%	51%	67%	73%
Have children, any age	88%	89%	74%	77%	88%	90%
Have at least one child 0-18	48%	45%	48%	47%	39%	29%
Single parent w/sole responsibility for child 0-18	9%	6%	14%	14%	11%	8%
Annual family income <\$30K	14%	7%	56%	49%	43%	30%
Annual family income <\$50K	41%	32%	78%	75%	74%	68%

2014 & 2019 FCC surveys; 2015 & 2019 Director and Teacher surveys

* 5% Directors prefer not to answer gender | *.2% Teaching staff prefer not to answer gender

* 1% Teaching staff answered nonbinary | *.4% FCC prefer not to answer gender

+ Includes Asian, African American, Bi-Racial, and American Indian/Native American. Also include Hispanic/Latinx/Spanish.

that they preferred not to answer the question on gender.

Forty-five percent (45%) of directors and 51% of the teaching staff indicated that they were people of color (including those indicating that they are white and Hispanic/Latinx/Spanish). A larger 73% of family child care providers reported they were people of color. These percentages have increased slightly since the previous study when 44% of directors, 47% of the teaching staff and 67% of family child care providers indicated that they were people of color. Communities in which directors and teachers closely align with the overall population in terms of race and/or ethnicity provide models of career possibilities to young children. The total population of the state is largely non-Hispanic, white (63%) with the remaining 37% representing people of color.⁷ The teaching staff and leadership in child care programs and family child care homes reflects this diversity overall. However, specific to those of Hispanic/Latinx/Spanish descent in the child care field, 2% of directors, 6% of the teaching staff and 4% of family child care providers indicated this ethnicity compared to a larger 10% of the overall statewide population.⁸

Many early care and education professionals struggle financially. Seven percent (7%) of directors, 49% of the teaching staff, and 30% of family child care providers had a total family income of less than \$30,000. Given that 10 years have passed since the Great Recession which ended in 2009, the expectation would be a smaller percentage, specifically of the teaching staff, at this low level. Nearly one in three directors (32%), three-quarters (75%) of the teaching staff

and 68% of family child care providers reported a total family income of less than \$50,000 per year which falls below the 2018 median family income in North Carolina of \$52,413.⁹ Nearly half (47%) of the teaching staff have at least one child birth through 18, adding further financial stress.

Most early care and education professionals indicated that they had experienced having a child of their own (89% of directors, 77% of the teaching staff, and 90% of family child care providers). Given their median ages, however, a lower percentage reported having one or more children who are under 18 years old (45% of directors, 47% of the teaching staff, and 29% of family child care providers). A smaller but significant percentage were required to navigate the responsibilities of parenthood alone with 6% of directors, 14% of the teaching staff, and 8% of family child care providers choosing the single with no support option on the survey.

Many of the 47% of teachers and assistant teachers who said that they have children under 18 indicated that these

children were young enough to need child care. Note that programs and services provided by early childhood employers as well other community agencies can be valuable resources for these workers and their families. Examination of the survey data suggests that of the nearly 30,000 early care and education teachers and assistants in North Carolina, about 31% were estimated to have children of an age to need child care. Most of these teacher-parents were served by the centers where they work (70%) but nearly one in three (30%) had another arrangement for child care. The centers employing them typically provided free or reduced care at the center for these employees' children (82%), but many remained eligible for government assistance for child care. The survey data suggest that one in three teacher-parents with child care aged children (34%) received government assistance to help pay for their children's care at work or elsewhere. The dominant source of this payment was from vouchers (88%). The remaining help came from diverse sources such as NC

Table 9: **Education of the Early Childhood Education Workforce**

	Directors		Teachers		Assistant Teachers		FCC Providers	
	2015	2019	2015	2019	2015	2019	2014	2019
HIGHEST EDUCATION COMPLETED*								
Bachelor's Degree or More in ECE/CD	23%	25%	15%	16%	3%	4%	5%	8%
Bachelor's Degree or More in Other Field	37%	39%	22%	18%	12%	14%	15%	9%
Associate Degree in ECE/CD	18%	19%	21%	26%	24%	24%	20%	29%
Associate Degree in Other Field	3%	4%	5%	5%	7%	8%	9%	5%
High School + Any College Courses	19%	13%	36%	32%	44%	40%	45%	44%
High School + Workshops	1%	<1%	1%	1%	4%	3%	3%	2%
High School Only	<1%	<1%	1%	1%	5%	7%	3%	3%
Less than High School	0%	0%	<1%	<1%	<1%	<1%	<1%	1%
OTHER EDUCATION CREDENTIALS								
N.C. EC Credential	66%	71%	73%	74%	68%	63%	78%	84%
N.C. EC Administration Credential	72%	76%	27%	24%	14%	14%	39%	38%
Infant/Toddler Certificate	na	22%	na	20%	na	16%	na	30%
Child Development Associate (CDA)	6%	15%	10%	12%	11%	11%	8%	15%
B-K/Preschool add-on License	10%	14%	12%	12%	1%	1%	2%	3%
EDUCATIONAL PURSUITS								
Currently Taking ECE/CD Courses	14%	9%	17%	16%	19%	20%	12%	8%

2014 & 2019 FCC surveys; 2015 & 2019 Director and Teacher surveys

* A person with multiple degrees is only included in the category of their highest degree.

Pre-K funding, Head Start, and Early Head Start. In addition to the teachers served by these programs, others may be eligible and on one of the long waiting lists for subsidy in counties across the state.

EDUCATION OF THE EARLY CARE AND EDUCATION WORKFORCE

The education of the early care and education workforce has been a critical factor influencing children’s early learning opportunities. With the 2015 release of the National Academics of Science report, “Transforming the Workforce for Children From Birth Through Age Eight,” it is clearer than ever before that our young children need a well-educated workforce. The report recommends that all lead teachers working with children from birth through age eight have a bachelor’s degree in early childhood education as a necessary but not sufficient measure for building quality teachers.¹⁰ This section profiles the educational attainment and aspirations of the workforce as expressed in the current survey. See Table 9 for education data on center directors (directors, director/owners, and assistant directors), teachers (teachers and lead teachers), assistant teachers (assistant teachers, teacher aides, and floaters), and family child care providers.

Center directors have achieved higher levels of education than teachers, assistant teachers, and family child care providers though none of the groups’ education levels match the minimum requirements for teachers and administrators in public elementary, middle, and high schools. Standards in North Carolina’s rated license system, Head Start/Early Head Start and NC Pre-K all require and/or emphasize a degree and the addition of early childhood course work.

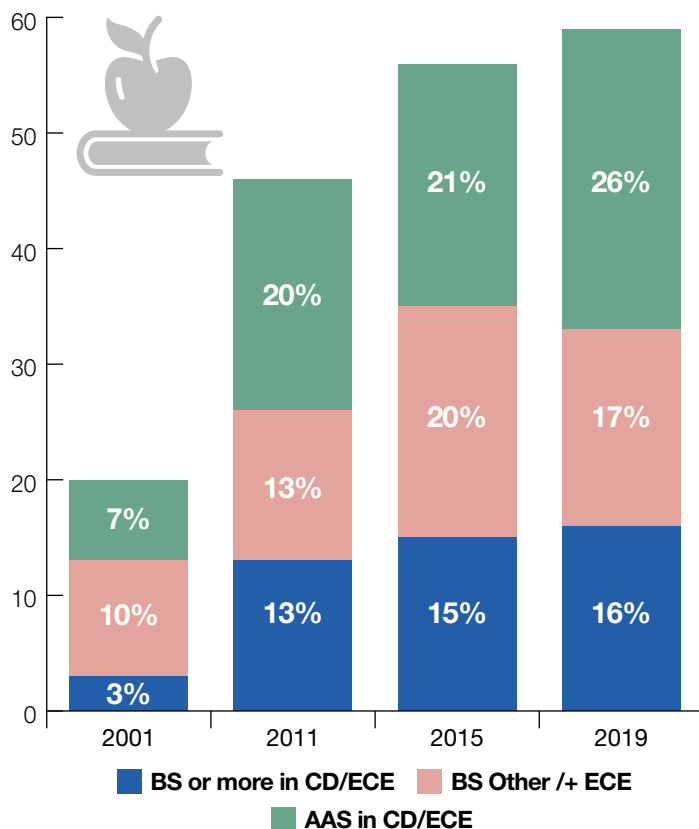
Overall, 87% of directors, 66% of teachers, 50% of teacher assistants and 51% of family child care providers had at least an associate degree or more in any field. In 2015, 81%, of directors, 63% of teachers, 46% of assistants, and 48% of family child care providers (in 2014) indicated that they had attained some type of college degree. In comparison, 75% of directors, 51% of teachers, and 39% of assistants in 2011 had earned at least an associate level diploma. In the 2019 study, the percentage of directors in the state with a bachelor’s degree or more in any field was 64%. A third of the teachers (34%) and 18% of assistants in centers had a degree beyond the associate level. Fewer family child care providers had a bachelor’s degree or more with 17% having achieved this level of education. These rates compare to the overall North Carolina population in 2018 where 29% hold a bachelor’s degree or higher.¹¹

Fifty percent (50%) of directors, 44% of teachers, 29% of assistant teachers, and 38% of family child care providers had a degree specifically in early childhood education/child development although this degree may or may not have been

their highest degree. (These percentages are not reflected in Table 9 which shows the highest degree a person has obtained.) Regardless of the level of education or degree obtained, 97% of directors, 95% of teachers, 82% of assistants, and 92% of family child care providers had taken at least one course in early childhood education. Further, 82% of directors, 65% of teachers, 46% of assistants, and 70% of family child care providers had taken six or more courses in early childhood education.

As shown in the lower half of Table 9, many directors, teachers, assistant teachers, and family child care providers have completed college courses and earned various certifications and licenses. Statewide, 14% of directors, 12% of teachers, 1% of assistant teachers, and 3% of family child care providers had a B-K/Preschool add-on Teacher License compared to 10% of directors, 12% of teachers, and 1% of assistant teachers in 2015 and 2% of family child care providers in 2014. A larger proportion had the infant-toddler certificate with 22% of directors, 20% of teachers, 16% of assistant teachers, and 30% of family child care providers reporting that they had this certificate. Furthermore, 9% of directors, 16% of the teachers, 20% of assistants, and 8% of family child care providers said that they were currently taking

Figure 6:
Teacher (only) Educational Gains Over Time



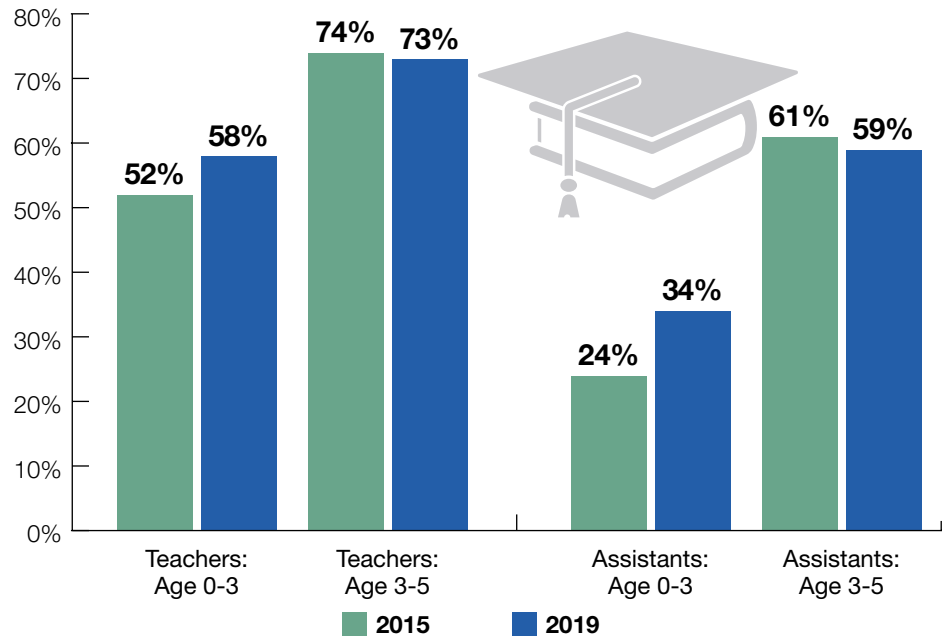
courses leading to a degree or credential in the early childhood field. Of those taking classes, 46% of teachers, 49% of assistant teachers, and 37% of family child care providers were working towards an associate degree and 25% of teachers, 27% of assistant teachers, and 39% of family child care providers were working towards a bachelor's degree.

Investments in the early care and education system have paid off dramatically over time for the workforce in terms of increased education levels of teachers (specifically) around early care and education coursework. Figure 6 shows a steady increase in the percentage of teachers (only) with degrees either in the early childhood education field or with at least a bachelor's degree in some other field and early childhood coursework. In 2001, a mere 20% of teachers had attained as much as an associate degree in early childhood/child development or had at least a bachelor's degree in another field and had taken an early childhood education course. By 2011, this percentage had more than doubled to 46%. Education levels in these three categories had all grown by 2015. In 2019, 59% of teachers had either a degree in the early childhood education field or had a bachelor's degree or more in some other field and early childhood coursework. This nearly 40 percentage point increase occurred in less than a 20 year timespan.

Attainment of professional degrees show both actual knowledge learned that can be directly applied in the classroom as well as the discipline and habit to continued professional development in order to best meet the needs of the children in their care. Young children do not come to child care as a blank slate. Instead, they bring their experiences with their families and communities, both positive and traumatic. In order to serve all children and help them meet their full potential, child care providers should be knowledgeable and experienced in working with children from a variety of backgrounds. Two situations that have a profound and lasting effect on the development of young children are family addictions and homelessness.

In 2017, nearly 20 million people (age 12 and older) were classified as having a substance use disorder as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). These substances included alcohol and marijuana abuse as well as other illicit drugs including both prescribed opioid pain relievers as well as illegal substances.¹² Despite the growing misuse of alcohol, opioids and other substances, 85% of the North Carolina teaching staff

Figure 7: **Percent of Teaching Staff with Degree by Age Group Taught**



reported not having had any formal training or education working with children whose parents suffer from addiction. A similar 84% of family child care providers reported no training or education in this area. A lower 30% of the teaching staff and 38% of family child care providers said that they are somewhat or fully unprepared to care for these children. Directors can be a support for the teaching staff who feel less prepared working with these children as just 13% of directors reported feeling somewhat or fully unprepared to support their staff working with children whose parents suffer from addiction.

A report prepared by the U. S. Department of Education found that in 2017-18, 1 in 26 children under six in North Carolina experienced homelessness.¹³ As the economy continues to stress the finances of low and middle income families in the face of the pandemic, this number of young children experiencing homelessness will most certainly grow. However, the vast majority of the early care and education workforce are not fully prepared to meet the unique needs of these children. Although only 13% of center directors stated that they were either somewhat or fully unprepared to support their staff in this area, a larger 31% of the teaching staff indicated that they feel somewhat or fully unprepared to care for these children (despite 82% who indicated that they had no formal training or coursework in working with children experiencing homeless). Thirty seven percent (37%) of family child care providers said that they feel somewhat or fully unprepared to care for children experiencing homelessness despite 80% reporting no formal training/education in this.

Education of Teachers and Assistant Teachers by Age Group Taught. Education levels of teachers differ as a group depending on the age of children in their care. Infant and/or toddler teachers (ages of children from birth to 36 months) tend to have lower levels of education than those who teach children three years old or older. See Figure 7. Some teachers indicated that they taught multiple age groups spanning across infant/toddlers and preschoolers (three to five year olds). In these cases, education levels were counted in both age groups. Seventy-three percent (73%) of those teachers who taught preschoolers (three through five year olds) had at least an associate degree compared to only 58% of those

teachers who taught infants and/or toddlers. Similarly among teacher assistants working with preschoolers, 59% had a degree at the AA level or above, whereas only 34% of their peers who worked with infants and/or toddlers had this level of education. Of note, from 2015 to 2019, an increase in the percentage of infant and/or toddler teachers with degrees occurred. For infant and/or toddler teachers, a six percentage point increase occurred while for assistants, a ten percentage point increase occurred.

Education by County/Geographic Area. Across the state, education levels of directors, the center teaching staff, and

Table 10: **High and Low County Education Levels**

DIRECTORS				TEACHING STAFF			
AA Degree or Higher		ECE Degree		AA Degree or Higher		ECE Degree	
Statewide	87%	Statewide	50%	Statewide	62%	Statewide	40%
Lowest Counties							
Mitchell	40%	Gates	0%	Alleghany	29%	Currituck	0%
Greene	43%	Polk	0%	Currituck	33%	Alleghany	12%
Camden	67%	Rockingham	16%	Granville	36%	Graham	13%
Dare	67%	Mitchell	20%	Alexander	42%	Chowan	18%
Lee	68%	Dare	25%	Sampson	43%	Richmond	22%
Anson	69%	Jones	25%	Hoke	44%	Dare	27%
Martin	70%	Pasquotank	25%	Chowan	44%	Onslow	28%
Stanly	70%	Yancey	25%	Rockingham	44%	Cabarrus	29%
Madison	71%	Richmond	28%	Richmond	46%	Polk	29%
Swain	71%	Carteret	29%	Graham	47%	Gaston	30%
Highest Counties							
Counties with 100%		Henderson	71%	Transylvania	82%	Rutherford	60%
Alexander	Jones	Swain	71%	Clay	82%	Caldwell	61%
Ashe	Lincoln	Washington	71%	Northampton	82%	Edgecombe	61%
Avery	Montgomery	Davidson	72%	Caswell	83%	Robeson	63%
Beaufort	Pamlico	Caldwell	72%	Polk	86%	Randolph	64%
Burke	Transylvania	Avery	75%	Ashe	87%	McDowell	64%
Caswell	Tyrrell	Brunswick	75%	Duplin	88%	Yadkin	65%
Currituck	Warren	Lenoir	78%	Hertford	89%	Caswell	66%
Gates	Watauga	Ashe	83%	Camden	100%	Hertford	73%
Graham	Yancey	Alexander	86%	Hyde	100%	Duplin	73%
Hyde		Hyde	100%	Warren	100%	Camden	100%

family child care providers vary by county and geographic area. Similarly, degree attainment specifically in the early childhood education/child development field varies across the state.

The percentage of directors statewide with an associate degree or more education in any field was 87%. Half of the directors in the state (50%) had a college degree in the early childhood education/child development field. The five counties with the lowest percentage of directors who reported a college degree of any type were Mitchell County (40%), Greene County (43%), Camden County (67%), Dare County (67%), and Lee County (68%). On the other hand, 100% of the directors in 19 counties responded that they had a college degree in some field (Alexander, Ashe, Avery, Beaufort, Burke, Caswell, Currituck, Gates, Graham, Hyde, Jones, Lincoln, Montgomery, Pamlico, Transylvania, Tyrrell, Warren, Watauga and Yancey counties).

Neither Gates County nor Polk County had any directors with degrees specifically in early childhood/child development. Following those two counties with the lowest percentage of directors with a degree specifically in the field were Rockingham County (16%) and Mitchell County (20%). At the other end of the spectrum, Hyde County leads the way with

100% of directors who had a degree in the early childhood education field. Eighty-six percent (86%) of directors in Alexander County, 83% of directors in Ashe County, 78% of directors in Lenoir County and 75% of directors in Brunswick County and Avery County had a degree specifically in the early childhood education/child development field. See Table 10.

Levels of education can be compared for teaching staff as well. Sixty-two percent (62%) of the teaching staff (teachers and assistants) of centers had a degree at least at the associate level, and 40% of the teaching workforce had this degree in early childhood education/child development. Camden, Hyde, and Warren counties stand out with 100% of their teachers and assistants who reported some type of college degree. (Fewer than 10 people responded in Hyde County and fewer than 20 in Camden County and Warren County.) Rounding out the counties with the highest percentages of teaching staff with degrees was Hertford County with 89% and Duplin County with 88%. Those counties with the lowest percentage of teachers with a degree in any field were Alleghany County (29%), Currituck County (33%), Granville County (36%), Alexander County (42%), and Sampson County (43%). Degrees specifically in the early

childhood education/child development field were held by 100% of the teaching staff in Camden County followed by Duplin (73%), Hertford (73%), Caswell (66%) and Yadkin (65%) counties. However, none of the teaching staff in Currituck County, 12% in Alleghany County, 13% in Graham County, 18% in Chowan County and 22% in Richmond County listed a degree in the field. See Table 10.

Although slightly more than half (51%) of family child care providers across the state had a college degree, that percentage varies just slightly across the state. The percentage of family child care providers in rural communities with a degree hovers around the statewide percentage with 49% having a degree. The percentage of family child care providers in urban communities matches the statewide percentage at 51%. Family child care providers in suburban communities were more likely to have a college degree than those across the state with 57% of providers having some type of secondary degree. Degrees in the field of early childhood education/child development across the state were held by 38% of providers. In urban areas, a lower percentage of family child care providers had a degree specifically in the field at 33%. Forty-one percent (41%) of family child care providers in rural communities and 46% of providers in suburban areas had a degree in early childhood education or child development.

County and geographic variation in educational levels of the workforce may be affected by the wide variation in the availability of educational resources and supports across the state. For many North Carolinians in rural communities, access barriers hinder the ability to obtain continuing education. At times, accessibility can be limited by distance, i.e. the excessive commute to an on-campus class. Other times, accessing higher education in rural areas can be limited by insufficient technological support or resources such as limited internet availability or only dial up access. The COVID-19 pandemic has further highlighted both the need for and disparity in access to reliable online services.

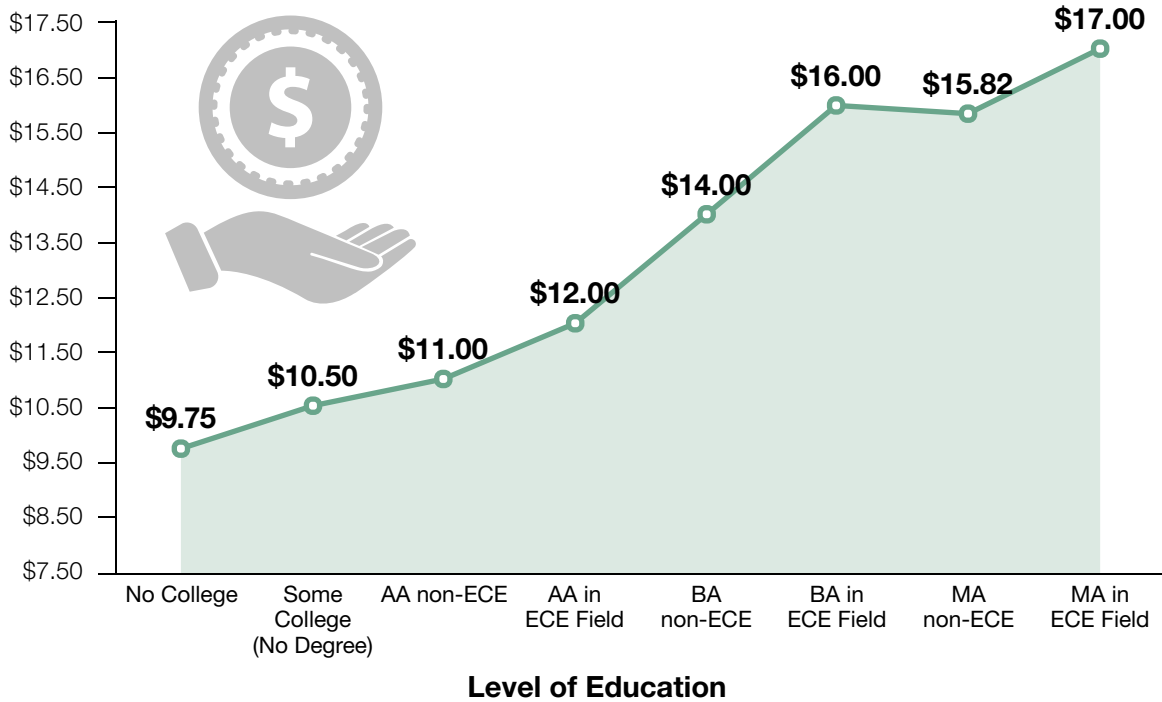
EARNINGS OF THE EARLY CARE AND EDUCATION WORKFORCE

Wages earned by early care and education staff begin with program administrators setting scales that reflect minimum requirements and responsibilities of each position. These scales have been described previously in this report. Actual earnings based on such factors as education, experience, longevity and other factors remain low for the important work that the early childhood educators do each day.

The median self-reported wage for all child care teachers and assistants combined in North Carolina is \$12.00 per hour, an increase from \$10.46 per hour in 2015. Despite this increase, neither teacher nor assistant teacher wages compare to those employed in public schools. The median wage for all early



Figure 8: **Median Hourly Wage of Teachers (only) by Level of Education**



care and education teachers in North Carolina, regardless of education or years of experience, was \$12.04 per hour. For public school teachers, those just starting out with no experience made approximately \$20.19 per hour. A similar pattern holds true for teacher assistants who made a median of \$11.00 per hour in early childhood programs compared to a lowest salary of \$12.13 per hour in public schools. With such low earnings for the direct teaching staff, a percentage of the early care and education teaching staff (13% of teachers and 16% of assistant teachers) said that they worked another paid job in addition to their job to help make ends meet as a teacher or assistant. The median number of hours worked per week in these additional jobs was 15 for both groups.

Child care center directors' self-reported median hourly wage of \$19.23 somewhat competes with that of the starting public school teachers (\$20.19 per hour with zero years of experience) though child care center directors have the added responsibility of running a business and most are not in their first year running a program. Director salaries fall far short of the base salary for public school principals (\$32.75 per hour), however. Assistant Directors' median wages in the state are \$14.52 per hour.

As would be expected, educational level plays a role in teacher and lead teacher wages. Figure 8 shows that, for the most part, the more education, the higher the paycheck for teachers/lead teachers. Having at least some college coursework raised salaries by about \$0.75 per hour

from having no college coursework. A teacher with an associate degree could expect \$0.50 to \$1.50 more per hour more in their paychecks (depending on whether or not their degree is in the early childhood education field) than their counterparts with no degree. Jumping from an associate to a bachelor's degree in a subject other than early childhood education/child development yielded a median paycheck that was about \$2.00 or \$3.00 more per hour than those with some type of associate degree. For those who hold a bachelor's degree or higher in the field of early childhood education, an average \$4.00 to \$5.00 more per hour than those with an associate degree could be expected. Though there was a slight decrease in hourly wages for those with a master's degree in a field other than early childhood education over those with a bachelor's degree in the early childhood education field, this master's degree salary was an increase over those with a bachelor's in another field (\$1.82 per hour more). Finally, for those who achieved a master's degree in early childhood education, an increase of \$1.00 to \$3.00 could be expected depending on whether their bachelor's degree was in the field or not.

For assistant teachers, a clear pattern of wage progression was difficult to ascertain specifically among the higher education levels. However, for assistant teachers, a significant difference in salary could be found between those who had any type or level of degree and those who did not. Assistant teachers with no degree made an average of \$10.00 per hour while

their counterparts with a degree of any type or any level made an average of \$12.00 per hour.

Similar to assistant teachers, educational attainment is not as clearly linked to income for family child care providers as with teachers. When grouped into just two categories, earnings do tend to rise for family child care providers. Family child care providers without a degree earn a median of \$8.12 per hour but those with a degree earn \$9.57 per hour. No consistent pattern of earning differences emerged for other levels of education.

Wage Trends. Wages for the early childhood workforce have been keeping pace with the cost of living although remain comparatively low. See Table 11. In 2015, teachers had a median wage of \$11.77 in 2019 dollars. By 2019, the median wage for these early childhood professionals was a bit over that amount at \$12.04. This represents an increase in buying power of 2.3%. A similar scenario plays out for the median wage of assistant teachers who in 2015 made \$10.70 in 2019 dollars and saw that buying power increase by 2.8% in 2019 with a wage of \$11.00 per hour. Teachers and assistants at the 90th percentile saw a larger increase in buying power with an increase of 5.6% and 7.7% respectively. Although assistant teachers who were in the 10th percentile did see a slight gain in buying power since 2015, the 0.4% increase represents the lowest growth across the study for any job category.

Regardless of increases in wages over the past four years, according to the MIT Living Wage Calculator and adjusting to 2019 figures,¹⁴ far too many teachers and assistant teachers made below the \$11.80 per hour living wage in North Carolina. Forty-one percent (41%) of teachers and 61% of assistant teachers made below the North Carolina living wage despite the great responsibility they have each day for the care and education of young children.

Center directors experienced a larger increase in buying power than either teachers or assistant teachers. The mid-range directors' wages had a 12.0% increase to \$19.23 per hour. Those directors at the top, in the 90th percentile, saw the smallest gain in this job category at 5.6% to a real wage of \$32.69 per hour. Those on the lower end saw a larger increase of 13.4% to \$11.87 per hour. Of note, the lowest paid directors (10th percentile) made less per hour than at least half of the teachers (50th percentile).

The situation for family child care providers involved consistent gains across the board, but their earnings remained quite low with a median wage of \$9.09 per hour. Although this median hourly wage is the lowest of all of the job categories (assistant teacher, teacher, and director), family child care providers have seen the highest increase in buying power at 19.9%. A large decline in the total number of family child care providers has occurred since the last family child care providers study in 2014. At that time, approximately 2,500 family

Table 11:
Self-Reported Earnings of the Early Care and Education Workforce

	2015* Wage in 2019 dollars	2019 Wage	Real Change 2015*-2019	Percent Change 2015*-2019
90th percentile wage: Teacher	\$17.58	\$18.57	105.6%	5.6%
50th percentile wage: Teacher	\$11.77	\$12.04	102.3%	2.3%
10th percentile wage: Teacher	\$8.59	\$9.00	104.8%	4.8%
90th percentile wage: Tchr Asst	\$13.42	\$14.46	107.7%	7.7%
50th percentile wage: Tchr Asst	\$10.70	\$11.00	102.8%	2.8%
10th percentile wage: Tchr Asst	\$8.05	\$8.08	100.4%	0.4%
90th percentile wage: Director	\$30.97	\$32.69	105.6%	5.6%
50th percentile wage: Director	\$17.17	\$19.23	112.0%	12.0%
10th percentile wage: Director	\$10.47	\$11.87	113.4%	13.4%
90th percentile wage: FCC Provider	\$14.37	\$15.73	109.5%	9.5%
50th percentile wage: FCC Provider	\$7.58	\$9.09	119.9%	19.9%
10th percentile wage: FCC Provider	\$2.25	\$2.95	131.1%	31.1%

Source: 2014 & 2019 FCC surveys; 2015 & 2019 Director and Teacher surveys

https://www.bls.gov/data/inflation_calculator.htm

* Family Child Care Historic Data is from 2014

child care providers served children birth to five. In 2019, this number had dropped to just over 1,500. Examining the entire distribution of family child care provider earnings (after expenses) reveals that one in three (34%) made less than minimum wage. These providers also tended to work long hours, which in part accounted for the relatively low hourly wages displayed in Table 11.

Earnings of Teachers and Assistant Teachers by Age Group Taught. Teaching three through five year olds proved to be financially beneficial for educators. Teaching staff who taught three to five year olds could expect approximately 13% higher wages over teaching staff who taught infants and/or toddlers. For teachers and lead teachers, those who taught infants and/or toddlers had a median salary of \$11.50 per hour. Those teachers who taught preschool children fared better with a median salary of \$13.00 per hour. The same held true for assistant teachers of infants and/or toddlers who made \$10.00 per hour compared to their preschool counterparts who made \$11.31 per hour. (Many teachers and assistant teachers indicated that they taught multiple age groups spanning across infant and/or toddlers and preschoolers. These teachers and assistants were counted in both age groups.) A similar, though larger disparity existed between those who only taught infants and/or toddlers and those who only taught preschoolers (17% difference for teachers and 15% difference for assistant teachers).

Earnings by County/Geographic Area. As with most professions, earnings vary based on county and/or geographic location. Table 12 shows the top and bottom median earnings of directors and the teaching staff by county. While statewide the median hourly wage for directors was \$19.23, many counties paid their directors less than this and many paid more than this hourly rate. Directors in Chowan County earned the least with a median reported wage of \$10.00 per hour, followed by Perquimans County at \$11.00 per hour. Alleghany and Duplin counties paid their directors a median of \$12.00 per hour. With a slightly higher median wage of \$12.36 per hour, Person County rounds out the counties paying their directors the lowest wages. On the other hand, Wilkes County paid directors the highest median wage at \$33.17 per hour. Other counties paying the highest wages to their directors were Watauga County (\$32.69 per hour), Jones County (\$31.73 per hour), Davie County (\$31.25 per hour), Polk County (\$30.77 per hour), and Hyde County (\$30.77 per hour).

The statewide wage for teachers and assistant teachers combined was \$12.00 per hour, however, depending on the county, the median wage for teaching staff strayed from this amount tremendously. The counties with the lowest median wage for the center teaching staff were Alleghany and Chowan counties which both averaged \$8.00 per hour.

Table 12: **High and Low County Wages**

DIRECTORS		TEACHING STAFF	
Statewide	\$19.23	Statewide	\$12.00
Lowest Counties		Highest Counties	
Chowan	\$10.00	Alleghany	\$8.00
Perquimans	\$11.00	Chowan	\$8.00
Alleghany	\$12.00	Avery	\$9.00
Duplin	\$12.00	Columbus	\$9.00
Person	\$12.36	Pamlico	\$9.00
Martin	\$12.50	Sampson	\$9.00
Washington	\$12.50	Alexander	\$9.04
Anson	\$12.60	Scotland	\$9.05
Mitchell	\$13.00	Richmond	\$9.17
Stanly	\$13.00	Rockingham	\$9.44
Highest Counties		Lowest Counties	
Lenoir	\$27.08	Warren	\$13.59
Cleveland	\$27.17	Mecklenburg	\$13.75
Cherokee	\$28.13	Wake	\$13.75
Alexander	\$30.05	Transylvania	\$14.25
Hyde	\$30.77	Polk	\$14.30
Polk	\$30.77	Orange	\$14.50
Davie	\$31.25	Caswell	\$15.00
Jones	\$31.73	Camden	\$15.35
Watauga	\$32.69	Jones	\$17.32
Wilkes	\$33.17	Hyde	\$21.06

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Following these two counties were Avery, Columbus, Pamlico and Sampson counties whose teaching staff averaged \$9.00 per hour. On the other end of the spectrum, the Hyde County teaching staff reported the highest median wages at \$21.06 per hour. Teaching staff in Jones County reported a median of \$17.32 per hour, followed by Camden County at \$15.35 per hour, Caswell County at \$15.00 per hour and Orange County at \$14.50 per hour.

Because family child care providers reported working long hours each week (median of 53.75 hours each week statewide) often with little or no help, and because of the expenses inherent to running a child care business, family child care providers often make low wages (\$9.09 statewide). This hourly wage varies greatly for family child care providers based on geographic areas. While those providers in urban

areas reported an hourly rate of \$10.48 per hour, providers in suburban areas reported an hourly rate of \$8.91 per hour. Rural family child care providers made just \$7.63 per hour based on working a median of 55 hours per week.

Economic Well Being of the Early Care and Education Workforce. Many people working in the early childhood field face severe economic challenges that affect their families and them personally. The coronavirus pandemic will only make these challenges more difficult. Overall, the early care and education workforce was at a significant disadvantage economically from the North Carolina population as a whole. Strictly in terms of household income alone, early care and education providers and their families fall well short of other North Carolinians. From the U.S. Census Bureau’s Quick Facts, the median North Carolina household income in 2018 was \$52,413.¹⁵ Three quarters (75%) of early care and education teachers and assistant teachers, have household incomes below this amount (below \$50,000). One in three (32%) directors’ family income was reported as below this amount as was nearly seven of ten (68%) family child care providers. In fact, 49% of the teaching staff, 7% of center directors and 30% of family child care providers have an annual family income below \$30,000.

A direct result of low wages and low household earnings is that many early childhood staff are forced to rely on some type of public assistance. Additionally, 39% of teachers, 37% of assistant teachers and 16% of family child care providers had received some type of public assistance (e.g., Medicaid, SNAP, TANF, child care subsidy) in the previous three years.

Table 13: **Individual Economic Well Being of Child Care Providers**

	Family Child Care Providers	Teachers	Assistant Teachers
Median Hourly Earnings	\$9.09	\$12.04	\$11.00
Median Family Income	\$35-\$39K	\$30-\$35K	\$25-\$29K
Single Parent with Child 0-18	8%	15%	13%
Public Assistance Usage Past 3 Yrs	16%	39%	37%
Works Another Job	7%	13%	16%
No Health Insurance, 2019	16%	22%	20%

2019 Teacher and FCC surveys

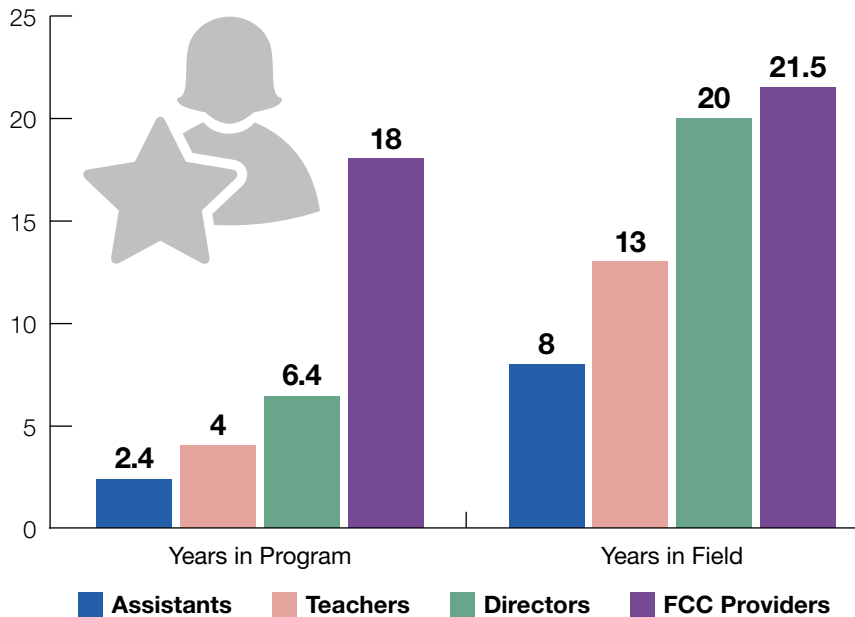
Statewide in 2015, a similar 39% of teachers/lead teachers and 39% of assistant teachers had received some type of public assistance in the prior three years. In 2014, 24% of family child care providers had received some type of public assistance in the prior three years. The most needed service received for the North Carolina early childhood teaching staff was Medicaid for their child(ren) at 29% with SNAP benefits second most used (19%). For most of the teaching staff who had used some type of public benefit over the past three years, 38% used only one service. Approximately one in four (24%) used two public assistance programs. Nearly one in five (18%) needed help from three public benefits. The remaining 20% of the center teaching staff who used public benefits in the past three years utilized more than three programs.

Table 13 breaks down the hard financial burden that teachers, assistant teachers, and family child care providers must battle each day. Given the bleak economic climate for teachers and assistant teachers in North Carolina, center directors often find it difficult to attract and retain qualified staff. As expected, assistant teachers faced more severe economic challenges than did teachers. Hourly wages for assistant teachers remained below that of teachers as did their overall household earnings. To increase their financial situations, a higher percentage of assistant teachers than teachers worked a second job.

Though family child care providers tended to make less in hourly earnings than center staff did, overall, their economic well-being exceeded that of teachers and assistant teachers. Their household incomes were higher, there were a lower percentage of single parents, they were more likely to have health insurance, and a lower percentage had used public assistance in the past three years. Despite the fact that family child care providers maintained long hours, 7% of them also worked a second job.

Although the past decade has seen an improvement in the percentage of the early childhood workforce who had insurance, over the past four years (five for family child care providers), the percentage with coverage has decreased slightly. Statewide, in 2019, approximately one in five teachers (22%) and assistants (20%) reported having no health insurance from any source. Family child care providers reported a slightly lower rate of being uninsured at 16%. For teachers and assistants, 21% received health insurance through their spouse’s plan. A slightly lower percentage, 20% had their health insurance either fully or partially paid through their employer. Nineteen percent (19%) purchased their plan through their employer (with an additional 6% paying for their plan in some other way). Nearly 1 in 4 teachers and assistants (22%) indicated that they received insurance either as a result of the Affordable Care Act or that they were on their parents’ insurance (which was expanded through the Affordable Care Act). Finally, approximately 11% were on Medicaid or Medicare.

Figure 9: **Early Care and Education Workforce Experience**



EXPERIENCE AND TURNOVER OF THE CHILD CARE WORKFORCE

Despite the hardships imposed by the low wages of the workforce, young children need experienced, well-educated teachers with whom they can form close attachments over time. These attributes are even more important for teachers of infants and toddlers because of their developmental stage. North Carolina had a combination of seasoned child care professionals who had remained with their current programs for years as well as some less-experienced providers who had either just begun in the field or in a new child care program.

Across the state, median length of experience in the child care field was 20.0 years for directors, 13.0 years for teachers, 8.0 years for assistant teachers, and 21.5 years for family child care providers. See Figure 9. Directors' median years in their centers was 6.4 years with a range of zero months to 49 years. With a median of 4.0 years in their program, teachers had been in their programs anywhere from just started to over 54 years. The median number of years teacher assistants had been in their programs was 2.4 years with a range of just started to 41 years. Further, about 14% of teachers and 27% of assistant teachers reported having worked at their center for less than a year. Finally, family child care providers had been in their programs for a median of 18.0 years.

The current survey included data which can be used in two different measures of turnover: (1) for center-based teaching staff, the percentage of child care teachers and assistant teachers who left their centers during the previous

year and (2) for individual directors, teachers, assistant teachers, and family child care providers, the percentage of workers who are planning to leave the child care field in the next three years. An aggregate separation rate was constructed by summing the number of staff reported by center directors as working in their centers and dividing into the number they reported as having left employment in the previous year. See Table 14. As a proportion of the population of full-time teachers and assistants in the state, 21% left their centers during the previous 12 months. The separation rate for full time teachers was 22% and for full time assistants the rate was 18% in 2019. These percentages are higher than in 2015 when 18% of the full time teaching staff left: 19% of full time teachers and 13% of full time assistants.

These same data can be used to calculate center specific separation rates. These rates varied substantially across centers. Thirty-one percent (31%) of centers reported that they had no full-time staff turnover during the previous year while 6% of centers had turnover at or above 100% of current full-time staff.

Nearly one in five teachers (19%) said that they would not be in the field in the next three years. For assistant teachers, the rate was 22%. These percentages compare to 19% for teachers and 21% for assistant teachers in 2015. Directors, however, were somewhat less likely to say that they plan on

Table 14: **ECE Workforce Turnover**

Statewide Separation Rates	2015*	2019
Full-time Teachers and Assistant Teachers	18%	21%
Full-time Teachers	19%	22%
Full-time Assistant Teachers	13%	18%
Teachers Leaving the Field in 3 years	19%	19%
Assistant Teachers Leaving the Field in 3 years	21%	22%
Infant/Toddler Teaching Staff Leaving the Field in 3 Years	21%	22%
Preschool Teaching Staff Leaving the Field in 3 Years	17%	19%
Directors Leaving the Field in 3 Years	12%	8%
Family Child Care Providers Leaving the Field in 3 Years	17%	14%

2014 & 2019 FCC surveys; 2015 & 2019 Director and Teacher surveys

* Family Child Care data is from 2014

leaving the field in the next three years at 8% compared to 12% in 2015. Finally, 14% of family child care providers said that they plan to leave the field in the next three years comparable to the 2014 rate of 17%.

Experience and Turnover by Age Group Taught. Not surprisingly, when controlling for age group taught, preschool

teachers and assistant teachers showed slightly more experience both in their centers and in the field as a whole compared to infant and/or toddler teachers.

When asked if they would still be working in the child care field in three years, 19% of the preschool teaching staff answered in the negative. For infant and/or toddler teaching staff, 22% responded that they may not be in the field in three

Table 15: High and Low County Experience

DIRECTORS				TEACHING STAFF			
Years in Program		Years in Field		Years in Program		Years in Field	
Statewide	6.4	Statewide	20.0	Statewide	3.8	Statewide	12.0
Lowest Counties							
Wilkes	0.8	Jones	11.5	Polk	0.9	Alleghany	3.0
Clay	0.8	Hyde	12.0	Alleghany	1.4	Graham	4.2
Bertie	0.9	Madison	13.0	Clay	1.4	Avery	5.5
Cleveland	1.6	Surry	14.5	Beaufort	1.5	Polk	6.4
Henderson	2.1	Onslow	15.0	Cabarrus	2.0	Pamlico	6.6
Jones	2.1	Watauga	15.0	Chatham	2.0	Cabarrus	7.2
Johnston	2.5	Columbus	15.0	Lee	2.3	Alexander	8.0
Surry	3.0	Pasquotank	15.5	Durham	2.4	Pasquotank	8.2
Lincoln	3.0	Lincoln	16.0	Richmond	2.5	Vance	8.4
Scotland	3.2	Cabarrus	16.0	Avery	2.8	Chatham	8.7
Onslow	3.3	Tyrrell	16.0	Onslow	2.8	Jackson	9.4
Rowan	3.3	Lenoir	16.0	Gates	2.8	Onslow	9.4
Mitchell	3.4	Robeson	16.0	Caldwell	2.8	Swain	9.7
Highest Counties							
Alamance	11.0	Graham	25.2	Duplin	8.6	Craven	17.4
Hyde	11.0	Halifax	25.5	Greene	9.3	Martin	17.5
Edgecombe	12.0	Gaston	25.5	Tyrrell	9.4	Camden	17.5
Stanly	12.0	Duplin	25.8	Edgecombe	9.4	Perquimans	17.6
Randolph	12.1	Henderson	25.8	Washington	9.9	Currituck	17.8
Anson	12.6	Cleveland	26.0	Hertford	10.0	Greene	18.0
Richmond	13.0	Rutherford	26.0	Camden	11.1	Hertford	18.0
Hertford	14.7	Granville	26.4	Davie	11.6	Davie	18.0
Ashe	15.0	Vance	26.8	Bertie	12.2	Bertie	18.1
Gates	16.0	Caldwell	28.0	Jones	14.0	Jones	22.0
Greene	16.0	Greene	30.0	Warren	19.2	Warren	27.4
Davie	16.6	Alexander	32.5	Perquimans	22.0	Hyde	38.3

2019 Director and Teacher surveys

years. See Table 14. During this early period of development (8 months to 2 years), many young children go through a period of stranger anxiety, which can only be exacerbated by staff churning, making teacher stability at this age even more important than at other stages of development.

Teachers of preschool children typically had been employed by their programs for 4.8 years, and had been in the field for 14.0 years with 13% having less than one year experience in their programs. For assistant teachers working with preschoolers, median years working in their current centers was 3.0 although they reported having been in the child care field for a median of 10.0 years. For assistant teachers, nearly one in four (23%) had been at their program for less than a year. The profile for the teaching staff working with infants and/or toddlers suggested less employment stability. Sixteen percent (16%) of teachers of this youngest age group had been in their programs a year or less with a median of 3.8 years in their current program, although typically they report having been in the field for 12.0 years. A similar profile was found for assistant teachers in this age group. One in three (33%) had worked in their center for a year or less with a median of 1.7 years in their current program, although they had a median 5.5 years in the field as a whole. (It should be noted that some teachers and assistant teachers indicated that they taught multiple age groups spanning across infant and/or toddlers and preschoolers. In the cases where there was overlap in ages taught, experience and turnover were counted in both age groups.)

Experience by County/Geographic Area. The amount of experience both within their current programs and within the field as a whole varied across counties and geographic areas in our state. Table 15 displays the median number of years that directors and the center-based teaching staff had worked in the programs where they were currently employed and the field as a whole. The table also displays the typical length in years that these early childhood professionals had spent working in the field.

The statewide teaching staff reported working in their current centers 3.8 years and 12.0 years in the field overall. In Polk County, the teaching staff had the lowest median years of experience in their programs at 0.9 years (11 months). Following this county were Alleghany and Clay counties (1.4 years), Beaufort County (1.5 years), and Cabarrus and Chatham counties both at 2.0 years of experience in their programs. On the other end of the spectrum, Perquimans County had the longest teaching staff tenure with a median of 22.0 years in their programs. Warren County followed at 19.2 years and then Jones County (14.0 years), Bertie County (12.2 years), and Davie County (11.6 years).

The counties with the teaching staff with the least experience in the field as a whole were Alleghany County (3.0 years), Graham County (4.2 years), Avery County (5.5 years), Polk



County (6.4 years) and Pamlico County (6.6 years). Teaching staff who had been in the field the longest could be found in Hyde County (38.3 years), Warren County (27.4 years), Jones County (22.0 years), Bertie County (18.1 years), and Davie, Hertford and Greene counties (18.0 years each).

Not surprisingly, directors typically had the lengthiest tenure in their centers. Directors have a statewide average tenure of 6.4 years in their current position in their current center, but this varies across the state. The median years range from a low of 0.8 years (10 months) in Wilkes and Clay counties to 16.6 years in Davie County. Other counties with particularly low director median years of experience were Bertie (0.9 years), Cleveland (1.6 years), and Henderson (2.1 years). In addition to Davie County, Greene (16.0), Gates (16.0), Ashe (15.0), and Hertford (14.7) counties have the directors with the longest tenure in their current program.

Directors, as would be expected, tended to have had relatively lengthy careers in the early childhood education field, just as they had in their own centers. Typically a child care center director in North Carolina had been in the field for 20.0 years. Directors in Jones County (11.5 years), Hyde County (12.0 years), Madison County (13.0 years), Surry County (14.5 years), and Onslow, Watauga, and Columbus counties (15.0 years) had the shortest careers in the field. The directors with the most experience in the field could be found in Alexander County (32.5 years), Greene County (30.0 years), Caldwell County (28.0 years), Vance County (26.8 years), and Granville County (26.4 years). Over half of the counties in the state (51) have directors who had been in the field for more than two decades (greater than 20.0 years), showing a commitment to ensuring that young children begin their lives with the tools needed for success.

Statewide, family child care providers had been providing care in their homes for a median of 18.0 years. They reported

having worked in the field for 21.5 years. Those providers in suburban areas had been providing care in their homes and in the field for less time than the statewide median years (15.0 and 20.4 respectively). In urban areas, family child care providers had been in business for the same as the statewide median 18.0 years but had been in the field for a slightly lower amount of time than the statewide median years at 21.0 years. Providers in rural communities had been in business and in the field as a whole for the longest tenure at 19.3 years and 22.0 years.

Workforce Retention. Survey respondents who indicated that they planned to leave the field within three years were asked what would make them stay in the field. Directors who indicated that they were not planning to be in the field in three years were asked to provide insight into what would make them stay. The 8% of directors planning to leave indicated a number of different factors that might entice them to stay in the field. See Table 16. Chief among those factors was being able to find qualified teachers (44%), increase in pay (40%) and finding substitutes (29%). Fewer money problems for the center (27%) and better benefits (26%) round out the top five reasons listed by directors as factors that might impact their thoughts about leaving the field. Nearly one in five (19%) of those directors planning on leaving the field indicated that nothing would impact their decision as they planned on retiring.

The 20% of teaching staff who indicated that they plan to leave the field within the next three years were forthcoming in voicing factors that might keep them in the field. Some motivators that were listed as possibly changing teachers' and assistants' minds about staying in the field included higher pay, which was listed as the top motivator with over 80% of the teaching staff who plan to leave the field naming this factor as one that might entice them to stay. Better benefits were listed by 55% of the teaching staff as important for their remaining in the early care and education field. More support working with children with challenging behaviors (39%) and more respect for the early childhood field (37%) were also named by teaching staff as important motivators. Finally, having more opportunities for professional growth (35%) was also identified by approximately one in three teaching staff considering leaving as something that might make them stay. Other reasons that might entice folks to continue teaching can be found in Figure 10.

Fourteen percent (14%) of family child care providers expressed their desire to leave the field in the next three years. Those that were planning to leave responded to a slightly different set of possible reasons that would entice them to stay in the field than did center directors. See Table 16. The subset of providers who were considering leaving the field in the next three years also listed their ability to earn more money as the number one motivator to staying in the field (31%). A distant second was more time off (21%), followed by the ability

to more easily get a substitute (17%). A sizeable number of other reasons, e.g., health considerations, burned out, unfair regulations, insurance, etc. were also given by many family child care providers. Fifteen percent (15%) said that nothing would keep them in the field because they planned on retiring.

PROFESSIONAL SUPPORT FOR THE EARLY CARE AND EDUCATION WORKFORCE

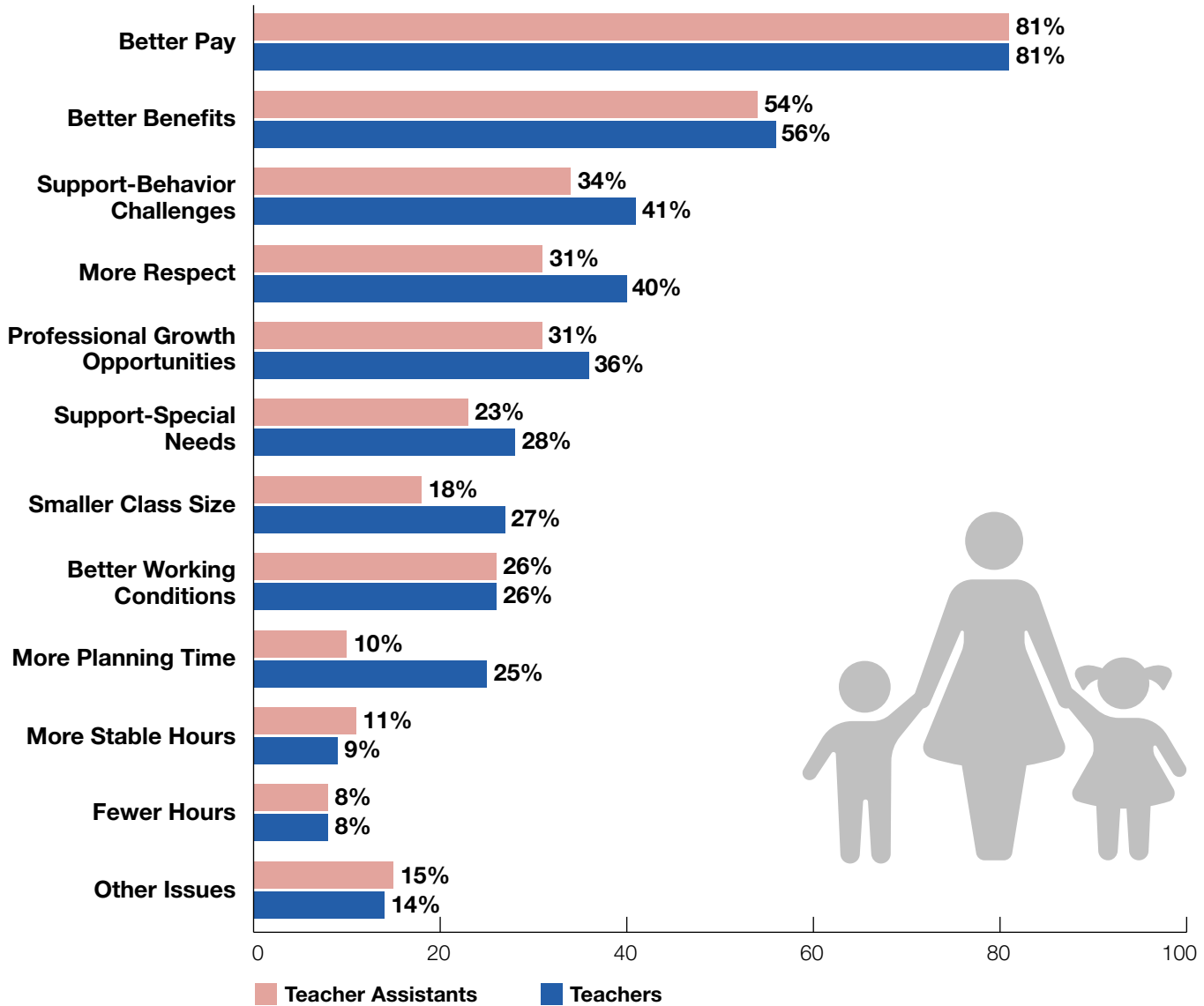
Early childhood research has shown that higher education and compensation of early care and education providers can lead to positive outcomes for children. Programs such as the T.E.A.C.H. Early Childhood® Scholarship Program and salary supplement programs have

Table 16: **Factors Motivating ECE Directors and FCC Providers to Stay in the Field**

CENTER DIRECTORS		FAMILY CHILD CARE PROVIDERS	
Motivator	Percentage	Motivator	Percentage
More pay	40%	Earn more money	31%
More benefits	26%	More time off	21%
Fewer money problems for center	27%	Find substitutes	17%
Finding qualified teachers	44%	Receive training	5%
More administrative help	16%	Respect from families	11%
Working fewer hours	22%	Meet others (FCC providers)	0%
Professional growth opportunities	15%	Help working with children with challenging behaviors	9%
Better working conditions	11%	Help working with children with special needs	5%
Finding substitutes	29%	Nothing, because retiring	15%
Opportunity to network	18%		
Nothing, because retiring	19%		

2019 Director and FCC surveys

Figure 10: **Factors Motivating Teaching Staff in North Carolina Early Childhood Programs to Stay in the Field**



addressed some of the educational and financial needs of early care and education providers while lowering staff turnover. At the program level, child care centers offer staff opportunities to develop their teaching skills and professionalism through coursework and by creating a supportive work environment. The workforce survey included a number of questions on these professional support topics.

The T.E.A.C.H. Early Childhood® Scholarship Program.

Since the early 1990s, the T.E.A.C.H. Program has addressed the education, compensation, and turnover of the early childhood workforce across the state. According to center directors, 55% of centers in North Carolina had at

least one staff member that had ever received a T.E.A.C.H. scholarship. Thirty-five percent (35%) of directors reported that they themselves were either currently or had in the past received a scholarship. Most all directors had at least heard of the T.E.A.C.H. program with only 2% stating that they had never heard of T.E.A.C.H.

Among respondents to this year's teacher surveys, a sizeable proportion of teachers and assistant teachers (26%) said that they had received a T.E.A.C.H. scholarship. When the teaching staff was broken down, 28% percent of teachers and 17% or assistant teachers reported receiving T.E.A.C.H. Early Childhood® support at some point in their careers.

A larger proportion of family child care providers had

received a scholarship from the T.E.A.C.H. Early Childhood® Program, with 42% who reported in the affirmative. Seven percent (7%) had never heard of the scholarship program.

Data from the T.E.A.C.H. Early Childhood® Scholarship Program indicate that the Program is working to increase the education levels and satisfaction of child care providers. For Program participants, over two thirds (68%) indicated that they feel more appreciated and recognized for their work. Fifty-six percent (56%) of Program participants further stated that participation in T.E.A.C.H. has made them more willing to stay with their current early care and education program.

In any given year, nearly 50% of T.E.A.C.H. scholarship recipients are people of color. The widespread availability of T.E.A.C.H. scholarships has helped raise the qualifications of the workforce and has potentially contributed to the increasing percentage of people of color in center leadership positions.¹⁶

Salary Supplements. Similar to the T.E.A.C.H. Program, the Child Care WAGE\$® and the Infant-Toddler Educator AWARD\$® programs also address the education, compensation, and turnover of the early childhood workforce in North Carolina. WAGE\$, beginning in the mid-1990s, blends funds from local Smart Start Partnerships and the Division of Child Development and Early Education in those counties across the state where the local Partnership chooses to participate. In response to a growing body of research on the importance of the very earliest years of life, the AWARD\$ program began in 2018 and is available in every county across the state to those teachers, assistant teachers and family child care providers who work full time with infants and/or toddlers and have at least an associate degree.

Among North Carolina teachers and assistant teachers, 39% reported that they had received a salary supplement funded either through WAGE\$ or AWARD\$ at some point in their careers. This percentage included 43% of teachers and 27% of assistant teachers. A higher 49% of family child care providers had received such a supplement.

According to FY19-20 WAGE\$ participant evaluations, ninety-six percent (96%) of participants in the program indicated that WAGE\$ had encouraged them to stay in their current program. Further, 96% said that the program helped them feel more satisfied with their job and 98% said that WAGE\$ supplements helped ease financial stress. Child Care WAGE\$® not only provides benefits for participants. Directors also realized the benefits with 80% indicating that the program increased morale and 58% specifying that lower turnover was a benefit. Finally, 68% of directors cite Child Care WAGE\$® as having encouraged staff to seek more education.¹⁷

Infant-Toddler Educator AWARD\$® Program evaluation data showed similar support for both participants and programs. Of the AWARD\$ participants surveyed in FY19-20, 97% said that AWARD\$ encouraged them to stay in their current program. Similar to WAGE\$, 97% said that the program helped them feel more satisfied with their job and 99% said that the

Table 17: **Professional Support Benefits in Child Care Centers**

Professional Supports	2015	2019
Orientation	89%	92%
Written Job Description	93%	95%
Written Personnel Policies	91%	94%
Paid Education/Training	78%	na
Paid Workshop Fees	na	75%
Paid Tuition	na	49%
Paid Breaks	56%	61%
Time Off for Training	60%	70%
Planning/Preparation Time	67%	71%
# Professional Supports	2015	2019
0-3	14%	10%
4	12%	9%
5+	74%	82%

2015 & 2019 Director surveys

AWARD\$ supplement helped ease financial stress. Directors also credited AWARD\$ with increasing morale (79%), lowering turnover (56%), and encouraging further education (64%).¹⁸

Other Center-Provided Support. Child care centers can support the professional development of staff without creating a significant financial burden on their programs. Eight key types of professional support that centers can provide staff are an orientation to the child care program, written job descriptions, written personnel policies, paid tuition expenses, paid workshop/conference fees, paid breaks, compensatory time for training, and paid preparation or planning time. Center directors understand the importance of providing support to their teachers. See Table 17. Most programs indicated that they offered at least one of these low cost benefits (99%) with most (82%) offering five or more of these supports. Nearly all offered their employees written job description (95%), written personnel policies (94%), and an orientation (92%). Many paid workshop fees and/or conference registration (75%) and offered compensation or paid time off to attend these training events (70%). Nearly three-fourths (71%) paid for preparation or planning time. Sixty-one percent (61%) paid for breaks. Finally, nearly half, 49% paid for tuition expenses of their employees. Research has shown that job satisfaction is one of a handful of direct predictors of quality in preschool classrooms.¹⁹ Offering a more professional work environment may be a low-cost means for centers to both reduce staff turnover and increase classroom quality as job satisfaction increases.



CONCLUSION

North Carolina has long been recognized as an innovative leader in the early childhood education field. Time and again, North Carolina has implemented seemingly radical, impossible ideas, providing a framework and guidance for other states to mimic the creation of their own statewide systems all towards the goal of providing a level playing field and firm foundation for the development of our nation's future generations. As research by James Heckman and others points out, for every dollar spent on high quality early care and education programs, communities can expect a 7% to 13% return on investment. Now more than ever, this investment in "comprehensive birth to five early childhood education is a powerful and cost-effective way to mitigate [child poverty's] negative consequence on child development and adult opportunity."²⁰

Progress continues to be made in the educational attainment of the early care and education workforce in North Carolina. The profession continues to show slow, but steady progress in a number of areas, including degree attainment and wages. When the Race to the Top Early Learning Challenge Grant application was submitted in the fall of 2011, one of the lofty NC goals set forth in the application was that "47% of lead teachers/teachers working with children from birth through five in licensed child care, Head Start, or Pre-K settings will have an associate's degree in Early Childhood Education or its equivalent, or a bachelor's degree in Child Development alone or with a BK license or its equivalent". With investments in the field and the dedication and hard work of the early care and education professionals teaching our young children, North Carolina is close to meeting this goal with approximately 46% of teachers having attained this education. In fact, in all job categories, educational levels continue to improve as measured by degree attainment. At the time of this study, 87% of directors, 65% of teachers, 50% of assistant teachers, and 51% of family child care providers had an associate degree or more in any field.

Statewide, on the compensation side, wages paid to early childhood professionals increased by varying increments from 2015 to 2019. During that time period, the buying power of teachers increased by 2.3%. Assistant teachers gained 2.8%. Directors and family child care providers saw larger growth. Despite the increases overall, actual wages varied greatly across the state based on a number of factors. For the center teaching staff, median wages were vastly different based on factors such as county (\$8.00 per hour in Alleghany and Chowan counties to \$21.06 per hour in Hyde County), auspice (\$11.00 per hour in for-profit single site and faith based programs to \$15.50 per hour in public schools), star level (\$10.50 per hour in GS-110 programs to \$13.00 per hour in 5-star programs), educational levels (\$9.10 per hour for a high school diploma only to \$16.95 for a master's degree in early childhood education), and presence of NC

Pre-K classrooms (\$11.50 per hour for non-NC Pre-K sites to \$12.80 for programs with at least one NC Pre-K classroom).

In the 1994 Leandro v. North Carolina lawsuit, five low-wealth school districts claimed they were financially unable to provide an equal education to all of their students. The subsequent rulings stated that all students were entitled to a "sound basic education" including the requirement that the State provide (among other things) "the resources necessary to support the effective instructional program".²¹ Following this ruling, a Joint Report to the Court, based on recommendations from West Ed, the State, and the State Board of Education outlined their remedial action plan for fiscal year 2021, taking into account the implications of the pandemic. One of the items set forth included expanding funding to provide salary supplements based on education to child care providers with a priority on those teachers working in high poverty school districts. Specifically mentioned in their report was the ability to increase teacher retention and education through the Child Care WAGES[®] Program and the Infant-Toddler Educator AWARD[®] Program.²² In addition to lowering turnover, concentrated efforts to increase wages (and benefits) could motivate more young people to enter the early childhood workforce confident of making a good living, while improving the quality of care young children receive.

With the creation of the Affordable Care Act and policies both requiring individual health insurance coverage and providing financial support to attain this coverage, the early care and education workforce has made great strides in protecting themselves from financial ruin should a medical issue arise. Shortly after the turn of the century, in 2003, 29% of the center teaching staff and 30% of family child care providers reported having no health insurance. In 2019, this percentage had dropped to 21% for the teaching staff at centers and 16% for family child care providers. While these significant gains in coverage help to protect the financial situation for the workforce, the percentage who continue to lack health care coverage remains higher than the statewide average of the North Carolina population of 13% uninsured persons (under age 65 without health insurance²³).

Teachers know that programs pay very different wages and provide varying degrees of benefits. As such, the early care and education workforce is taking steps to pursue fair compensation as needed to support themselves and their families. The overwhelming strategy that teachers reported would keep them in their classroom is better wages with 81% of teaching staff listing this as their top motivator and 55% indicating better benefits as a motivator. For those leaving the field, turnover has a direct, negative impact on young children, their attachments with the adults in their lives, and their overall well-being. So while the turnover rate in programs has increased over the past four years, the longevity of center staff and family child care providers has either remained constant or lengthened. The center teaching staff has been

in the field 8.0 years (assistant teachers) and 13.0 years (teachers). Directors have been in the field on average two decades (20.0 years) and family child care providers have run their businesses for over this amount of time (21.5 years). This longevity in the field coupled with increased educational credentials are indicators of the development of a professional workforce. But with adequate wages not reflecting the large educational gains, tackling the challenge of workforce compensation in earnest is a must.

During the nation-wide shut down due to the COVID-19 pandemic, while other businesses shuttered their doors, early care and education programs marched on providing a key resource to parents who were deemed essential to the very life of our nation. With the recognition that child care is indispensable in allowing parents to work came the understanding that early care and education professionals are woefully under-compensated for the vital work that they do. In acknowledgement of the crucial role of the early childhood workforce, the NC Division of Child Development and Early Education set a precedent for assistance with the compensation of staff by providing monthly bonus pay for all onsite child care employees. The decision to provide these bonuses from the state underscores the necessity of supplementing the fees that parents are unable to pay for child care. Without new and strategic investments like this one, North Carolina may experience a resurgence of higher turnover rates and the loss of its better educated teachers in its licensed and higher star settings. Better paying jobs in other industries may be a significant enticement without the compensation and

recognition the workforce deserves.

The COVID-19 pandemic has unveiled what those of us in the field have long known, that early care and education is an essential service. Vital not only in providing young children with both the literal and figurative building blocks necessary for success in school and life, but also for allowing their parents to do their part in fueling a healthy and growing economy. The relationship between supportive early relationships and life success has long been established, and these relationships can only form if teachers have the adequate resources, health, education, and time to cultivate them. The pandemic has caused catastrophic and long lasting effects. However, COVID-19 has also provided an opportunity to re-envision the early care and education system for our youngest children. Our new world can be built with a child care workforce that is well-educated, well-compensated, and well-positioned to cocoon all of our children with the care and support necessary to become their best, most productive selves as they continue the cycle of improving our great nation.

Although the COVID-19 pandemic has wreaked havoc on the great strides made in the early childhood education field in North Carolina, the serendipitous timing of this study provides invaluable information as a baseline moving forward. As a state, we know where we have come from and where we had plans to go. With this study, we have a road map back to our starting point as we continue to progress towards ensuring that the youngest children in our state have the support of a well-qualified, well-compensated workforce guiding their early learning and development.





RECOMMENDATIONS

1. The 2019 workforce study provides essential information about the early care and education workforce pre-COVID-19. As the state and country settles into a pandemic and then post-pandemic normal, a statewide and county level study is imperative to understanding what was lost in the field so that we can begin to rebuild the system. The state of North Carolina should fund a similar study of the workforce for the entire state post-COVID-19 in order to see the impact of the pandemic and plan for the future.
2. The state of North Carolina should fully and routinely fund a similar study of the workforce for the entire state. Additional funds for a longitudinal study following particular programs and teachers over time can provide new insights into long term benefits for programs and funding.
3. The findings of this study should be widely distributed to the early care and education community. Presentations should encourage center directors and family child care providers to compare their policies and practices with North Carolina providers at large to help them develop strategies to improve education, salaries, benefits, working conditions, and retention.
4. The state of North Carolina should fund and implement a system-wide early childhood workforce registry as was outlined in the 2021 Leandro Action Plan. The Leandro decision recognizes the critical role that early childhood education plays in the state's ability to provide a sound, basic education to all North Carolina children. A registry affords the state the ability to document, describe, and better understand the education and compensation needs of the workforce.
5. Increasing health insurance costs are making it very difficult for child care providers to fully cover health insurance programs. Additional supports to programs to help with health insurance for their employees could increase longevity and improve the health of both child care teachers and the children in their programs. These supports are particularly necessary given the attempts to erode the Affordable Care Act and the not yet fully understood lasting impacts of COVID-19 on individuals.
6. Infant and/or toddler teachers tend to have less education, are paid less, and have fewer years of experience both within their centers and in the field as a whole than preschool teachers. Programs like the Infant-Toddler Educator AWARD\$ Program and others aimed at improving education, compensation, and retention should continue to be funded and should be expanded to address these deficits specific to the infant/toddler workforce.
7. Few early childhood education professionals have had formal training in working with children whose parents suffer from addiction. Americans suffer from addiction in large numbers and these numbers are growing as COVID-19 continues unchecked. Developing a curriculum and requiring teaching staff to receive training in this area will help prepare them to understand the unique needs of children whose parents suffer from addiction.
8. Few early childhood education professionals have had formal training in working with children who are homeless. The aftermath of the pandemic and a continued anemic economy will result in even larger numbers of children without stable housing. Developing a curriculum and requiring teaching staff to receive training in this area will help prepare them to understand the unique needs of children who are homeless and/or who do not have consistent housing.
9. By chronically underfunding an outdated market rate survey, providers are not operating in any "real time" market and basically agreeing to a cut-rate contract with the state for services. This impacts their ability to focus on quality and compensation for the workforce. Looking at the success of the NC Pre-K program, which has better standards and a much higher reimbursement rate, provides evidence that strategic investments in rates coupled with expectations for quality and compensation can really make a difference. A similar approach should be implemented to raise the quality of care for infants and toddlers from low income families.
10. The state of North Carolina should help all programs with the funding and implementation of a salary scale tied to education, with funding and implementation of benefits and improved working conditions, and with the implementation of revenue generating strategies which will result in a better qualified, higher compensated workforce.

Appendix A

SURVEY METHODS AND RESPONSE RATES

Sample Design and Sampling Weights

The current workforce study made use of a complex, multi-stage, unequal probability sampling design, rather than a simple random sample or survey of the entire population. Such a design was chosen to achieve a variety of objectives. The first objective was to maximize the reliability of the data obtained from targeted cases enabling readers to make inferences from the sample data collected by generalizing to the entire relevant population. The second objective was to minimize the effort involved in collecting, verifying, and analyzing information obtained from the surveys of directors, family child care providers, and teaching staff. Finally, a third objective was to construct a sample design that was transparent and easy to understand as well as simple to execute. This latter objective seems especially important given the first two objectives.

Three different targeted populations were involved in the overall North Carolina workforce study: (1) family child care providers; (2) early childhood education center directors; and (3) teaching staff in centers. The sampling frames for the first two populations were developed from data files provided by the North Carolina Division of Child Development and Early Education. Licensed family child care homes and licensed child care centers selected for survey participation were drawn from 2019 regulatory data of the North Carolina Division of Child Development and Early Education. Programs that served only school-age children were excluded. It should be noted that those public (school-based) pre-kindergarten programs which are not licensed (and hence are not included in the licensure files) are excluded from this study. Although licensed family child care homes were included as they had been in previous studies, separate county estimates were not required as part of the statewide study so a much more simplified sampling strategy was used for homes which differed from the sampling strategy used for centers.

No formal sampling frame could be developed for the survey of teaching staff, but estimates of the numbers of teaching staff were developed from data provided in the licensing files, as well as from information provided in director surveys. Survey data about teaching staff in specific centers was largely obtained by means of directors distributing surveys to teaching staff who then returned completed surveys to CCSA. Estimates of the number of eligible teaching staff targeted and of the numbers of surveys actually distributed relied upon information provided to CCSA by center directors either on the director surveys or through other contact with center directors. Because of some missing or inconsistent data items on both the license and director survey data files, it was difficult to construct a reliable estimate of the number of teaching staff statewide, as well as that number for smaller

geographic areas. Consequently, several different estimates were constructed based on statistical models. A number of estimates were made using the available data with widely divergent results, and various estimation methods were applied using multi stage regression models attempting to maximize information derived from the licensing files and director surveys. Ultimately only center staff size and star rating information proved to be the most useful in constructing state and county level estimates of teaching staff size at the county and state levels.

Family Child Care Provider Sample: Design, Implementation, and Application of Weights

A simple 25% random sample of family child care providers statewide was selected for targeting surveys. This was done because only statewide, rather than county-by-county estimates were required. Unlike centers, homes have little variability in size and sponsorship, so in order to test for potential response bias, the only effective variables on the sampling frame were geographic location and star rating. We attempted to identify family child care providers in terms of their level of education to examine the hypothesis that family child care providers with more education might have been more likely to respond to the surveys. However, we were unable to obtain reliable data on the educational level of the operators. It is important to note, however, that education of an operator is one of the key components of the star rating, so this potential source of bias is probably controlled for in the higher sampling weight that has been applied in estimating data from lower star homes.

Geographic diversity was indexed by classifying counties in which homes were located as Urban, Suburban or Rural, as indicated in Appendix Table 1. Thus every family child care provider in the state had one of 12 discrete sampling weights which ranged from 3.08 for 5-star suburban homes that had the a very high response rate to 6.87 for 1- or 2-star homes located in rural counties which had the lowest response rate. The high rate at which homes were sampled and the typically high response rate from family child care providers strongly suggests that survey responses quite accurately reflect the characteristics of the entire population values.

Director Sample: Design, Implementation, and Application of Weights

Sampling of directors had a twofold objective: (1) to obtain a reliable and efficient sample describing centers, and (2) to help develop data for constructing a reliable estimate of the number of teaching staff in each center, and thereby estimate the numbers of teaching staff in the county in which that center was located, and consequently for the entire state. Unlike previous recent workforce studies conducted by CCSA, this study sought to obtain information about both centers and teaching staff aggregated to the county level. Previous recent

studies had attempted to obtain reliable measurement at the state level as well for several geographically defined multi-county regions of interest. Consequently, generalizing to a smaller geographic level of analysis required using a different, more challenging sampling design.

It was decided early on that for smaller counties, i.e., those with fewer centers, 100% samples would be sought from most counties in the state and partial samples would be sought from larger counties. County size was indexed by the number of centers located in a county rather than population or some other measure. Four different strata were used to sample. Three counties had 200 or more centers and 35% of these centers were randomly targeted for selection to the sample. Three additional counties had between 100 and 199 centers, and 65% of the centers in each of these counties were randomly targeted for sampling. Nine additional counties had between 60 and 99 centers. In these counties, 85% of the centers in each of those 9 counties were targeted for the sample. Finally, for all the remaining 85 counties, each of which had 59 or fewer centers, no sampling was done; all ECE programs within each of those counties were targeted for the survey.

The first level county weights consisted of the inverse of the survey response rate for each county. In the fifteen counties where not every case was selected for sampling, the inverse of the response rate was multiplied by the inverse of the sampling fraction. This weight was then adjusted by the statewide differential response tendency of centers by star level which was defined into one of three categories: (1) 3-star or fewer; (2) 4-stars; or (3) 5-stars. Thus each center was weighted up by its probability of selection and probability of response, as well as the differential statewide tendency of survey response associated with the center's star level rating.

The impact of the sampling design and the distribution resulting weights are displayed in Appendix Table 2. Tables 2A-2D display the impact of the sample design and execution on the overall response rates and sampling weights applied to the director survey data. These are arrayed according to the four variables available on the sampling frame: sponsorship; size; presence of a pre-K classroom in the center; and star level. As can be seen, response rates for all categories are high, only occasionally below 65%. Further, first order weights rarely exceed 5-meaning that most selected cases represent 5 or fewer cases in the population.

Implementation of the sample required intensive effort which yielded quite strong results. A 70% rate was achieved for all strata, with results exceeding this level in smaller counties (i.e., the 85% of counties with 60 or fewer centers) where on average the response rate was 77%. In the very smallest counties aggregate response rates were even stronger, where 100% results were obtained in 3 counties and responses averaged 83% in counties with 6 or fewer centers, meaning virtually universal coverage. This pattern of strong

response should give analysts confidence about the accuracy of county level estimates based on data from the director survey, especially for those cases in smaller rural counties where small numbers can result in large differences in interpretation of a statistical measure.

Teaching Staff Survey: Sampling Design, Implementation, and Application of Weights

Information from the directors' surveys and from the licensing file was used to assess how center and director characteristics might have affected response levels from the teaching staff. Among the relevant factors investigated were location, size, sponsorship, star-rating, and designation as a site with a NC Pre-K classroom.

Given the uncertainty about statewide denominators it is difficult to directly assess a response rate for teaching staff in centers. This is in large part due to the difficulty of obtaining a single reliable estimate of the number of teaching staff in centers to serve as a denominator. Variations in estimates may be due to inconsistent recording by directors of the part-time segment of the teaching staff workforce. This number is difficult to specify, and varies somewhat depending on how "part-time" and how "intermittent" these workers are, and how the center and the individual workers define themselves, whether or not they can be unduplicated from survey or license data if they work at several centers. Although it is more difficult to assess the number of different persons falling in the category of "part-time", these types of individuals are probably less likely than their full time counterparts to be included in the dataset generated from the teacher surveys and reported here. The extent to which part-time workers have jobs in other settings, consider their child care work a "second job," or identify with or aspire to careers in child care is not well understood. Finally, the occurrence of the COVID-19 pandemic during the latter part of the study period may have affected the number of teaching staff answering the survey and/or the definitions of full/part-time staff reported by directors.

The final weight used to estimate county level numbers of teaching staff adjusts initial county level weights for the effect of differential responses by star rating level. Each county is assigned an initial weight which is the ratio of two quantities: (1) the estimated number of teaching staff in a county divided by (2) the number of valid staff surveys returned by teaching staff employed in centers located in that county. That initial weight is then adjusted for the differential response tendency associated with the quality rating of the license of the center where a teaching staff survey respondent is employed.

For the teaching staff file, the preliminary survey weight requires an estimate of the number of teaching staff in a county which was constructed in the following way. A regression equation estimate was constructed using as predictors the following variables available on the licensing file: Center sponsorship type, star rating (3-levels), presence

of a NC Pre-K classroom, and selected measures of the size or scale of the program which were on the license file and assumed to be strongly correlated with staff size. These included the number of children in each age group which the program served. These predictors were supplemented with another predictor which was the actual number of teaching staff reported by directors on completed director surveys. The predicted value in the regression equation was the caregiver estimate of the number of teaching staff recorded on the state licensing file. The regression coefficients were then used to construct an estimated number of teaching staff for each center in each county. This number was then appended to each record for each center case.

The next step in the weighting process was to use that estimate of the actual number of teaching staff working in all centers in each county and divide it by the number of teaching staff surveys actually returned by teaching staff working in centers located in that county. This quantity would serve as a preliminary geographic weight for that county. The overall teaching staff number in each county was estimated by obtaining that number for each center in

that county from one of two sources: The first source was the data provided in the director surveys (if returned and completed). If no teaching staff estimate was available from a director survey, that estimated number was filled in with the predicted value obtained from the regression estimate described above.

County level estimates of teaching staff numbers were then obtained by aggregating estimates for all cases across each county. That number served as the numerator for the first order weight. The denominator was the actual number of teacher surveys returned from teaching staff working in centers located in that county.

This simple approach was adopted after extensive efforts to employ a number of complex multilevel statistical models that not only failed to accurately predict survey response, but seemed to “over correct” for other variables. After examining estimates of survey response using only the geographically adjusted data (see Appendix Table 3) it was determined that star rating is the most relevant factor in accounting for selective response from teaching staff. Support for this can be found in Appendix Table 3 where one can observe that the star rating is the only variable among the available predictors that yields more than a 5% difference in the percentage distribution of characteristics of centers where teaching staff are

employed. Notable differences between a presumed universe (i.e., the licensing file) and a geographically upweighted estimate from over 7,000

returned teaching staff surveys, suggest that statistical adjustment would benefit overall estimates. Fortunately, further analyses revealed that adjusting for star rating seemed to improve the estimates for the other variables so almost all came to within 5% of statewide estimates from what is generated by estimates made from data on the license file.

The counties with the smallest number of centers have the greatest likelihood of having some estimation problems but adjusting for star rating level doesn't seem to make much of a difference in these counties and appears not to make estimates in those counties worse. This is likely because—as noted above—there is an exceptionally high director level response rate (and consequently likely a high teaching staff response rate) in those smaller counties. It should be noted that more extensive statistical modeling might be employed to improve estimates for the larger counties should data users be interested in such estimates. ■



Appendix Tables

Table 1: **Sample Characteristics of North Carolina FCC Homes**

Star level	County Type*	Universe	Sample	Completions	Response Rate	UpWeight for Stratum
Under 3-stars	Rural	103	26	15	58%	6.87
	Suburban	54	21	11	52%	4.91
	Urban	117	29	19	66%	6.16
3-stars	Rural	199	50	33	66%	6.03
	Suburban	86	34	26	76%	3.31
	Urban	202	51	37	73%	5.46
4-stars	Rural	249	62	48	77%	5.19
	Suburban	104	42	30	71%	3.47
	Urban	236	59	44	75%	5.36
5-stars	Rural	52	13	11	85%	4.73
	Suburban	40	16	13	81%	3.08
	Urban	91	23	16	70%	5.69

* Six urban counties included Durham, Forsyth, Guilford, Mecklenburg, New Hanover, and Wake; had a total of 646 family child care providers. Fourteen additional counties were identified as suburban: Alamance, Buncombe, Cabarrus, Catawba, Cumberland, Davidson, Gaston, Henderson, Iredell, Lincoln, Orange, Pitt, Rowan, Union with a total of 284 sites. Seventy counties had 603 homes. No homes appear to be licensed in the remaining 10 counties.

Table 2: **Director Sampling Parameters: Overall Characteristics of Universe, Targeted Sample, & Survey Respondents.**

Table 2A: **Characteristics of Director Survey Sample Arrayed by Sponsorship Type**

Sampling Intensity	Sponsorship Type	Cases in Sampling Frame	Cases Targeted	Valid Responses	1st order Weight*	Response Rate
100% Targeted for Sample	For Profit	918	918	692	1.327	75%
	Not for Profit	427	427	315	1.356	74%
	Public	550	550	412	1.335	75%
85% Targeted for Sample	For Profit	334	289	210	1.590	73%
	Not for Profit	147	117	89	1.652	76%
	Public	182	157	109	1.670	69%
65% Targeted for Sample	For Profit	259	170	134	1.933	79%
	Not for Profit	94	60	44	2.136	73%
	Public	63	41	16	3.938	39%
35% Targeted for Sample	For Profit	670	248	175	3.829	71%
	Not for Profit	146	39	29	5.034	74%
	Public	112	37	24	4.667	65%

* The approximate number of cases on the sampling frame represented by a valid survey case.

Table 2B: **Characteristics of Director Sample Arrayed by Size of ECE Program**

Sampling Intensity	Size	Cases in Sampling Frame	Cases Targeted	Valid Responses	1st order Weight*	Response Rate
100% Targeted for Sample	Small	212	212	130	1.631	61%
	Medium	659	659	487	1.353	74%
	Large	628	628	488	1.287	78%
	X-Large	263	263	208	1.264	79%
	XX-Large	133	133	106	1.255	80%
85% Targeted for Sample	Small	78	68	51	1.529	75%
	Medium	216	184	124	1.742	67%
	Large	195	165	121	1.612	73%
	X-Large	111	93	72	1.542	77%
	XX-Large	63	53	40	1.575	75%
65% Targeted for Sample	Small	72	48	30	2.400	63%
	Medium	121	79	46	2.630	58%
	Large	111	70	55	2.018	79%
	X-Large	72	48	40	1.800	83%
	XX-Large	40	26	23	1.739	88%
35% Targeted for Sample	Small	155	52	29	5.345	56%
	Medium	195	69	43	4.535	62%
	Large	203	72	53	3.830	74%
	X-Large	208	73	58	3.586	79%
	XX-Large	167	58	45	3.711	78%

* The approximate number of cases on the sampling frame represented by a valid survey case.

Table 2C: **Characteristics of Director Sample Arrayed by NC-PreK Classroom Presence**

Sampling Intensity	Has NC PreK Classroom	Cases in Sampling Frame	Cases Targeted	Valid Responses	1st order Weight*	Response Rate
100% Targeted for Sample	NO	1226	1226	896	1.368	73%
	YES	669	669	523	1.279	78%
85% Targeted for Sample	NO	444	382	284	1.563	74%
	YES	219	181	124	1.766	69%
65% Targeted for Sample	NO	299	195	147	2.034	75%
	YES	117	76	47	2.489	62%
35% Targeted for Sample	NO	746	261	178	4.191	68%
	YES	182	63	50	3.640	79%

* The approximate number of cases on the sampling frame represented by a valid survey case.

Table 2D: **Characteristics of Director Sample Arrayed by Star Rating of Program**

Sampling Intensity	Star Rating	Cases in Sampling Frame	Cases Targeted	Valid Responses	1st order Weight*	Response Rate
100% Targeted for Sample	3-star & below	574	574	397	1.446	69%
	4-star	372	372	291	1.278	78%
	5-star	949	949	731	1.298	77%
85% Targeted for Sample	3-star & below	219	184	132	1.659	72%
	4-star	143	123	99	1.444	80%
	5-star	301	256	177	1.701	69%
65% Targeted for Sample	3-star & below	123	81	60	2.050	74%
	4-star	115	75	62	1.855	83%
	5-star	178	115	72	2.472	63%
35% Targeted for Sample	3-star & below	282	99	67	4.209	68%
	4-star	218	76	56	3.893	74%
	5-star	428	149	105	4.076	70%

* The approximate number of cases on the sampling frame represented by a valid survey case.

Table 3: **Distribution of Estimated Teaching Staff Workforce by Type of ECE Center and Source of Data Used in Estimation**

Center has a NC Pre-K site	Upweighted Teacher File (N=7118)	Total Director File (N=3902)
No	67%	72%
Yes	33%	29%
Sponsor Type	Upweighted Teacher File	Total Director File
For Profit	59%	60%
Not For Profit	25%	25%
Public	16%	15%
Star Level	Upweighted Teacher File	Total Director File
3-star and below	59%	60%
4-star	22%	20%
5-star	60%	52%
Total	100%	100%
Size	Upweighted Teacher File	Total Director File
Small	59%	60%
Medium	13%	16%
Large	28%	26%
X-Large	29%	26%
XX-Large	27%	27%

Appendix B

DEFINITIONS OF TERMS

Child care centers/early care and education centers

An arrangement where, at any one time, there are three or more children less than 13 years old who receive care on a regular basis for more than four hours from a non-related person.²⁴ Centers may be found in community buildings, churches or synagogues, buildings built specifically for child care, in private homes or in public buildings. Centers can include programs with a Notice of Compliance (GS-110) as well as centers with a star-rated license. Centers can be not-for-profit, for-profit or public entities and include Head Start/Early Head Start as well as NC Pre-K programs both in and not in public school settings.

Child Care WAGES[®] Program

This program provides salary supplements that are linked to the education level of participants and are paid every six months as long as participants remain in the same child care program. (www.childcareservices.org)

Degree

Either an associate degree, bachelor's degree, master's degree or Ph.D. from an institute of higher learning. Throughout the report, "highest degree" is often used. In this instance, people are only counted once and fall within the category of their greatest degree attainment. A degree in early childhood education is considered "higher" than a degree in "other".

Degree in ECE

An associate, bachelor's, master's or Ph.D. in either early childhood education or child development.

Degree in other

An associate, bachelor's, master's or Ph.D. in a field of study other than early childhood education or child development.

Family child care provider/home

A licensed child care arrangement located in a residence where, at any one time, more than two children, but less than nine children receive child care.²⁵

For-profit centers

Child care centers ranging from single-classroom facilities consisting of a multi-age group of children and one teacher/director to multi-site facilities enrolling hundreds of children and employing a director, assistant director, lead teachers, and assistant teachers that are operated as sole proprietorships, partnerships, or corporations with the goal of making a profit for their owner or stockholders.

Infant-Toddler Educator AWARD[®] Program

This statewide program provides salary supplements to infant/toddler teachers, assistant teachers, and family child

care providers who work full-time with birth through two year olds. The supplements are linked to the education level of participants and are paid every six months as long as participants remain in the same child care program.

Median

One of three measures of central tendency; the number representing the case which has equal cases above and below it. Throughout this report, "average" is used interchangeably with "median".

NC Pre-K

A community-based education initiative designed to prepare at-risk four-year-olds in North Carolina for success in school. Pre-kindergarten classrooms operate for the school day and school year and are provided in diverse settings such as public and private schools, Head Start centers, and community-based child care centers and preschools.

Non-profit centers

Child care centers operated by a board of directors that govern the program, that is mission-driven and not operated with a goal of making a profit for an owner. These programs may be sponsored by community or faith based organizations. Can include programs with a Notice of Compliance (GS-110) as well as centers with a star-rated license.

People of color

People who self-identify as Asian, Black, African American, bi-racial, multi-racial, or American Indian/Native American as well as those who identify themselves as Hispanic/Latinx.

Public (sponsored programs)

Head Start/Early Head Start sites, public school sponsored and other publicly funded programs.

Star rated license system

North Carolina's Star Rated License System awards stars to child care programs based on how well they are doing in providing quality child care. Child care programs receive a rating of one to five stars. A rating of one star means that a child care program meets North Carolina's minimum licensing standards for child care. Programs that choose to voluntarily meet higher standards can apply for a 2- to 5-star license.

T.E.A.C.H. Early Childhood[®]

This program provides comprehensive educational scholarships that help pay the cost of tuition, books, and travel, and may insure paid release time, require compensation incentives, and encourage retention for child care providers working on a credential or degree in early childhood education or child development.



Appendix C

NC Counties by Geographic Areas

County Name	Geographic Area	County Name	Geographic Area	County Name	Geographic Area
Alamance	Suburban	Franklin	Rural	Orange	Suburban
Alexander	Rural	Gaston	Suburban	Pamlico	Rural
Alleghany	Rural	Gates	Rural	Pasquotank	Rural
Anson	Rural	Graham	Rural	Pender	Rural
Ashe	Rural	Granville	Rural	Perquimans	Rural
Avery	Rural	Greene	Rural	Person	Rural
Beaufort	Rural	Guilford	Urban	Pitt	Suburban
Bertie	Rural	Halifax	Rural	Polk	Rural
Bladen	Rural	Harnett	Rural	Randolph	Rural
Brunswick	Rural	Haywood	Rural	Richmond	Rural
Buncombe	Suburban	Henderson	Suburban	Robeson	Rural
Burke	Rural	Hertford	Rural	Rockingham	Rural
Cabarrus	Suburban	Hoke	Rural	Rowan	Suburban
Caldwell	Rural	Hyde	Rural	Rutherford	Rural
Camden	Rural	Iredell	Suburban	Sampson	Rural
Carteret	Rural	Jackson	Rural	Scotland	Rural
Caswell	Rural	Johnston	Rural	Stanly	Rural
Catawba	Suburban	Jones	Rural	Stokes	Rural
Chatham	Rural	Lee	Rural	Surry	Rural
Cherokee	Rural	Lenoir	Rural	Swain	Rural
Chowan	Rural	Lincoln	Suburban	Transylvania	Rural
Clay	Rural	Macon	Rural	Tyrrell	Rural
Cleveland	Rural	Madison	Rural	Union	Suburban
Columbus	Rural	Martin	Rural	Vance	Rural
Craven	Rural	McDowell	Rural	Wake	Urban
Cumberland	Suburban	Mecklenburg	Urban	Warren	Rural
Currituck	Rural	Mitchell	Rural	Washington	Rural
Dare	Rural	Montgomery	Rural	Watauga	Rural
Davidson	Suburban	Moore	Rural	Wayne	Rural
Davie	Rural	Nash	Rural	Wilkes	Rural
Duplin	Rural	New Hanover	Urban	Wilson	Rural
Durham	Urban	Northampton	Rural	Yadkin	Rural
Edgecombe	Rural	Onslow	Rural	Yancey	Rural
Forsyth	Urban				

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