

The National  
Registry  
Alliance



2012 Workforce  
Dataset: A Review of  
Workforce Trends





# The National Registry Alliance

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This report presents descriptive analyses on workforce trends in the 2012 National Registry Alliance Dataset, features an analysis examining the relationship of age with education level, and provides recommendations for registry functioning and policy development based on these findings. The 2012 National Registry Alliance Dataset consists of data from nine registries: Connecticut, Miami-Dade County (FL), Maine, Missouri, Montana, New Jersey, West Virginia, Wisconsin, and Wyoming. These registries followed the Partnership Eligibility Review (PER) guidelines for data submission. The dataset represents active registry participants as of January 1, 2010, through March 1, 2012, and includes individual records from 58,398 professionals (49,740 of whom were currently employed) working across 12,050 programs/facilities.



Given this report's primarily descriptive nature, the issues of saturation—the extent to which a specific registry captures all programs and workers in the field for a given geographic region—and representativeness of registry data are not addressed. Further work regarding saturation and representativeness of registry data will be forthcoming from the National Registry Alliance.

## Demographics

### Overview of Programs/Facilities

Table 1 shows the type and number of facilities, including regulation (licensing) status, for the full dataset. The majority of facilities/programs were center-based. With the exception of those facilities of unknown type—programs for which data are missing—almost all programs were regulated.

Table 1. Facilities by Program Type and Licensing Status

Program Type	n	% regulated	% unregulated	% data not collected by registry
Center-based	7,181	93.5%	0.7%	5.8%
Family Child Care Home	3,662	95.7%	1.4%	2.8%
School-based	253	100.0%	0.0%	0.0%
Other program types	807	90.1%	5.6%	4.3%
Unknown	147	3.4%	96.6%	0.0%

Table 2. Characteristics of Registry Participants by Major Role

	Center-based administrator	Center-based lead teacher	Center-based asst. teacher	Family Child Care Provider	School-based administrator	School-based lead teacher	School based asst. teacher
Total n across registries	4,503	21,431	10,523	4,723	111	384	348
Mean age	43.8 (n=4,118)	37.0 (n=19,928)	36.2 (n=8,700)	41.9 (n=3,785)	45.9 (n=74)	36.6 (n=267)	42.1 (n=206)
Race/Ethnicity*	79% White 16% Black 3% Hispanic	77% White 14% Black 5% Hispanic	71% White 16% Black 9% Hispanic	66% White 25% Black 6% Hispanic	90% White 7% Black 1% Hispanic	74% White 13% Black 11% Hispanic	67% White 8% Black 23% Hispanic
Gender	95% Female	97% Female	97% Female	96% Female	81% Family	93% Female	99% Female
Median years in field	12 (n = 3,939)	6 (n = 18,801)	4 (n = 8,363)	8 (n = 3,316)	18 (n = 97)	6 (n = 294)	9 (n = 211)
Median hourly wage	\$14.22 (n=1,812)	\$10.00 (n=11,310)	\$9.00 (n=5,596)	\$10.00 (n=175)	\$40.02 (n=63)	\$18.45 (n=180)	\$13.74 (n=199)
Highest level of education*	38% Bachelor's 31% HS diploma	50% HS diploma 29% Bachelor's	71% HS diploma 15% Bachelor's	63% HS diploma 15% Associate's	47% Master's 36% Bachelor's	40% Bachelor's 30% Master's	41% Bachelor's 16% Associate's

\*Only top categories provided.

Note. N's differ across variables. Some roles not shown.

The demographics of our field reflect our diversity and the challenge to build our workforce capacity to meet the demands.

~Denise Mauzy

### Overview of Participants

To facilitate comparisons, participants were grouped by role, which is based on program type and title. Table 2 shows characteristics of registry participants by major roles.<sup>1</sup> Not all roles are shown in Table 2 because of low sample sizes or ambiguity in role definition (e.g., “owner” of an “other type of program”). Most of the data from these registries reflect participants working in direct service in group settings with young children and youth. Although school-based personnel represent important aspects of the field, because of the small sample size in this dataset across all states and roles (n = 843), the focus of this report will be on the early care and education participants.

<sup>1</sup> The Wyoming registry does not currently collect information on titles. Based on program type, Wyoming family child care professionals were able to be assigned a role and were included in subsequent analyses.

## Gender, Race/Ethnicity, and Age

The majority of early childhood participants across all roles were female and White. The racial distribution for roles was consistent with data reported by Maroto and Brandon (2012), who found that the majority of workers in early childhood occupations were White; in their study, this included 76-83% of preschool teachers (compared to 77% of center-based lead teachers in the current study), 71-79% of child care workers (compared to 71% of assistant teachers in the current study), and 69-86% of FCC providers (66% in the current study).

With respect to mean age, center-based administrators tended to be older than center-based lead and assistant teachers, which is unsurprising, but were closer in age to family child care (FCC) providers. The mean ages of leads, assistants, and family child care providers were similar to the median ages reported by Maroto and Brandon (2012) from American Community Survey (ACS) and Current Population Survey (CPS) data. They reported that “child care workers” had a median age that ranged from 35-39 (similar to the 36.2 mean reported here for assistant teachers), preschool and kindergarten teachers had a median age of 39 (compared to 37.0 for preschool lead teachers), and FCC providers had a median of 43 (compare to 41.9 in this study).

## Median Years in the Field

As a time-related variable, this attribute was highly correlated with age. Accordingly, those roles characterized by older mean ages also reflected higher median years of experience in the caregiving field. Center-based administrators reported being in the field twice as long (12 years) as lead teachers (6 years), and three times as long as assistant teachers (4 years). FCC providers’ median age fell between lead teachers and administrators (8 years). These medians are comparable to the 4.0-5.4 year range for child care workers and 6.8-11.7 years for preschool teachers (Maroto & Brandon, 2012).

## Median Hourly Wage

Compared to their school-based counterparts, center-based staff and family child care providers earned significantly less money. This wage differential was likely related to the difference in education levels for the two groups, which will be discussed below. Within center-based staff, it is not surprising to see that administrators earned more than lead teachers, who in turn made more money than assistant teachers. The data on FCC providers is quite sparse, but what is available indicates their median hourly wage was the same as center-based lead teachers.

The Occupational Employment Statistics (OES) Survey provides wage estimates for the nation for the following occupational categories: administrators of preschool/child care programs; preschool teachers (not special education); and child care workers. Although these classifications likely do not match up perfectly with the role variables constructed for the dataset, they are

sufficiently similar to provide some useful comparisons. According to OES (2010) estimates, administrators of preschool/child care programs had a median hourly wage of \$20.65, compared to the \$14.22 earned by center-based administrators. The OES (2010) estimate of \$12.35 as the median wage for preschool teachers (not special education) was somewhat higher than the \$10.00 an hour earned by center-based lead teachers in this dataset. Center-based assistant teachers earned \$9.00 an hour, compared to the \$9.28 estimated by OES for child care workers in 2010. Besides occupational category differences, another explanation for the lower medians reported in this dataset may be that the geographical areas represented may have lower wages in general compared to the rest of the nation.

## Median and Mean Number of Training Hours

It should be noted that registries had different policies with respect to how training hours are collected. Two of the participating registries (MT, WI) required professionals to submit all training hours. Six registries (Miami-Dade, ME, MO, NJ, WV, and WY) provided all training hours for which they have documentation, with the acknowledgement that their participants may have received additional training hours that were not recorded. One registry, CT, only entered training data on a select group of participants (those participating in the CCAC Training Program in Child Development that leads to a CDA credential).

Table 3 shows median and mean training hours by roles based on the three methods of data collection. Median training hours are reported because the distribution of training hours in 2010 was significantly skewed. Method 1, in which participants were required to submit documentation for all their training clock hours, yielded higher average than Method 2, in which registries rely on participants to voluntarily submit their hours. Because Method 3 reflects a specific state initiative, the results should not be compared with the other methods.

## Participants by Registry

In considering the findings from this dataset, it is important to keep in mind the differences in the number of participants from each registry. These differences are related to number of factors, including the population of the relevant area, regulations regarding registry participation, and registry resources. Figure 1 presents the number of currently employed participants by registry, the number of current employed participants in the early childhood field, and the 2011 OES estimate of the total number of early childhood workers employed in the state.<sup>2</sup> Based

<sup>2</sup> The following Standard Occupational Classification (SOC) codes were summed to obtain the estimate: 11-9031 Education Administrators, Preschool and Childcare Center/Program; 25-2011 Preschool Teachers, Except Special Education; 39-9011 Childcare Worker. As mentioned earlier, nearly all participants in the dataset work in the early care and education field. There are many limitations to using this methodology, as discussed in Sommers (2012), including lack of data on those providing services in agencies whose primary activity is not early care and education, problems with the distinctions between codes and type of work performed, and lack of data on age of children served (could include programs serving school-aged children).

on these estimates of the early childhood workforce (which should be treated as approximate due to issues about how workers in the early education field are classified in federal datasets), registries differ considerably on the extent to which they have participation from these professionals.

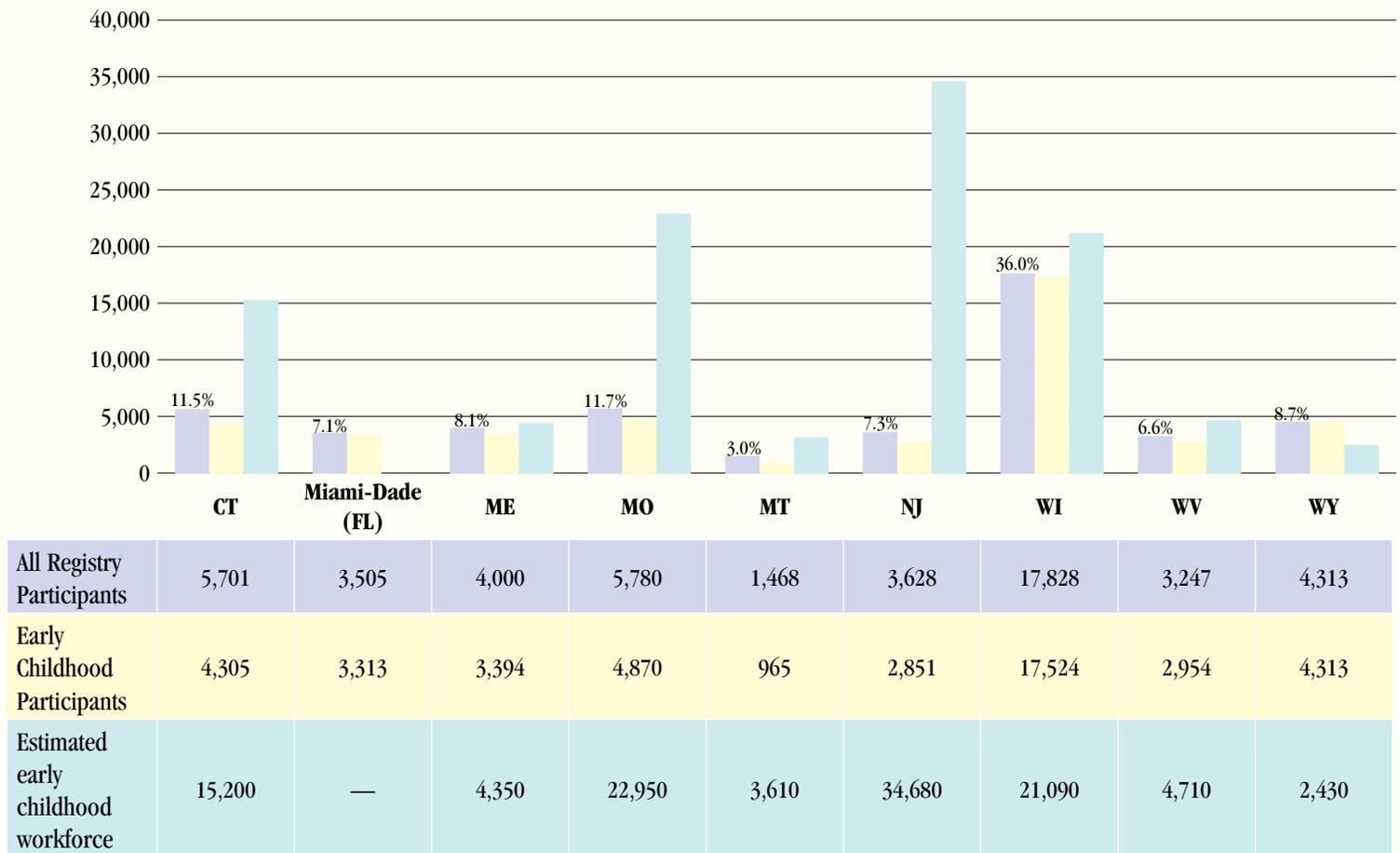
Another important demographic factor to consider, within and across registries, is participant urbanicity—that is, how urban,

suburban, or rural the area in which the participants lived. The 2003 Rural-Urban Continuum Codes (also known as Beale Codes) were used to classify participants' home county. Figure 2 gives a breakdown of Beale Codes and their relation to the Metro and Non-metro categories. As shown in Figure 3, over three quarters (76%) of participants in this dataset were from metropolitan areas, with the largest proportion, not surprisingly, coming from the most urban of counties.

*Table 3. Median and Mean Training Hours for Early Childhood Roles by Data Collection Method*

Role	Required to submit hours (Method 1)			Document all hours submitted (Method 2)			Collect hours on select group (Method 3)		
	Median	Mean	<i>n</i>	Median	Mean	<i>n</i>	Median	Mean	<i>n</i>
Center-based administrator	12.5	37.2	2,229	6.0	21.9	1,614	45.0	67.1	125
Center-based lead teacher	8.0	35.7	11,700	7.0	22.6	6,512	51.0	98.2	521
Center-based assistant teacher	6.0	32.9	2,421	2.0	20.4	5,000	90.0	112.4	540
Family child care provider	9.5	27.8	1,869	8.0	15.6	2,361	150.0	130.2	26

*Figure 1. Number of Employed Participants (both Early Childhood and School-Age) and Estimated Early Childhood Workforce by Registry*



Note. Workforce estimates for Miami-Dade County are not available since county-level estimates are not provided by OES. Percentage at the top of blue bars indicate each registry's relative contribution to the entire employed dataset.

Figure 2. Beale Code Designation

Beale Code	Description
<b>Metro Counties</b>	
1	Counties in metro areas of 1 million population or more
2	Counties in metro areas of 250,000 to 1 million population
3	Counties in metro areas of fewer than 250,000 population
<b>Non-Metro Counties</b>	
4	Urban population of 20,000 or more, adjacent to a metro area
5	Urban population of 20,000 or more, not adjacent to a metro area
6	Urban population of 2,500 to 19,999, adjacent to a metro area
7	Urban population of 2,500 to 19,999, not adjacent to a metro area
8	Completely rural or less than 2,500 urban population, adjacent to a metro area
9	Completely rural or less than 2,500 urban population, not adjacent to a metro area

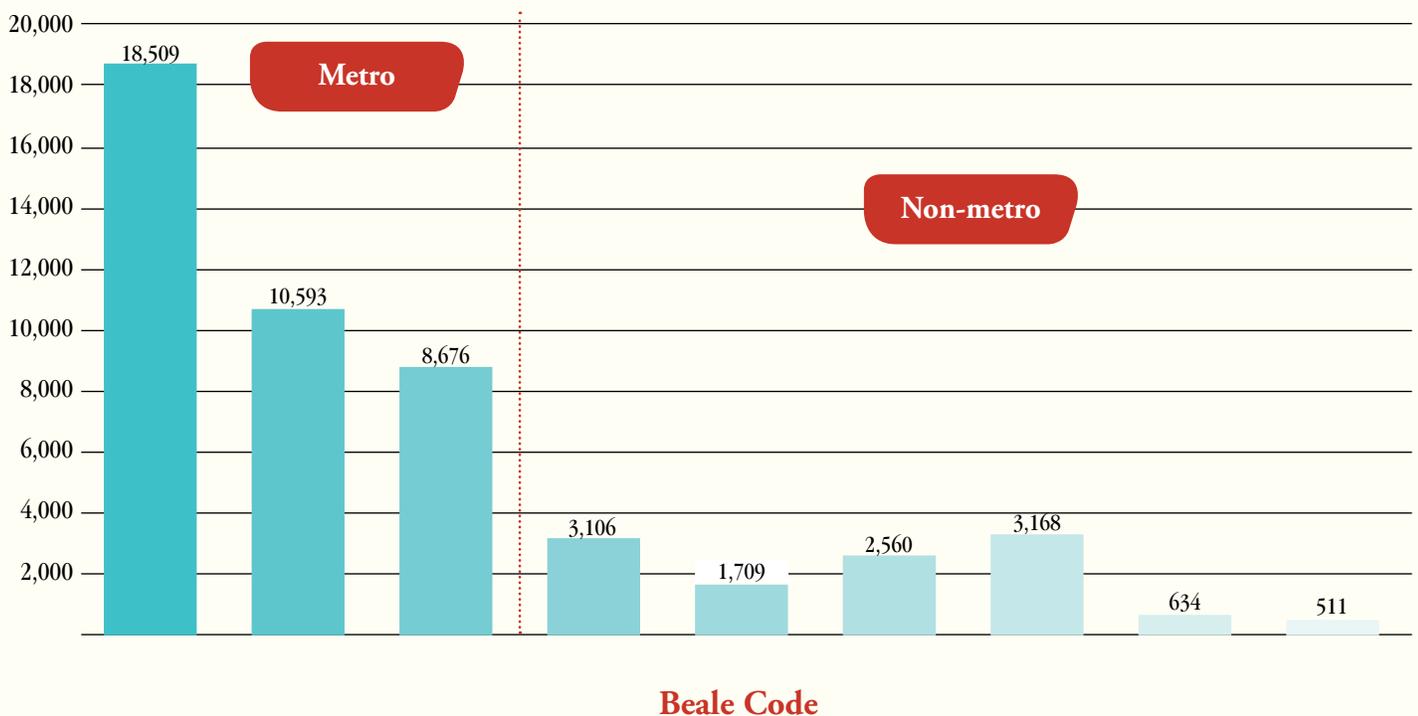
Understanding the language preferences and needs of our field are critical in supporting cultural competence and providing professional development opportunities to improve practices in working with young children.

~Maria Taylor

### Participant Primary Language

Registries reported on the primary language spoken by participants. Of the 42,584 participants who provided data for this field, 90.7% of them indicated English as their primary language. The second most reported primary language was Spanish (8.0%). The proportions for other languages are as follows: Other language not listed, 0.4%; Creole, 0.2%; Arabic, 0.1%; French, 0.1%; Portuguese, 0.1%, Russian, 0.1%, and Tagalog, 0.1%.

Figure 3. Registry Participants by Beale Code



## Early Care and Education Workforce

The remainder of this report will focus on the results of four early childhood professional roles: center-based administrators, center-based lead teachers, center-based assistant teachers, and family child care (FCC) professionals.

### Highest Level of Education by Role

Figure 4 shows the highest level of formal education attained by registry participants by role. All registries contributed data for education level of participants. The registries requested full education of participants and entered all data they receive, but it should be noted that some education records may not be complete—i.e., they only reflect the education level as reported by the participant, with the possibility that the highest level and early childhood-specific qualifications have not been reported. (For Missouri’s records, only those participants who indicated that they had reported all education were included in the dataset.)

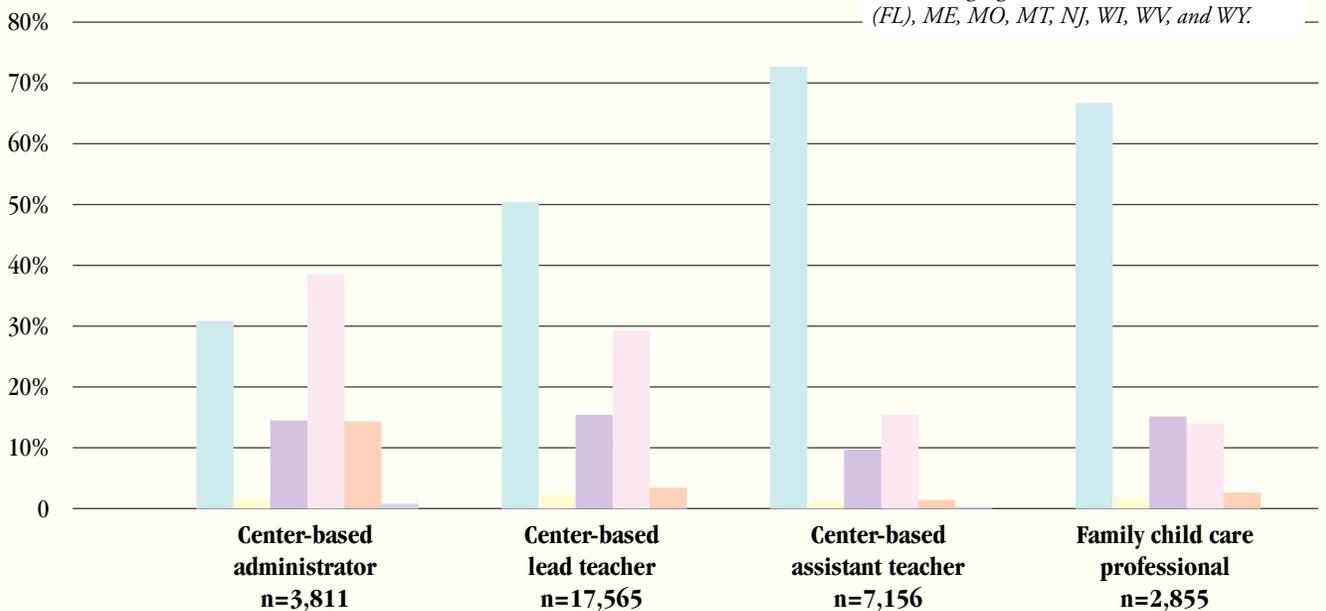
As expected, administrators tended to have more education than lead teachers; over half of administrators have at least a bachelor’s degree, whereas only a third of lead teachers have the same level of education. Assistant teachers had similar educational

qualifications as FCC professionals; more than two-thirds of both roles had a high school diploma or less, and less than 20% had a bachelor’s degree or more. It is clear that early childhood professionals across these registries continued to lack the formal education qualifications that would be desirable for enhancing the field in terms of wage, status, and professionalism.

However, it should be noted that there was quite a bit of missing data with respect to education level for professionals in these registries. An even greater concern is the likelihood that the missing education data were not random, which would limit the generalizability of the results of these analyses. As shown in Figure 5, the more educated and well-paid (relatively) groups of professionals—center-based administrators and lead teachers—had much less missing data compared with center-based assistant teachers and family child care professionals.

Figure 4. Highest Level of Education Attained by Role

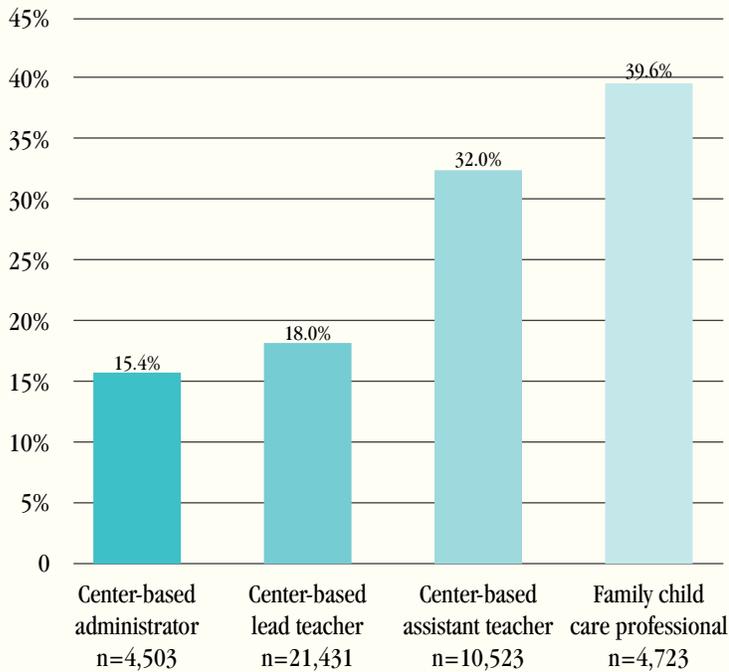
The Alliance 2012 Workforce Dataset  
contributing registries include: CT, Miami-Dade (FL), ME, MO, MT, NJ, WI, WV, and WY.



Education Level	Center-based administrator (n=3,811)	Center-based lead teacher (n=17,565)	Center-based assistant teacher (n=7,156)	Family child care professional (n=2,855)
High school diploma or less	30.8%	50.3%	72.6%	66.7%
1-year certificate	1.7%	2.0%	1.1%	1.9%
Associate's degree	14.4%	15.3%	9.8%	15.0%
Bachelor's degree	38.4%	29.1%	15.2%	13.9%
Master's degree	14.1%	3.4%	1.2%	2.5%
Doctoral degree	0.7%	0.0%	0.1%	0.0%

Note. “High school diploma or less” includes participants who have “Some College.”

Figure 5. Missing Data for Highest Level of Education by Role



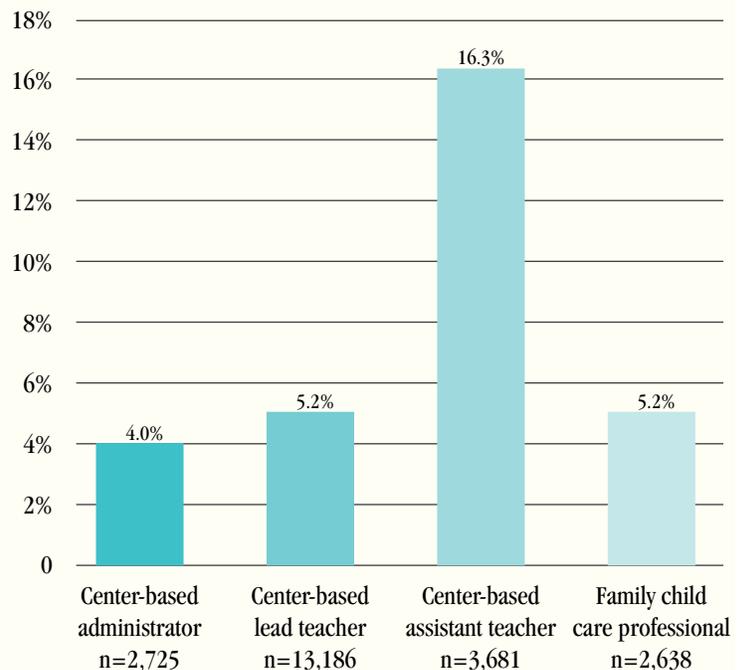
The Alliance 2012 Workforce Dataset contributing registries include: CT, Miami-Dade (FL), ME, MO, MT, NJ, WI, WV, and WY.



### “Some College” as an Education Category

Another educational trend that the National Registry Alliance has been monitoring over the years is frequency of professionals whose highest education level was “Some College”—that is, those who have earned college credits but have not earned a post-secondary degree. Figure 6 displays the percentage of professionals, by role, who indicated their highest level of education was “Some College.” (It should be noted that these results were based on data from fewer registries since not all track “Some College” and the number of college credits professionals have completed. In registries that do not track “Some College,” those with college credits fall into the high school diploma or less category with respect to highest level of education attained.) Relatively few center-based administrators, lead teachers, and FCC professionals reported “Some College” as their highest educational attainment. However, the rate of “Some College” for assistant teachers was much higher; nearly one in six indicated having college credits that did not yet count towards a degree. Across all roles, the rate of “Some College” was lower than what Maroto and Brandon (2012) documented: 12-18% for preschool teachers; 21-39% for child care workers, and 17-32% for FCC professionals. Although the rates were different, the pattern is similar: child care workers, who were most similar to assistant teachers in this dataset, were more likely to report that their highest educational level was “Some College” in comparison with preschool teachers, who were most similar to lead teachers in the dataset.

Figure 6. Proportion of Professionals whose Highest Education Level was “Some College,” by Role



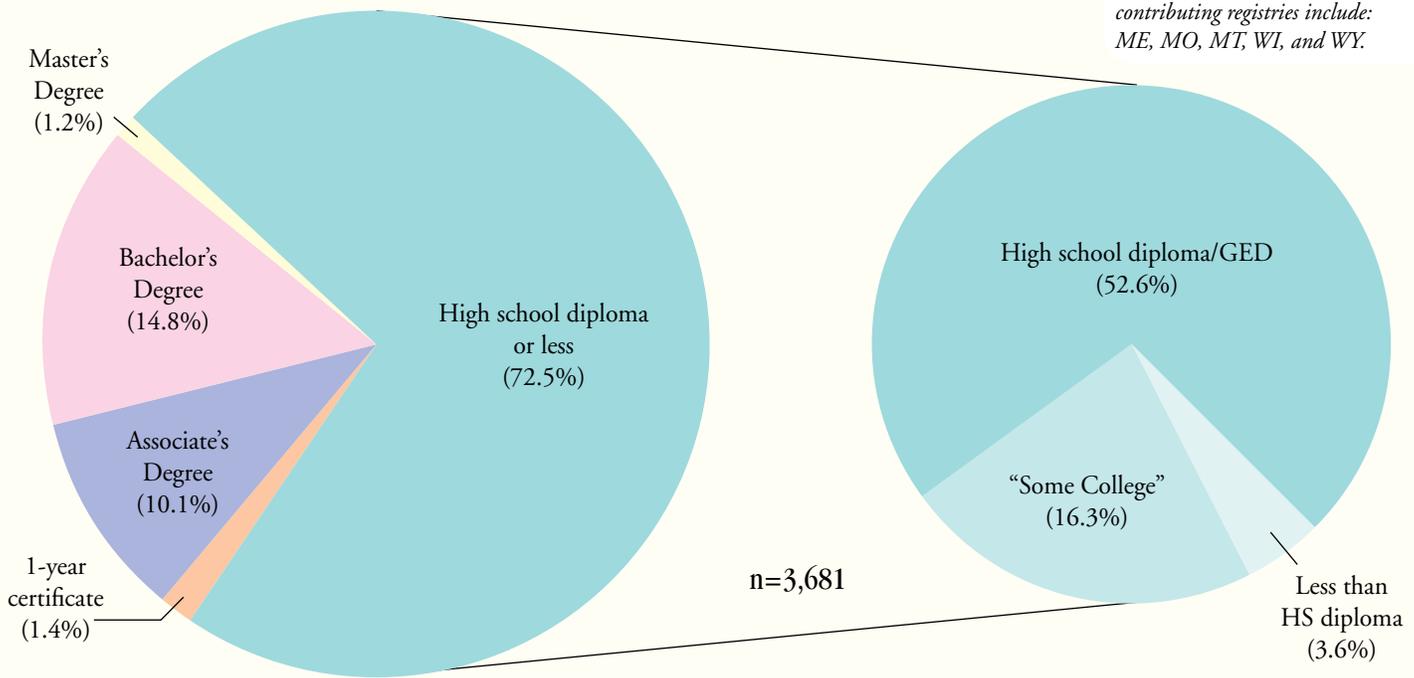
The Alliance 2012 Workforce Dataset contributing registries include: ME, MO, MT, WI, and WY.

Figure 7 shows education level for center-based assistant teachers for those registries that track “Some College.” For the majority of assistant teachers, their highest level of education was categorized as high school diploma or less; the smaller pie shows the breakdown of these participants. “Some College” was the second largest educational attainment category for assistant teachers, after high school diploma/GED. Specifically, as shown

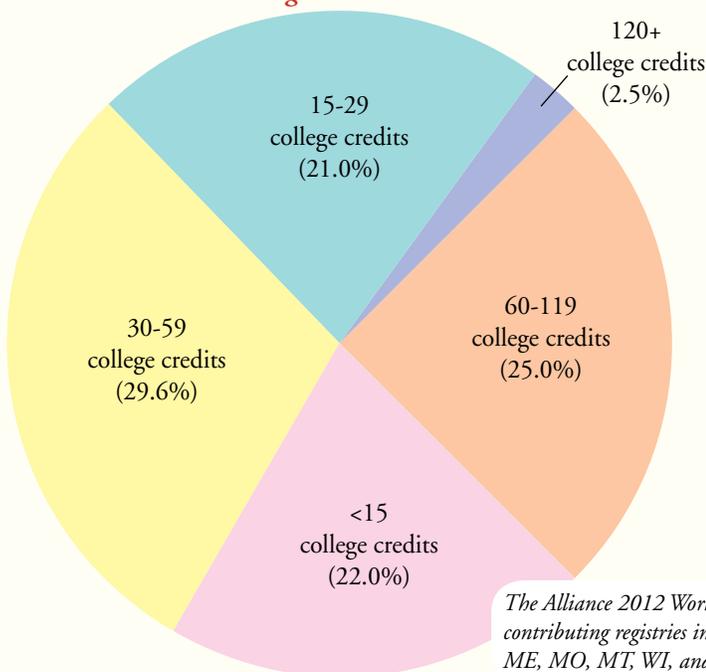
in Figure 8, over half (57%) of “Some College” participants had at least 30 college credits, and over a quarter (27.5%) had at least 60 credits, which is a typical total for many holders of Associate’s degrees. Thus, many professionals whose highest level of education is considered a high school diploma actually have a great deal more education than expected based on traditional categorizations that do not include “Some College.”

*Figure 7. Center-based Assistant Teacher Highest Education Level, including “Some College”*

*The Alliance 2012 Workforce Dataset contributing registries include: ME, MO, MT, WI, and WY.*



*Figure 8. Number of College Credits earned by Assistant Teachers with “Some College”*



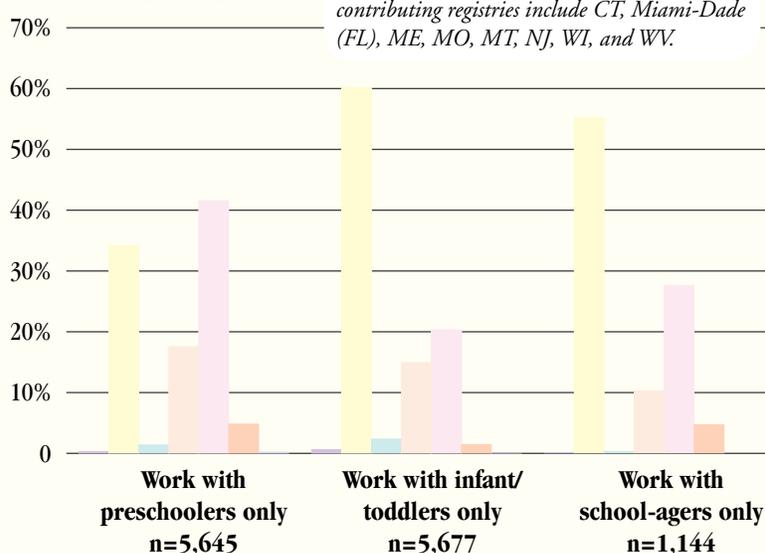
*The Alliance 2012 Workforce Dataset contributing registries include: ME, MO, MT, WI, and WY.*

**Data alone doesn't tell the story. It relies on the voice of the field to frame the data, communicate the status of our workforce, and translate the potential impact on our nation's children.**

*~Darlene Ragozzine*

Figure 9. Highest Level of Education for Lead Teachers by Age Group Taught

The Alliance 2012 Workforce Dataset contributing registries include CT, Miami-Dade (FL), ME, MO, MT, NJ, WI, and WV.



### Center-based Lead Teachers: Highest Level of Education by Age Group Taught

Lead teachers varied in their educational background, depending on the age group with which they primarily worked. As shown in Figure 9, nearly half of those who worked with preschoolers had at least a bachelor's degree, whereas less than a quarter of those work with infant/toddlers had a bachelor's degree or more. Nearly one-third of school-age professionals reported that their highest level of education was at least a bachelor's degree.

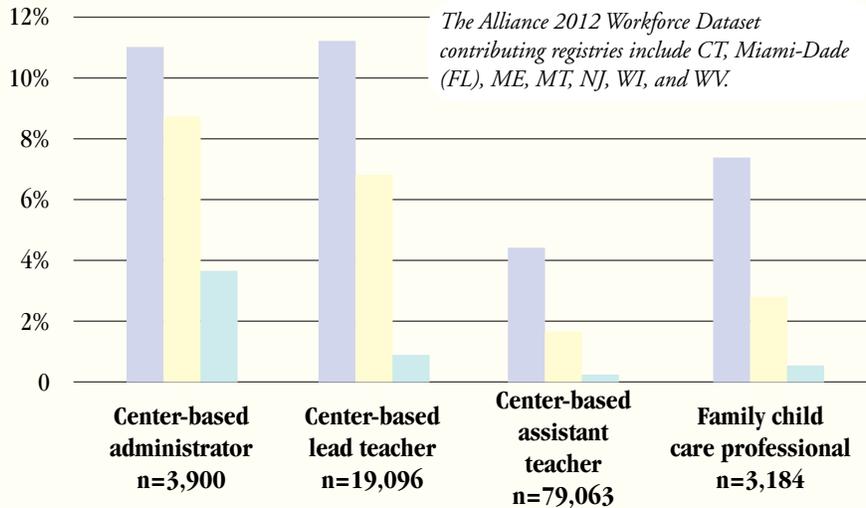
### Early Childhood-Specific Education and Qualifications

Early childhood professionals differed in the amount of early childhood education-specific (ECE) degrees they obtained, as shown in Figure 10. The National Registry Alliance allows registries to code early childhood-specific degree equivalents, which is defined as a course of study that covers early childhood education and child development topics but which does not necessarily culminate in a degree. Overall, relatively few professionals, regardless of role, had educational qualifications that were related specifically to early childhood. Although half

of center-based administrators had at least a bachelor's degree, only 12% had an ECE bachelor's degree or higher. The situation for lead teachers was similar; one third had at least a bachelor's degree but only 7.5% earned an ECE bachelor's or higher. The attainment of ECE degrees for assistant teachers and FCC professionals was even lower. Among center-based assistant teachers, 17% had a bachelor's or higher, but only 2% obtained at least an ECE bachelor's degree. For FCC providers, the statistics were similar: 16% had at least a bachelor's degree but only 3% had an ECE degree or higher.

As pointed out by Institute of Medicine and the National Research Council (2012), specific early childhood professional development, including higher education, that focuses on implementing defined evidence-based curricula, developing supportive teacher-child relationships, and providing appropriate child development knowledge, is the key to raising program quality and ensuring positive child outcomes—not simply obtaining a higher education degree.

Figure 10. Early Childhood-Specific Degrees by Role

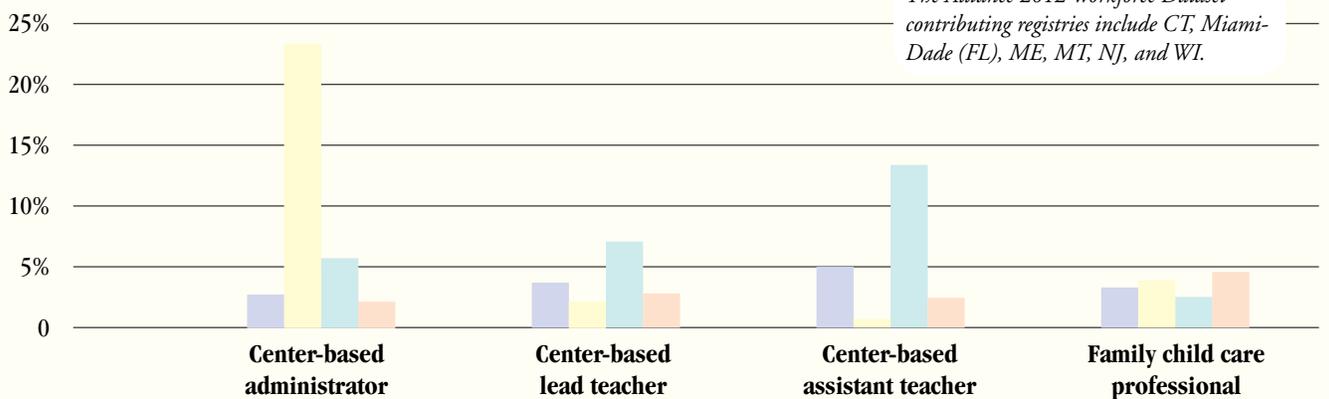


Role	ECE Associate's degree or equivalent	ECE Bachelor's degree or equivalent	ECE Master's degree or equivalent
Center-based administrator (n=3,900)	10.8%	8.5%	3.8%
Center-based lead teacher (n=19,096)	11.1%	6.7%	0.8%
Center-based assistant teacher (n=79,063)	4.3%	1.8%	0.2%
Family child care professional (n=3,184)	7.6%	2.7%	0.5%

### Child Development Associate Credential

The Child Development Associate (CDA) credential is the most widely recognized certification in early childhood education. It is based on a set of core competency standards designed to provide guidance to professionals in their work in the early care field. The original credential is valid for three years, after which it may be renewed every five years. As shown in Figure 11, only a very few professionals indicated that they held a current CDA. The percentages found here are quite low compared to Maroto and Brandon (2012), who reported that 23% of preschool teachers held a CDA. This discrepancy may exist because this dataset only includes professionals who are current in their CDA credentialing, whereas the data used by Maroto and Brandon may have included individuals with expired CDAs.

Figure 11. CDA, Director, Preschool, and I/T Credentials by Role



Role	Current CDA	Director credential	Preschool credential	Infant/Toddler credential
Center-based administrator (n=4,503)	2.7%	23.1%	5.2%	2.1%
Center-based lead teacher (n=21,431)	3.5%	2.1%	7.0%	2.8%
Center-based assistant teacher (n=10,523)	5.0%	1.3%	13.1%	2.5%
Family child care professional (n=4,723)	3.2%	4.3%	2.6%	4.7%

## Director, Preschool, and Infant/Toddler Credentials

State-sponsored credentials are another professional development avenue that many professionals choose to pursue. Many states now offer professional credentials, similar to the CDA, that help to ensure that professionals have the same core early childhood knowledge, regardless of setting. The credentials are often based on the role and age group with which professionals work. The National Registry Alliance currently tracks state-based credentials in three areas: Director (Administrator), Preschool, and Infant/Toddler credential. However, not all states offer these credentials. For this year's dataset, professionals in the following states have access to credentials: Director (CT, FL, NJ, WI); Preschool (CT, FL, MT, WI); and Infant/Toddler (CT, ME, MT, NJ, WI).

Figure 11 shows the percentage of professionals by role with a particular credential. Not surprisingly, center-based administrators were most likely to have a Director credential, with nearly a quarter reporting such a certification. Center-based assistant teachers were most likely to have a Preschool credential, whereas

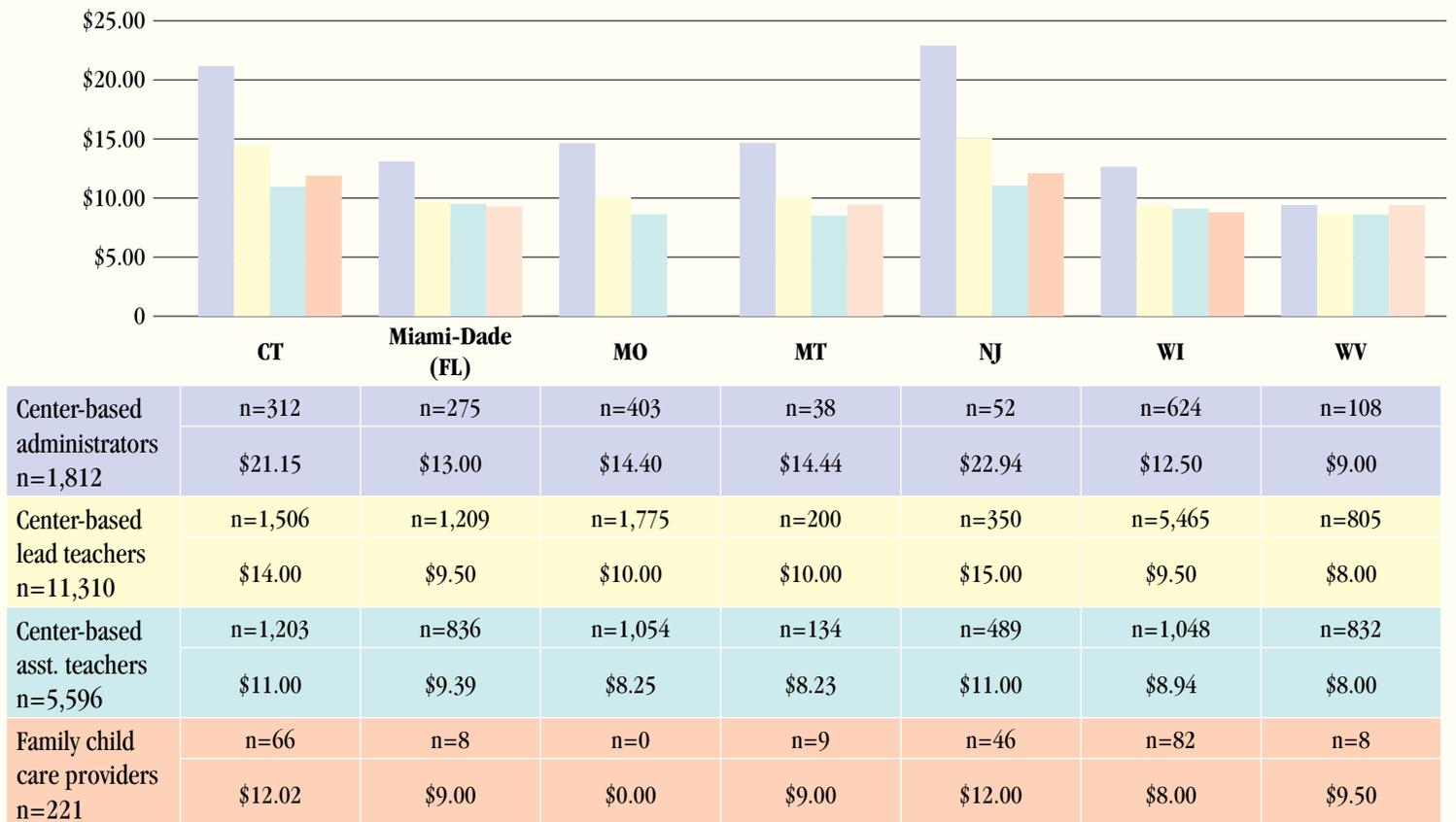
FCC professionals were most likely to have the Infant/Toddler credential. It is expected that these numbers will increase over time as more states offer credentials, and as more professionals become aware of them as options for professional development.

## Median Hourly Wage and Its Relationship to Demographic Characteristics

The relatively low compensation of professionals in the early childhood field has long been noted as one of the factors that has interfered with the recruitment and retention of talented professionals. Of course, wages are usually tied to education levels, which are fairly low across roles for early childhood professionals, which may be one factor that keeps wages low.

Given that early childhood professionals often work in positions that are not full-time, registries must maintain flexibility in collecting different kinds of income data, including hourly wage data and salary data. The data presented in this report reflect

Figure 12. Median Hourly Wage by Registry and Role



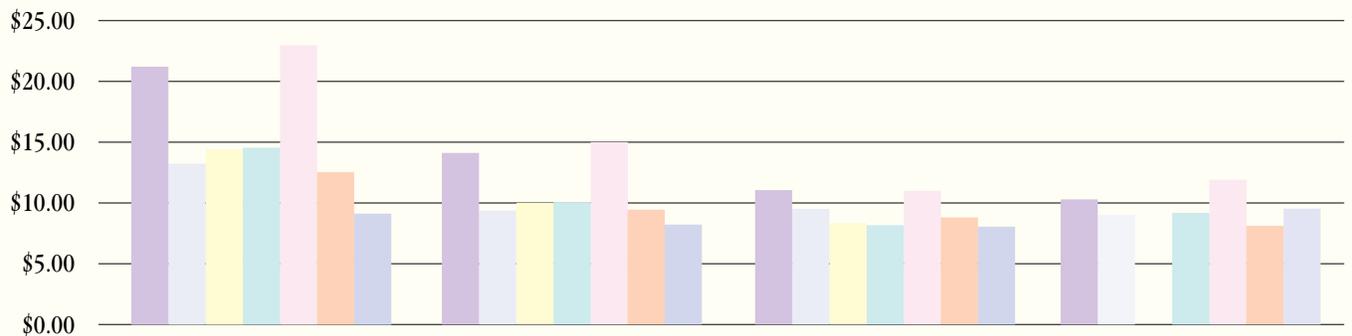
Note. The lighter shaded bars for FCC providers indicate that the data represent fewer than 10 people and should be treated with caution.

hourly wage data. Figures 12 and 13 present median hourly wage by registry and role. Figure 12 is useful for looking at variation within a registry; Figure 13 is useful for comparison among registries. There was considerable variation between registries with respect to wages. The two East Coast registries (CT and NJ) had the highest compensation in general, which reflected the generally higher cost of living in those states. It is noteworthy that those two states also demonstrated the greatest wage differentiation; the amount that administrators earned was significantly higher than the median wage for other roles. On the other hand, the differences in wages by role were least prominent in WI and WV. Overall, administrators earned the most, followed by lead teachers, then assistant teachers. The data on FCC providers was relatively scant and should be treated with caution.

**A fairly compensated and well-prepared early childhood workforce is central to a system that prepares children for success in school and life.**

~Jill Soto

*Figure 13. Median Hourly Wage by Role and Registry*



	<b>Center-based administrator n=1,812</b>	<b>Center-based lead teacher n=11,310</b>	<b>Center-based assistant teacher n=5,596</b>	<b>Family child care professional n=221</b>
<b>Connecticut</b>	n=312 \$21.15	n=1,506 \$14.00	n=1,203 \$11.00	n=66 \$12.02
<b>Miami-Dade (FL)</b>	n=275 \$13.00	n=1,209 \$9.50	n=836 \$9.39	n=8 \$9.00
<b>Missouri</b>	n=403 \$14.40	n=1,775 \$10.00	n=1,054 \$8.25	n=0 —
<b>Montana</b>	n=38 \$14.44	n=200 \$10.00	n=134 \$8.23	n=9 \$9.00
<b>New Jersey</b>	n=52 \$22.94	n=350 \$15.00	n=489 \$11.00	n=46 \$12.00
<b>Wisconsin</b>	n=624 \$12.50	n=5,465 \$9.50	n=1,048 \$8.94	n=82 \$8.00
<b>West Virginia</b>	n=108 \$9.00	n=805 \$8.00	n=832 \$8.00	n=8 \$9.50

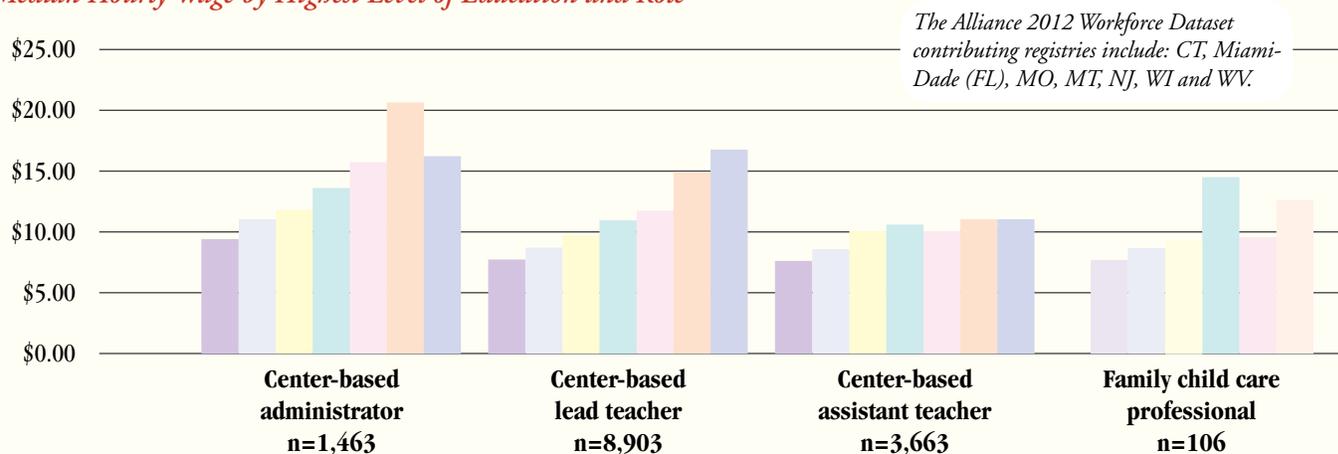
Note. The lighter shaded bars for FCC providers indicate that the data represent fewer than 10 people and should be treated with caution.

## Median Hourly Wage and Education

In general, having more education was associated with higher earnings, especially for center-based administrators and lead teachers (see Figure 14). For assistant teachers, the important threshold appears to be the one-year certificate; there was little difference in the median wage for those with one-year certificates through master’s degrees. Again, the data on FCC providers was relatively scant and should be treated with caution.

In comparison to kindergarten teachers, early childhood professionals who held at least a bachelor’s degree earned significantly less. According to 2010 Bureau of Labor Statistics (BLS), median wage for kindergarten teachers (not special education) was \$27.75—more than twice as high as the median wage for preschool teachers (not special education). In this dataset, center-based lead teachers with a bachelor’s degree earned \$11.80 an hour, and those with a master’s degree earned \$15.00, far below the median wages for kindergarten teachers.

Figure 14. Median Hourly Wage by Highest Level of Education and Role



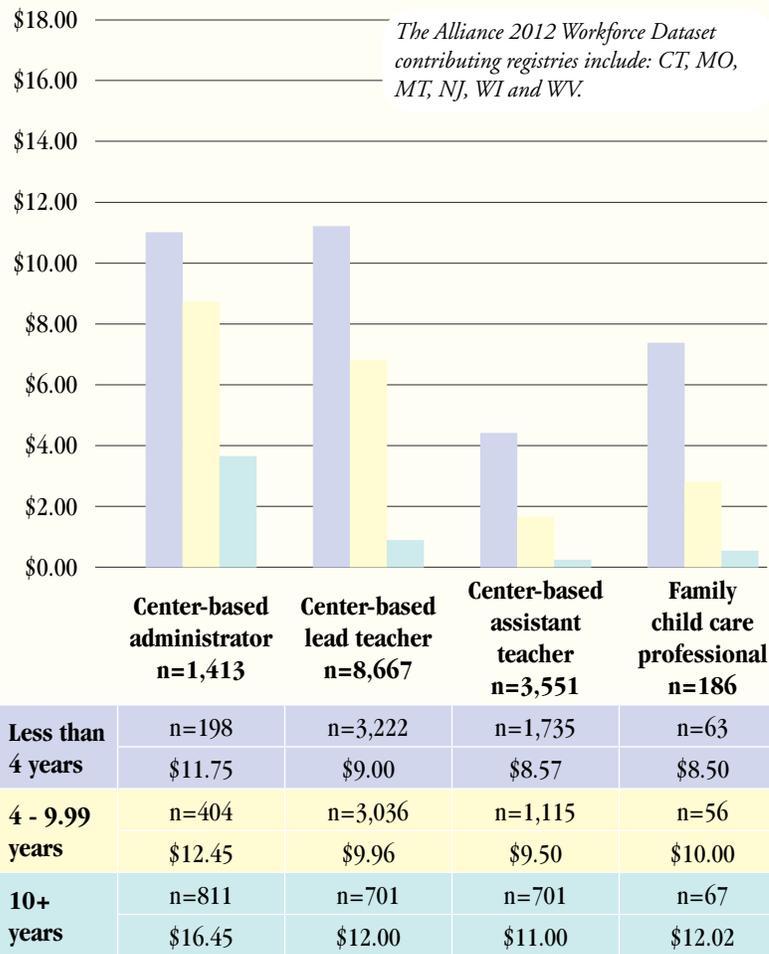
	Center-based administrator n=1,463	Center-based lead teacher n=8,903	Center-based assistant teacher n=3,663	Family child care professional n=106
No High School Diploma	n=3	n=36	n=33	n=2
	\$9.30	\$7.75	\$7.60	\$7.75
High school diploma/GED	n=467	n=4,482	n=2,579	n=72
	\$11.00	\$8.75	\$8.50	\$8.58
1-year certificate	n=14	n=165	n=46	n=3
	\$11.75	\$9.85	\$10.00	\$9.00
Associate's degree	n=195	n=1,376	n=362	n=11
	\$13.50	\$11.00	\$10.50	\$14.42
Bachelor's degree	n=579	n=2,545	n=586	n=16
	\$15.63	\$11.80	\$10.00	\$9.38
Master's degree	n=199	n=297	n=54	n=4
	\$20.62	\$15.00	\$11.00	\$12.50
Doctoral degree	n=6	n=2	n=3	—
	\$16.15	\$16.86	\$11.00	—

Note. The lighter shaded bars indicate that the data represent fewer than 10 people and should be treated with caution.

### Median Hourly Wage and Years in the Field

Figure 15 shows that the number of years in the early childhood field tended to be related to median hourly wage. Across all roles, the median increased with greater field-related experience. Although wages were generally low, this trend highlights the fact that remaining in the field, and potentially earning additional credentials, can result in higher wages.

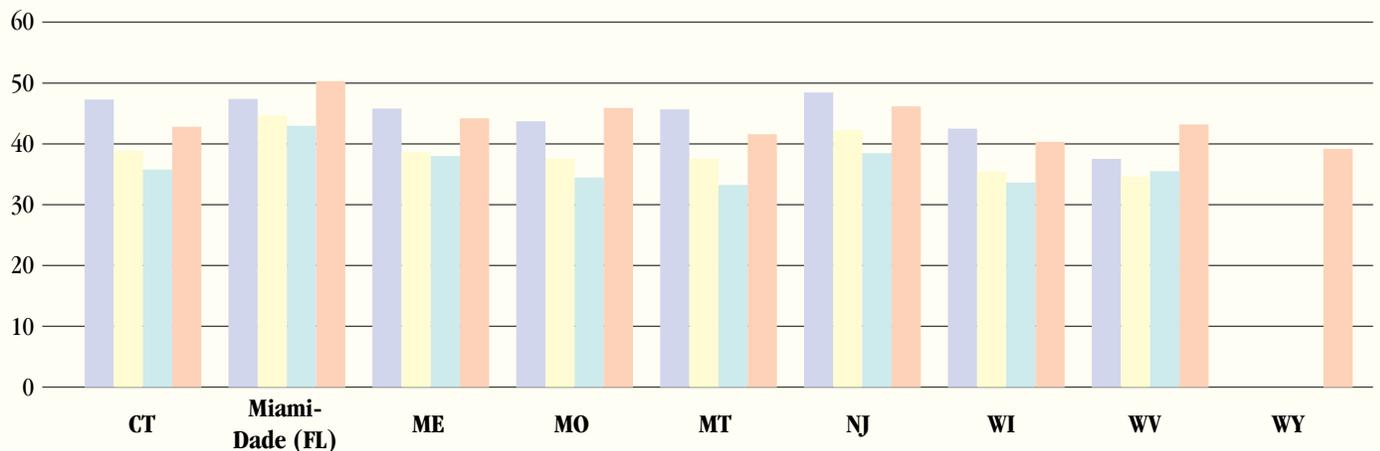
*Figure 15. Median Hourly Wage by Role and Years in Field*



**Attracting and retaining a competent early childhood workforce will be dependent on our ability to provide fair compensation commensurate with our expectations.**

~Phyllis Kalifeh

Figure 16. Mean Age by State and Role



	CT	Miami-Dade (FL)	ME	MO	MT	NJ	WI	WV	WY
Center-based administrators	n=384 47.4	n=389 47.5	n=257 45.7	n=603 43.8	n=132 45.8	n=58 48.5	n=2,097 42.5	n=198 37.4	—
Center-based lead teachers	n=1,352 38.8	n=1,650 44.8	n=1,449 38.8	n=2,335 37.5	n=435 38.4	n=182 42.1	n=1,263 35.4	n=1,262 34.7	—
Center-based asst. teachers	n=1,133 35.9	n=1,214 43.0	n=814 38.0	n=1,458 34.6	n=251 33.2	n=286 38.5	n=2,165 33.5	n=1,379 35.6	—
Family child care providers	n=132 42.9	n=33 50.2	n=777 44.1	n=480 45.9	n=144 41.5	n=58 46.2	n=1,725 40.2	n=108 43.2	n=400 38.3

**Good data management systems are essential. They provide the fundamental building blocks for assessing the status of our early childhood field and charting a course for the future, benefitting the children and the workforce alike.”**

~Rose Kor

### Mean Age and Its Relationship to Workforce Characteristics

On average, center-based administrators (mean age = 43.8) were older than center-based lead teachers (mean age = 37.0), followed by assistant teachers (mean age = 36.2), and FCC professionals (41.9). Given these dataset means, Figure 16 shows that CT, Miami-Dade, and NJ clearly reported older administrators compared to the other registries, whereas WV’s administrators were younger. With respect to lead teachers, staff in Miami-Dade and NJ were clearly older, whereas staff in WV were somewhat younger. Similarly, assistant teachers in Miami-Dade and NJ were older than their counterparts in MT and WI. For FCC professionals, Miami-Dade, ME, MO, and NJ all clearly exhibited higher mean ages, whereas WY’s was lowest.

Across the registries, there was some variation with respect to mean age and role of early childhood professional. For five registries (CT, ME, NJ, WI, and WV), the typical pattern (oldest to youngest mean age) was center-based administrator, FCC professional, center-based lead teacher, and center-based assistant teacher. For three registries (Miami-Dade, MO, and WV), FCC professionals were the oldest category; these workers’ ages may reflect these regions’ tendency to have an older population overall.

As shown in Figure 17, there was almost no difference in mean ages between early childhood professionals living in urban and rural areas. The only statistically significant difference was for lead teachers: those living in metropolitan areas tended to be slightly older than their non-metropolitan area peers,  $t(19926) = 2.91$   $p < .01$ .

*Figure 17. Mean Age by Role and Urbanicity*



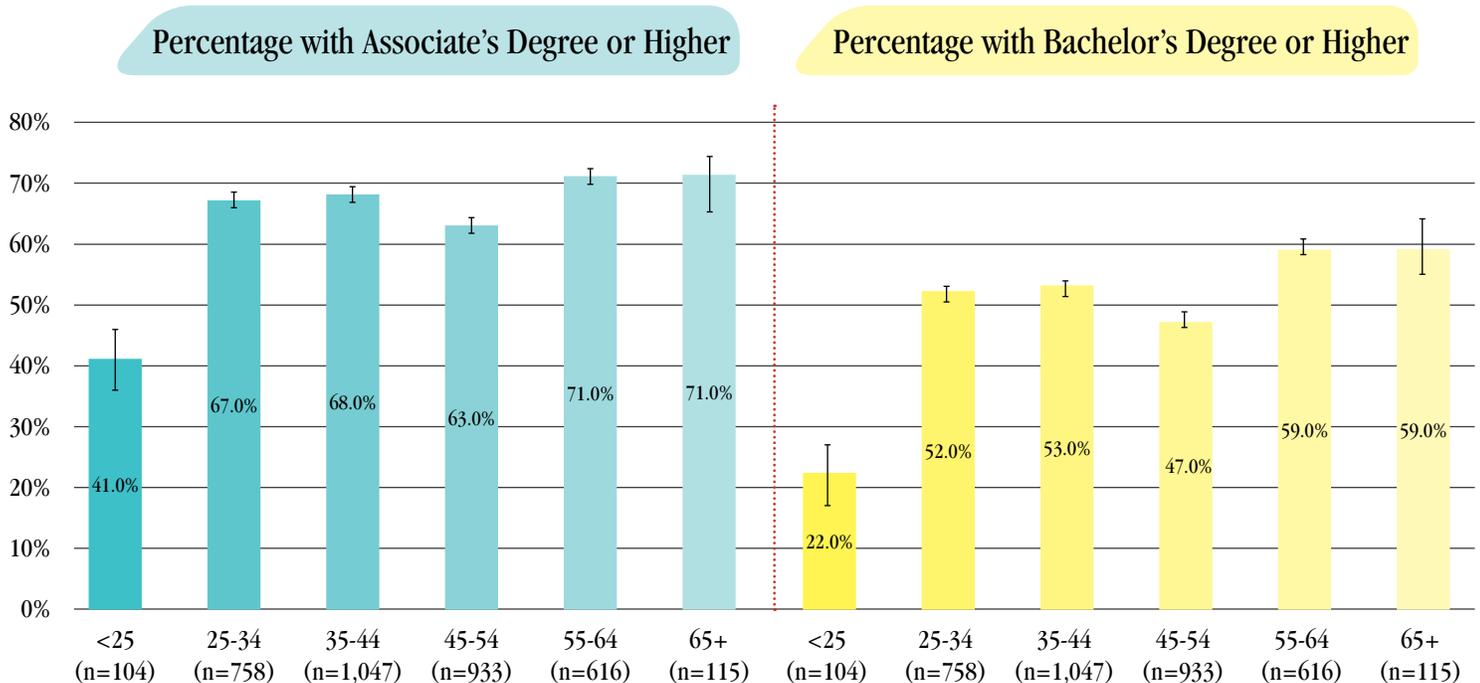
	Center-based administrator	Center-based lead teacher	Center-based assistant teacher	Family child care professional
<b>Non-metro (Beale codes 4-9)</b>	n=806 44.0	n=3,717 36.5	n=1,824 36.0	n=1,277 42.0
<b>Metro (Beale codes 1-3)</b>	n=3,311 43.7	n=16,211 37.1	n=6,876 36.3	n=2,577 41.8

## Featured Analysis: Relationship of Age and Education Level

A long-standing concern in the early childhood field is the apparent decline of workforce qualifications over time. Herzenberg, Price, and Bradley (2005) examined the relationship between age and educational attainment of early childhood professionals from 1979 to 2004. They found that the education levels of early childhood workers had declined since the early 1980s. In their most recent data, the younger a teacher or administrator is, the less likely she or he is to have a bachelor's degree. In fact, 25% of teachers/administrators ages 24-36 have a bachelor's degree, compared to 36% of those ages 40-50 and 43% of those over 50. While older workers have more time in which to attain a degree, Herzenberg et al. showed that workers who had been in the field since the 1970s tended to enter the field with more qualifications. This has brought up a potential concern: will our field lose a great deal of expertise rather quickly due to retirement, if in fact education is more concentrated among older workers?

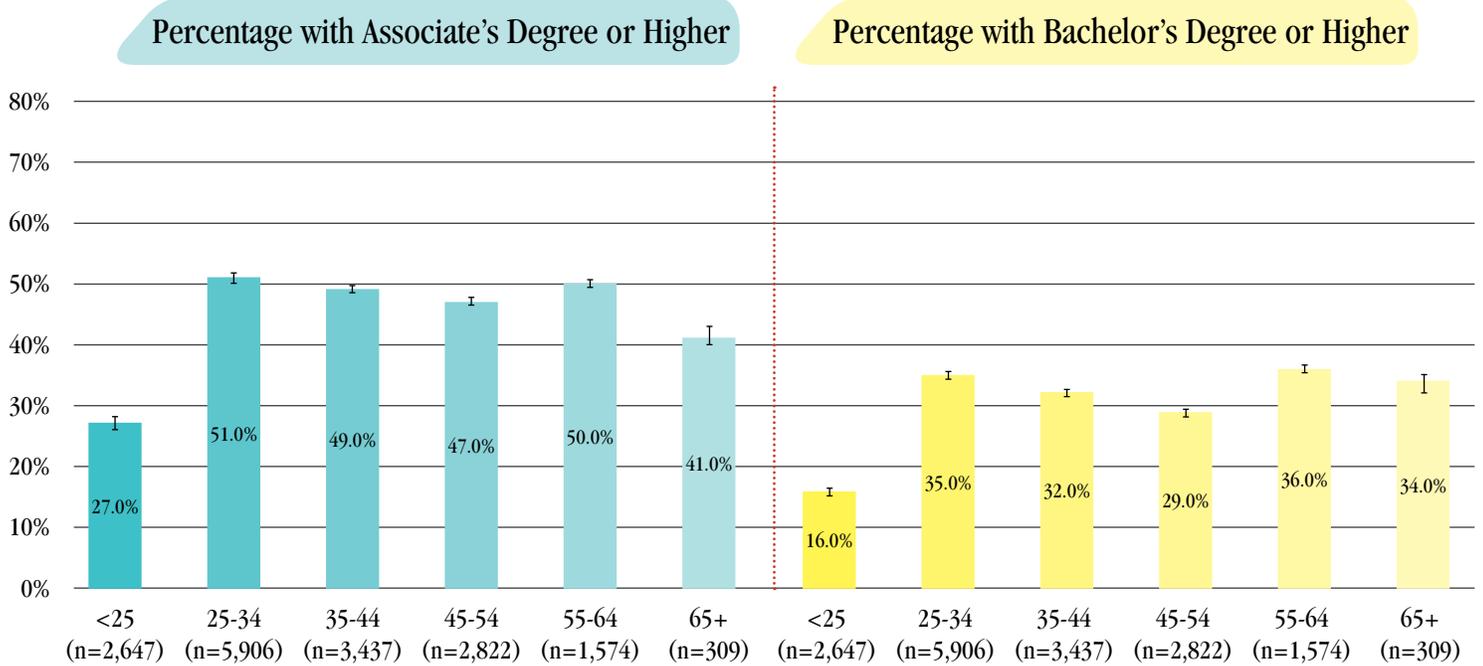
This dataset can be used to address this issue in a preliminary fashion. Specifically, the educational attainment of professionals by role was examined using ten-year age categories. Figures 18-21 show the percentage of professionals whose highest level of education was at least an associate's degree and those who held at least a bachelor's degree. For each role, the different percentages (proportions) were compared across age levels for a specific degree using chi-square analyses, employing z-tests to compare column proportions when there were significant differences, with Bonferroni adjustments for multiple tests (p was set at .05). Table 4 summarizes the statistically significant results.

Figure 18. Center-based Administrators: Associate's and Bachelor's Degree Attainment by Age



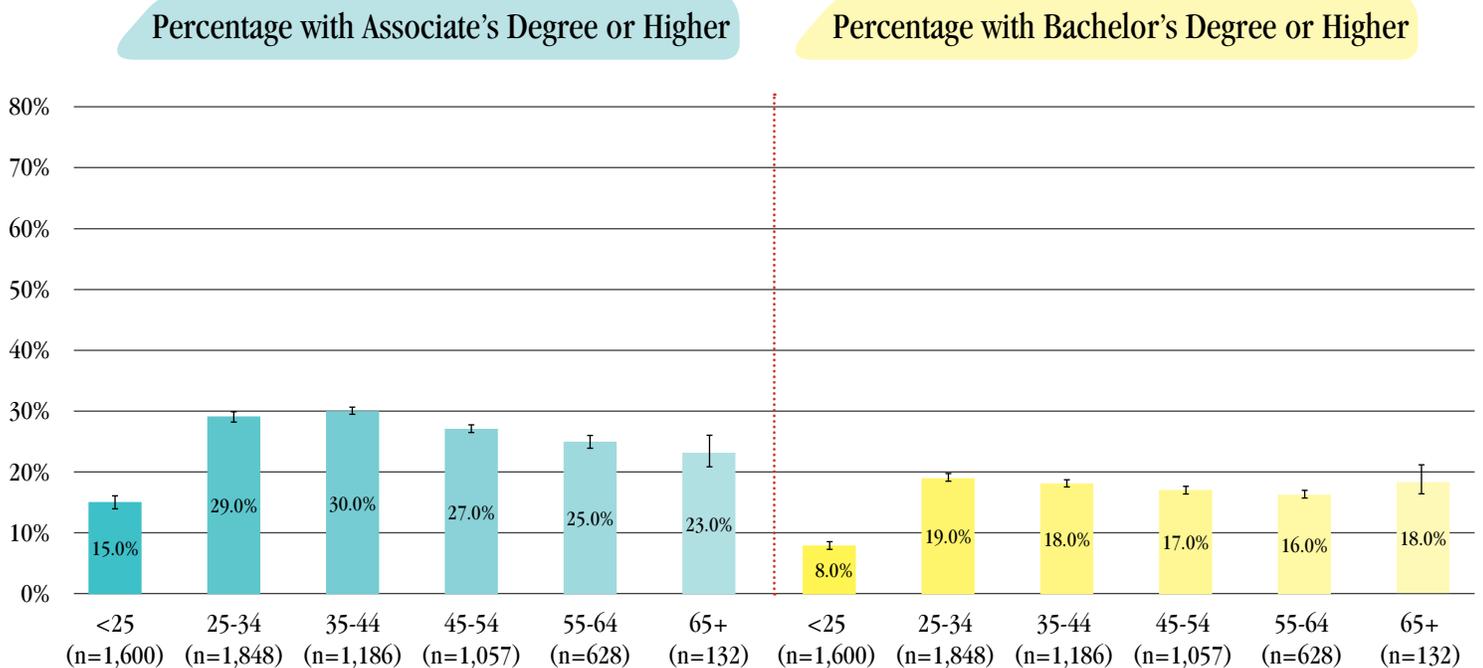
The Alliance 2012 Workforce Dataset contributing registries include: CT, Miami-Dade (FL), ME, MO, MT, NJ, WI, WV, and WY.

Figure 19. Center-based Lead Teachers: Associate's and Bachelor's Degree Attainment by Age



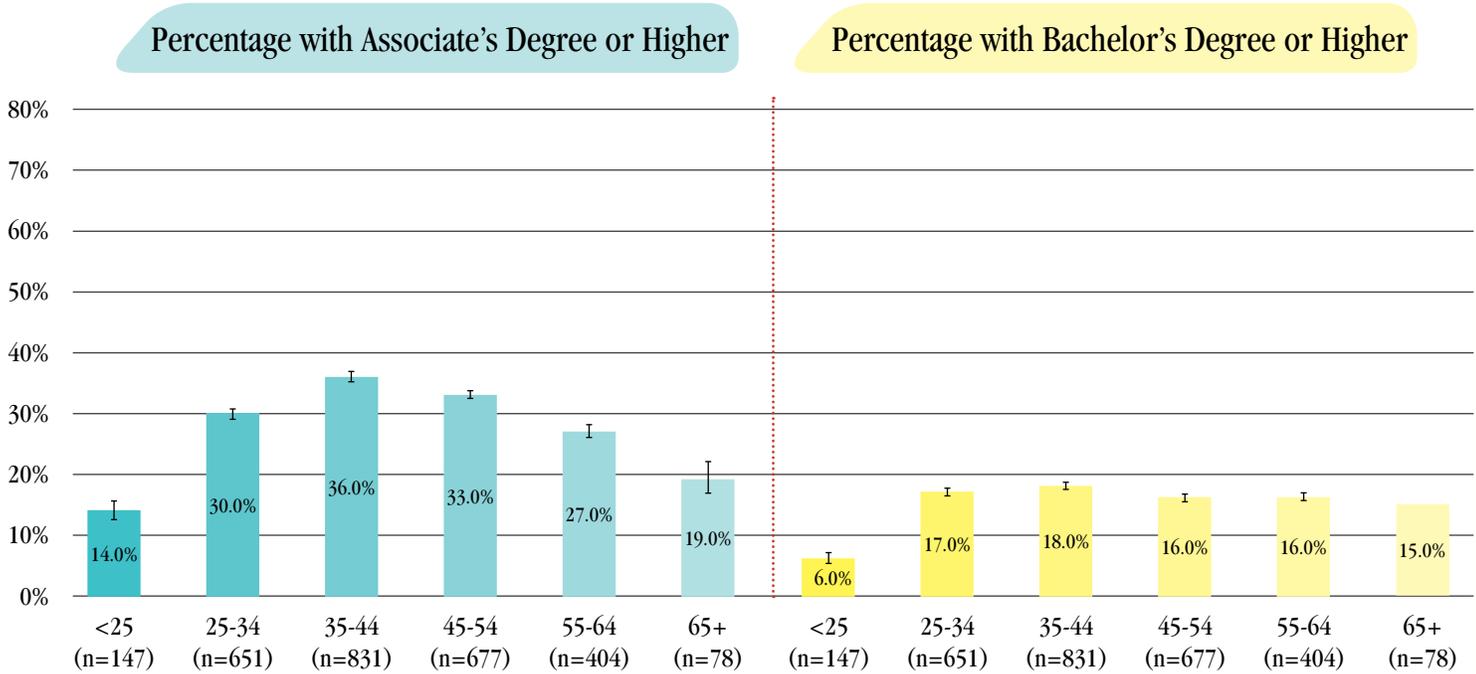
The Alliance 2012 Workforce Dataset contributing registries include: CT, Miami-Dade (FL), ME, MO, MT, NJ, WI, WV, and WY.

Figure 20. Center-based Assistant Teachers: Associate's and Bachelor's Degree Attainment by Age



The Alliance 2012 Workforce Dataset contributing registries include: CT, Miami-Dade (FL), ME, MO, MT, NJ, WI, WV, and WY.

Figure 21. Family Child Care Professionals: Associate's and Bachelor's Degree Attainment by Age



The Alliance 2012 Workforce Dataset contributing registries include: CT, Miami-Dade (FL), ME, MO, MT, NJ, WI, WV, and WY.

Table 4. Statistically Significant Results of Educational Attainments by Age Category by Role Analyses

Degree attainment	Center-based administrators	Center-based lead teachers	Center-based assistant teachers	Family child care professionals
<b>Associate's or higher</b>	<ul style="list-style-type: none"> <li>&lt; 25 are less likely to have degree compared to all categories.</li> <li>45-54 are less likely to have degree compared to 35-44, 55-64.</li> <li>25-44 are as likely to have degree as 55-64, 65+.</li> </ul>	<ul style="list-style-type: none"> <li>&lt; 25 are less likely to have degree compared to all categories.</li> <li>25-34 are more likely to have degree compared to 45-54, 65+.</li> </ul>	<ul style="list-style-type: none"> <li>&lt; 25 are less likely to have degree compared to all categories.</li> <li>25-34 are more likely to have degree compared to 55-64.</li> </ul>	<ul style="list-style-type: none"> <li>&lt; 25 are less likely to have degree compared to all categories except for 65+.</li> <li>35-44 are more likely to have degree compared to 25-34, 55-64.</li> </ul>
<b>Bachelor's or higher</b>	<ul style="list-style-type: none"> <li>&lt; 25 are less likely to have degree compared to all categories</li> <li>55-64 more likely to have degree than 45-54.</li> </ul>	<ul style="list-style-type: none"> <li>&lt; 25 are less likely to have degree compared to all categories.</li> <li>25-34 more likely to have degree compared to 35-44, 45-54.</li> <li>25-34 as likely to have degree as 55+.</li> </ul>	<ul style="list-style-type: none"> <li>&lt; 25 are less likely to have degree compared to all categories</li> <li>For 25+, all age groups are as likely to have degree.</li> </ul>	<ul style="list-style-type: none"> <li>&lt; 25 are less likely to have degree compared to all categories.</li> <li>For 25+, all age groups are as likely to have degree.</li> </ul>

Not surprisingly, for every role, the very youngest professionals—those younger than 25—had the lowest educational attainment. Somewhat consistent with Herzenberg et al. (2005), older center-based administrators (ages 55-64) were more likely to have an Associate's or Bachelor's degree compared to those ages 45-54. However, there was little evidence for the hypothesis that older cohorts of professionals have greater degree attainment than younger professionals with respect to other roles. For center-based lead teachers, the 25-34 age group was more likely to hold an Associate's degree than the 45-54 and 65+ age groups. Lead teachers in the 25-34 age group were also more likely to have a Bachelor's degree than those ages 35-54; these younger lead teachers were as likely to have a Bachelor's as professionals ages 55 and older. Thus, the hypothesis that older lead teachers have substantially more education is not supported by these data.

For center-based assistant teachers and family child care professionals, the educational attainment by age results was similar. Assistant teachers who were somewhat younger—ages 25-34 and 35-44—were as likely to have an Associate's degree as those who are 65+, and are more likely than those who are 55-64. With respect to Bachelor's degrees, all age groups, except for those in the < 25 group, were statistically the same. For FCC professionals, those in the 35-44 age group were more likely to have an Associate's degree than those in the 25-34 and 55-64 age groups. With respect to Bachelor's degrees, for FCC professionals over 25, all age groups were equally likely to have a Bachelor's degree. Again, the hypothesis that older workers tend to have more education is not supported by these data for assistant teachers and family child care professionals.

The fact that these findings do not match what Herzenberg et al. (2005) found may be due to a number of factors. First, their study used data from 1979-2004, whereas this study used data from professionals from 2010. There may be changes in patterns of educational attainment that are related to professional development initiatives, as well as market pressures, that have occurred or begun emerging between these two time frames. In addition, their methodology differed significantly from this study. Herzenberg et al used the Current Population Survey, which provides data on a nationally representative sample using survey methodology. The current study used all available data from participating registries. The extent to which these data are representative of the individual states and regions is unknown and likely varies substantially based on individual registry policy.

It should be noted that there are other limitations to these analyses. First, they represent only one point in time. Multi-point, longitudinal analyses, such as Herzenberg et al.'s (2005) study, can take into account degree attainment over time as well as examine changes in trends over time. There is also a concern about the extent to which early childhood professionals attain degrees and

then leave the field due to low wages; including information about when degrees were obtained would help address this concern. Finally, the results are only as valid as the data that comprise them. The extent to which age and educational data are accurate affects the generalizability of these results. In particular, all these registries code highest level of education attained based on the information provided to them by registry participants. It is possible that some professionals might have more education or credentials than what they report to their respective registries.

## Overall Conclusions

- “Some College” was an important factor in looking at education, especially for center-based assistant teachers (for whom 1 in 6 “Some College” is highest education level).
- Completion of education specific to early childhood was still low across roles.
- In general, wages followed general education level, but the pattern was strongest with center-based administrators and lead teachers.
- Those who have education specific to early childhood tended to earn higher wages.
- The age group worked with tended to be related to wages; those working with preschoolers exclusively made more than those working with infant/toddlers or school-agers exclusively.
- Across all roles, those with more experience in the field tended to earn more.
- Across all roles, those living in metro areas typically earned more than those in non-metro areas.
- Despite common trends found across registries, there were also some differences in findings by registry, which underscores the importance of using regional/state-specific registry data for policy work at local levels.
- There was some evidence from this dataset that, despite concerns that the field may be losing its most educated professionals due to “aging out,” younger early childhood professionals are attaining education levels consistent with their older peers.
  - ◆ Only for center-based administrators was there some evidence that older professionals were more likely to have Bachelor's degree.
  - ◆ For center-based lead teachers, younger workers were as likely to have Bachelor's degrees as older workers, and somewhat more likely to have at least an Associate's degree.
  - ◆ For center-based assistant teachers and FCC providers, Bachelor degree attainment the same across age groups 25+.

## Recommendations for Registries

### *Share your data so that your registry can help inform policy at state and national levels.*

Thanks to the Partnership Eligibility Review (PER) guidelines established by the National Registry Alliance, workforce registries now have solid, proven methods for aggregating data. Increasing registries' capacities to share data will continue to enhance their ability to emerge as important contributors to other data-driven policy initiatives, including longitudinal data systems.

### *Make it a goal to grow your registry by adding the capacity to capture PER-approved data.*

It is not possible to change a registry overnight, especially its ability to gather complex data from a large number of people! However, registries will provide more policy-relevant data by making specific goals to target crucial variables, such as wages, education level, "some college," and experience in the field, that are not currently gathered.

### *Add the ability to capture "Some College" and number of college credits to your registry.*

Given the prevalence of workers with "some college" as their highest education level, especially assistant staff, data-driven policy work that does not include this category risks missing the mark, especially as more registry participants take college courses for professional development but do not necessarily attain a degree.

## Recommendations for the National Registry Alliance

### *Address the issues of saturation and representativeness of registry data.*

Saturation and representativeness are key considerations for serious researchers and policymakers who want to use registry data. Saturation addresses the extent to which a specific registry captures all programs and workers in the field for a given geographic region. A related concept is the representativeness of registry data. If a registry does not capture all workers' data, then to what extent do the registry (sample) data reflect data for all workers (population)? The Alliance should begin to address the issue of saturation by comparing various methods of estimating workforce size, including estimates from regional and national datasets, as well as figures from registries that purport to have very high levels of saturation. The saturation work serves as a good starting point for more nuanced conversations regarding ways to gauge representativeness if the entire population cannot be accessed.

### *Continue to strengthen protocols aimed at enhancing the quality of data for aggregation and policy purposes.*

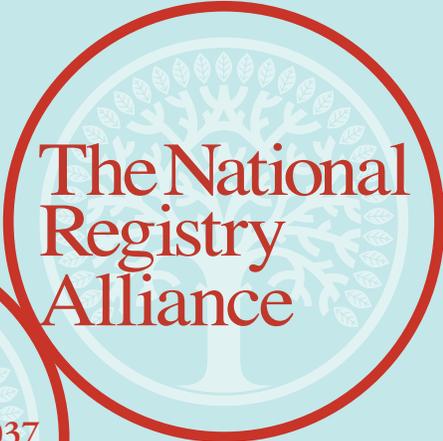
Key considerations for the Alliance for future datasets include: (1) decreasing the amount of "missing data" for each registry; (2) adding information regarding the date when degrees and credentials are earned, thereby enhancing analyses related to workforce qualifications; and (3) implementing "transaction flags" within registries so that changes in participant and program status can be captured over time.

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