

Oregon Early Learning Workforce: Six Years Beyond Baseline Comparison of 2012 and 2018

This brief was produced jointly by:

Oregon Center for Career Development in Childhood Care and Education
Portland State University

Oregon Child Care Research Partnership
Oregon State University

September, 2019

Acknowledgements

Funding for this work was provided through a contract with the Early Learning Division, Oregon Department of Education. The contents are solely the responsibility of the authors and do not represent the official views of the funding agencies, nor does publication in any way constitute an endorsement by the funding agency.

Special thanks go to Roni Pham of the Early Learning Division for her tireless efforts designing data collection strategies and for ensuring that the authors understood data collection processes. Both efforts greatly enhanced the value and accuracy of the data reported in this brief.

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INTRODUCTION

In Oregon, as in the rest of the nation, increased awareness of the importance of early learning and development has been accompanied by recognition of the critical role played by those who teach and care for young children. Oregon's ability to reach goals such as school readiness for all children entering kindergarten is linked to the knowledge and skill of its early learning workforce. Yet prior to 2012 Oregon lacked data to answer basic questions about those who work in early learning and development programs. We have not been able to answer such basic questions as:

- How many persons work in early learning and development programs?
- What positions do these persons hold?
- What is their gender, race, ethnicity, and primary language?
- What is their education level? How many hold postsecondary degrees?
- How much training do they receive in a year?
- How engaged are they in professional development?

In the late 2000s, members of the Oregon Child Care Research Partnership articulated questions they thought a state should be able to answer about its early learning workforce. The group then identified the information they would need to collect from members of the workforce in order to be able to answer these questions. The Early Learning Division (ELD), Oregon Department of Education, and the Oregon Center for Career Development in Childhood Care and Education (OCCD) at Portland State University designed a data sharing system that would link professional development and regulatory data on a daily basis. They ensured that the new system was designed to store the information needed to answer the policy-relevant questions about the workforce that partners had articulated. In 2012, ELD implemented the new system in which all staff working in regulated child care facilities submitted documentation of training and education to OCCD and that data began being linked with regulatory data managed by ELD. Electronic linking of professional qualification and licensing data has allowed Oregon to answer basic questions about the early learning workforce employed in regulated centers and home-based early learning facilities¹.

Baseline 2012 data on the workforce were reported in 2014 (OCCD & OCCRP, 2014) with follow up reports each year after the baseline (OCCD & OCCRP, 2015; OCCD & OCCRP, 2016; OCCD & OCCRP, 2017; OCCD & OCCRP, 2018; OCCD & OCCRP, 2019) Working together, OCCD, ELD, and the Oregon Child Care Research Partnership at Oregon State University (OSU) have analyzed the data for a seventh year, 2018. As with the previous reports, this brief answers questions that partners have determined to be most critical for supporting decision makers as Oregon works to improve outcomes for its youngest children. This brief is the seventh annual report on the workforce. In this report, we compare findings with the baseline. This comparison provides a measure of the impact of early childhood investments on the workforce by viewing changes in important workforce characteristics.

Findings in the first portion of the brief are based on an analysis of data collected from individual workforce members and stored in the Oregon Registry Online database (e.g., age, education, training, and professional engagement). In the second portion of the report, findings are based on data about the workforce collected from child care facilities (e.g., compensation and retention).

¹ Home-based child care providers are typically identified within the field by their regulatory status: a) small home-based providers are known as registered family child care and b) large home-based providers are known as certified family child care. We use the terms small and large home-based providers rather than the regulatory titles throughout this report in order to communicate with a broad group of stakeholders.

FINDINGS BASED ON DATA COLLECTED FROM INDIVIDUAL WORKFORCE MEMBERS

Definition and Size of the Workforce

Importance of this information: The knowledge and skills of those persons who work directly with young children strongly impacts the learning and development of the young children enrolled in early learning and development programs. A critical step in supporting young children’s development is identifying and describing those who work directly with them in childhood care and education facilities.

How measured: Partners identified the positions associated with direct work with children. To be included in the workforce individuals had to be:

- employed in regulated facilities;
- working directly with children and families, operationalized by employment in the following positions² – Aide I, Aide II, Assistant I, Assistant II, Director, Head Teacher, Provider, Site Director/Supervisor, and Teacher; and
- known to be working in regulated facilities in 2018³. This criterion was based on the individual’s hire date as well as their position start and end dates.

24,203 people worked in Oregon regulated early learning facilities in 2018. This represents an increase of 79 individuals from last year, and an overall increase of 3,330 individuals since 2012.

| 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--------|--------|--------|--------|--------|--------|--------|
| 20,873 | 23,488 | 22,101 | 24,761 | 23,683 | 24,124 | 24,203 |

Workforce by Type of Care and Position

Importance of this information: Members of the workforce play distinct roles and regulatory requirements vary by the position held so it is important to describe workforce characteristics by position held. Accurately describing the workforce by type of care and position within each type provides information needed for effective targeting of investments.

How measured: Workforce counts were created by type of care and by position within each type. We report counts of those employed in centers, large family homes, and small family homes.

Number of Persons in the Workforce by Type of Care

In 2018, center staff comprised the majority of the workforce with 77% of individuals working in child care centers. Large family child care homes comprised 14% of the workforce, and small family child care homes comprised 9% of the workforce. All individuals in small family homes were listed in the position of provider as small family child care home providers seldom hire staff. The data show a decrease in the

² Using positions defined by the Office of Child Care for use in licensing, we determined the positions in which individuals primarily work directly with children and thus meet our definition for the child care workforce.

³ For 2017: Hire date and position start date needed to be less than 12/31/18; and end date needed to be greater than 12/31/17.

number/percentage of persons employed in small home-based facilities and slight increases in both center and large home-based members of the workforce between 2012 and 2018.

Table 1

| Workforce by Type of Care | 2012 N = 20,873 | | 2018 N = 24,203 | | Difference 2012 to 2018 | |
|---------------------------|--------------------|----------------|--------------------|----------------|----------------------------|----------------|
| | N | % of workforce | N | % of workforce | N | % of workforce |
| Center | 15,069 | 72% | 18,640 | 77% | 3,571 | 5% |
| Large Home-Based | 2,295 | 11% | 3,332 | 14% | 1,037 | 3% |
| Small Home-Based | 3,509 | 17% | 2,231 | 9% | -1,278 | -8% |

Note: Percentages throughout this brief are rounded.

Number of Persons in the Workforce by Position

Table 2 shows the number of individuals who worked in each type of care by position. Percentages are of individuals within each type of care (for example, 6% of center staff were directors in 2018). Within centers there was a slight decrease in directors and teachers since 2012. This decrease may be associated with changes in position titles rather than a decrease in persons running programs. Although there was an increase in the number of large home-based providers, the providers were a smaller percentage of the large home-based staff due to increases in the assistant positions. The number of small home-based providers has continued to decline each year, with 1,278 fewer providers in the field in 2018 compared to 2012. The number of small home-based providers has decreased by more than one-third over the past seven years.

Table 2

| Workforce by Position | 2012 | | 2018 | | Difference 2012 to 2018 | |
|----------------------------|-------|----------------------------------|-------|----------------------------------|----------------------------|-----|
| | N | % of persons within type of care | N | % of persons within type of care | N | % |
| Center | | | | | | |
| Director | 1,176 | 8% | 1,033 | 6% | -143 | -2% |
| Site Director / Supervisor | 41 | 0% | 292 | 2% | 251 | 2% |
| Head Teacher | 2,283 | 15% | 2,723 | 15% | 440 | 0% |
| Teacher | 7,672 | 51% | 9,213 | 49% | 1,541 | -2% |
| Aide II | 1,071 | 7% | 1,862 | 10% | 791 | 3% |
| Aide I | 2,826 | 19% | 3,517 | 19% | 691 | 0% |
| Large Home-Based | | | | | | |
| Provider | 745 | 33% | 937 | 28% | 192 | -5% |
| Assistant II | 735 | 32% | 1,463 | 44% | 728 | 12% |
| Assistant I | 815 | 36% | 932 | 28% | 117 | -8% |
| Small Home-Based | | | | | | |
| Provider | 3,509 | --- | 2,231 | --- | -1,278 | --- |

Characteristics of the 2018 Child Care Workforce

Importance of this information: Oregon’s young children are increasingly diverse in terms of race, ethnicity, and primary language (Ryan, 2013; U.S. Census, 2015). There is growing evidence of the importance of young children being cared for by persons with knowledge and experience of the child’s culture and language (McCabe et al., 2014). It is important to describe the race, ethnicity, and primary language of members of the early learning workforce in order to assess the extent to which children from diverse backgrounds have access to teachers and providers with shared culture and language.

How measured: Data on race, ethnicity, age, gender, and primary language were asked of providers on the Oregon Registry Online database (ORO) Enrollment form. Completion of this form was optional for those who did not participate in a program managed by OCCD (e.g., Betty Gray Early Childhood Training and Certification Scholarships, or Education Awards). In addition, completion of questions about race/ethnicity and primary language was optional due to the nature of the information. Thus, confidence in the estimates is limited by being based on incomplete data although each year we have seen an increase in the percentage reporting demographic information.

Findings on workforce demographics were based on data from those workforce members who provided that information. As can be seen in Table 3, 71% of workforce members provided all data for gender, race/ethnicity, and primary language in 2018. This reflects an 18% increase in the number reporting demographic data compared to 2012. Since over 99% of individuals had age data, age was not included in the analysis of missing data in the following table.

Table 3

| Available Demographics (gender, race/ethnicity, and language) | 2012 | | 2018 | | Difference 2012 to 2018 | |
|--|--------|-----|--------|-----|----------------------------|------|
| | N | % | N | % | N | % |
| All Demographics | 11,150 | 53% | 17,077 | 71% | 5,927 | 18% |
| Some Demographics | 2,404 | 12% | 2,372 | 10% | -32 | -2% |
| No Demographics | 7,319 | 35% | 4,754 | 20% | -2,565 | -15% |

Demographic Characteristics of the Workforce

In Table 4 below, the number reported in the shaded row for each characteristic is the number of workforce members in each year that provided information on that individual characteristic. When viewing the demographic characteristics of the workforce, the consistency in the findings from 2012 to 2018 is striking. The similarities in findings from year to year strengthen our confidence in the reliability of reported demographic data in describing the workforce.

Table 4

| Demographics | 2012 | | 2018 | | Difference in Number or Percent* |
|-------------------------|---------------|-----|---------------|-----|----------------------------------|
| Age | 20,820 | | 24,157 | | |
| Mean (SD) | 38.44 (13.58) | | 37.20 (13.94) | | -1.2 years |
| Range | 18 to 91 | | 16 to 98 | | |
| Gender | 12,605 | | 18,218 | | |
| Male | 613 | 5% | 1,073 | 6% | 1% |
| Female | 11,992 | 95% | 17,145 | 94% | -1% |
| Race/Ethnicity | 11,310 | | 17,604 | | |
| American Indian | 181 | 2% | 259 | 1% | -1% |
| Asian | 453 | 4% | 774 | 4% | 0% |
| Black | 296 | 3% | 615 | 3% | 0% |
| Hispanic/Latino/Spanish | 1,602 | 14% | 3,346 | 19% | 5% |
| Native Hawaiian | 75 | 1% | 144 | 1% | 0% |
| White | 8,517 | 75% | 12,253 | 70% | -5% |
| Multiracial | 55 | <1% | 137 | 1% | 1% |
| Other | 131 | 1% | 76 | <1% | -1% |
| Primary Language | 12,487 | | 18,963 | | |
| English | 10,569 | 85% | 16,148 | 85% | 0% |
| Spanish | 1,222 | 10% | 1,974 | 10% | 0% |
| Russian | 226 | 2% | 192 | 1% | -1% |
| Vietnamese | 130 | 1% | 83 | <1% | -1% |
| Chinese (Traditional) | 99 | 1% | 114 | 1% | 0% |
| Other | 241 | 2% | 452 | 2% | 0% |

*A difference in percent does not necessarily indicate a decrease in the number of individuals in a category. The number of individuals may have increased, but it is a smaller percent of the total population resulting in a decrease in percentage.

Race/Ethnicity by Type of Care

Over one-fourth (30%) of Oregon's workforce are persons of color, which includes those who are Hispanic/Latino, Black, Asian, Native Hawaiian, American Indian, or multiracial. As seen in Table 5, the percentage of persons of color increased from 2012 to 2018 for all types of care. The workforce continues to be more diverse than the general adult population in Oregon (see Figure 1), but not as diverse as children under 5 of which 36% are Hispanic or Non-White.

Table 5

| Race/Ethnicity by Type of Care | 2012 N = 11,255 | | 2018 N = 17,604 | | Difference 2012 to 2018 | |
|--------------------------------|--------------------|-----------------|--------------------|-----------------|----------------------------|-----------------|
| | White | Person of Color | White | Person of Color | White | Person of Color |
| Center | 76% | 24% | 70% | 30% | -6% | 6% |
| Large Home-Based | 78% | 22% | 69% | 31% | -9% | 9% |
| Small Home-Based | 73% | 27% | 68% | 32% | -5% | 5% |

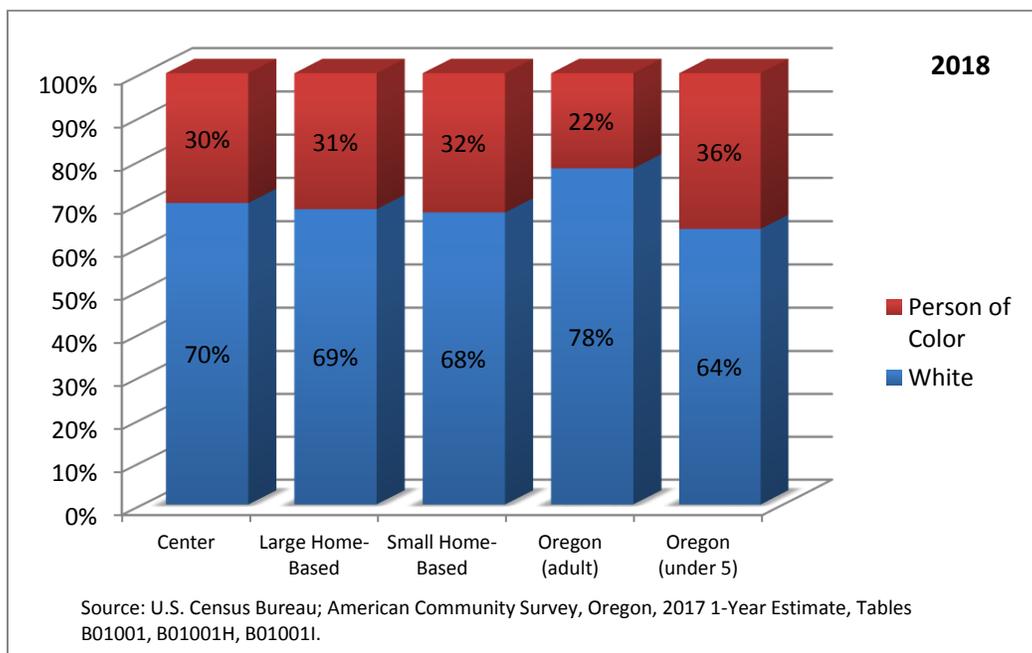


Figure 1

Primary Language by Type of Care

As seen in Table 6, the difference between small home-based providers and the rest of the workforce remained substantial with just over a third of small home-based members having a primary language other than English. Although the overall number of individuals in the workforce increased, the distribution of primary language spoken remained consistent for center-based staff from 2012 to 2018, with increases in the percent of small and large home-based providers who have a primary language other than English. Fifteen percent of Oregonians age five years and older speak a language other than English, see Figure 2.

Table 6

| Primary Language by Type of Care | 2012 N = 12,487 | | 2018 N = 18,963 | | Difference 2012 to 2018 | |
|----------------------------------|--------------------|--------------------|--------------------|--------------------|----------------------------|--------------------|
| | English | Other Than English | English | Other Than English | English | Other Than English |
| Center | 88% | 12% | 88% | 12% | 0% | 0% |
| Large Home-Based | 90% | 10% | 85% | 15% | -5% | 5% |
| Small Home-Based | 71% | 29% | 66% | 34% | -5% | 5% |

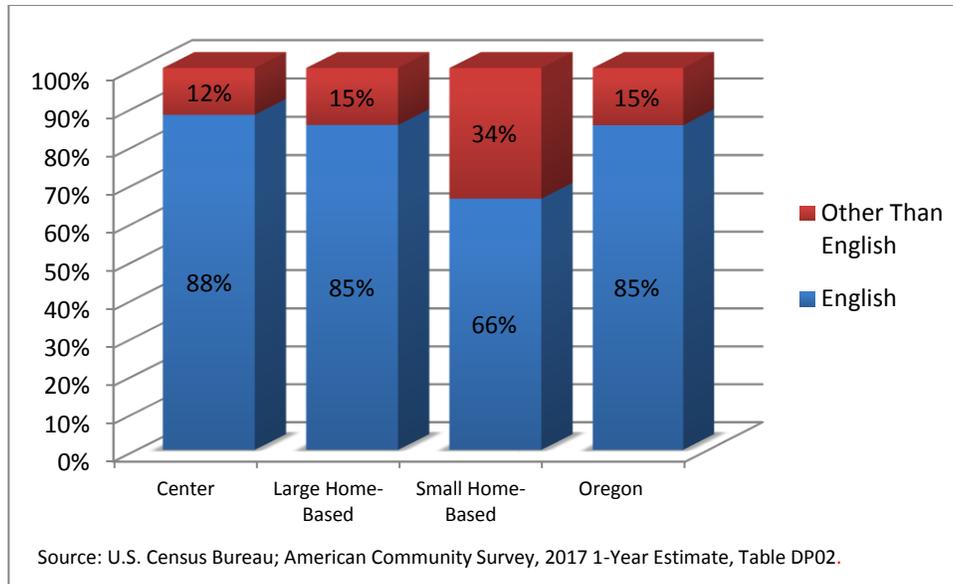


Figure 2

Gender by Type of Care

As seen in Table 7, the workforce continued to be predominantly female although the number of males in the workforce increased from 613 to 1,073 from 2012 to 2018. Even though the percentages do not show an increase for males in centers and small home-based facilities, the number of males increased between 2012 and 2018 in all types of care.

Table 7

| Gender by Type of Care | 2012 N = 12,605 | | 2018 N = 18,218 | | Difference 2012 to 2018 | |
|------------------------|--------------------|------|--------------------|------|----------------------------|------|
| | Female | Male | Female | Male | Female | Male |
| Center | 94% | 6% | 94% | 6% | 0% | 0% |
| Large Home-Based | 94% | 6% | 92% | 8% | -2% | 2% |
| Small Home-Based | 99% | 1% | 99% | 1% | 0% | 0% |

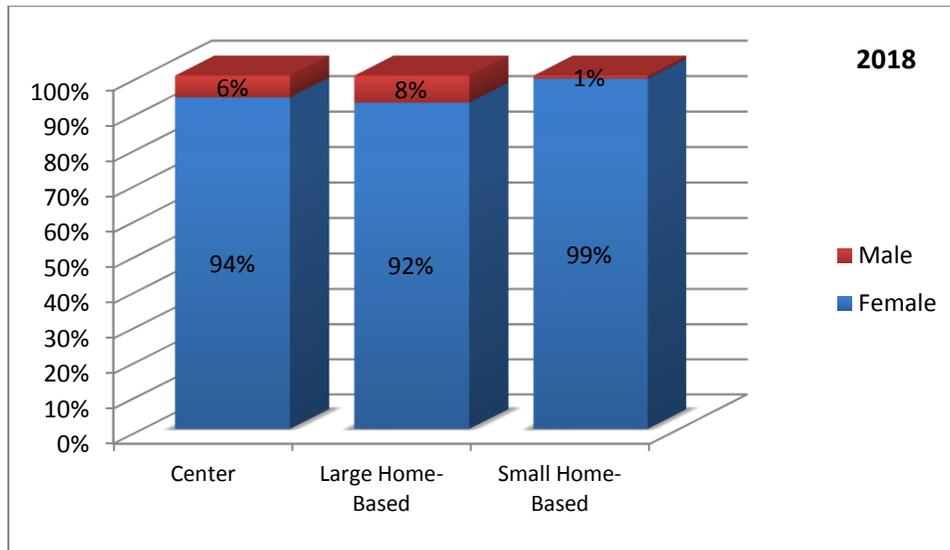


Figure 3

Education of Workforce

Importance of this information: Research has consistently found large positive associations between level of education of parents and teachers and the achievements and behavior of young children (Shonkoff & Phillips, 2000). Research has not yet identified a specific level of education (i.e. bachelors) associated with more positive outcomes (Early et al., 2006; Early et al., 2007; Vu, Jeon, & Howes, 2008). Yet, having less than high school has been found to be associated with less positive outcomes and more education with more positive ones (Ryan & Whitebook, 2012).

How measured: Data on education level was entered into ORO from multiple sources and verified by OCCD when possible. In order to earn a Step on the Oregon Registry Career Lattice (Registry) persons reported education and submitted documentation of coursework as well as degrees. Other workforce members self-reported education through the ORO Enrollment form when they applied for a program managed by OCCD or when they submitted information needed to meet regulatory requirements for the position they held. A final group submitted documentation of college credits to meet regulatory training requirements. In light of the fact that the Registry and other programs at OCCD are voluntary, this process resulted in missing education data on 26% (6,406) of the 2018 workforce. This was a decrease in workforce individuals missing education compared to 2012 (38%). Therefore, our confidence in the estimate of level of education is limited but continues to grow.

Level of Education for the 2018 Workforce

Over a third of the workforce has a bachelor's degree or higher and another third have some college or an associate's degree. The remaining third have a high school diploma, GED, or less, with only a small fraction of that third having less than high school. As seen in Table 8, over two-thirds of the workforce had education levels beyond a high school diploma or GED. The percentage with some college or more (some college, associate's, or bachelor's) increased slightly from 69% to 70% of the workforce from 2012 to 2018.

Table 8

| Education of Workforce | 2012 N = 12,968 | | 2018 N = 17,797 | | Difference 2012 to 2018 | |
|--|--------------------|-----|--------------------|-----|----------------------------|-----|
| | N | % | N | % | N | % |
| Less than High School Diploma/GED | 418 | 3% | 469 | 3% | 51 | 0% |
| High School Diploma or GED | 3,521 | 27% | 4,987 | 28% | 1,466 | 1% |
| Some college, certificate, or foreign degree | 2,910 | 22% | 4,115 | 23% | 1,205 | 1% |
| Associate's degree | 1,933 | 15% | 2,408 | 14% | 475 | -1% |
| Bachelor's degree or higher | 4,186 | 32% | 5,818 | 33% | 1,632 | 1% |

Education Level by Type of Care

As can be seen in Table 9 and Figure 4, in 2018 there continued to be wide differences in education levels across types of care, with 73% of center staff having more than a high school diploma or GED compared with 60% of those in large home-based and 45% of those in small home-based facilities.

Table 9

| Education by Type of Care | 2012 | | 2018 | | Difference 2012 to 2018 | |
|--|-------|--|-------|--|----------------------------|-----|
| | N | % of persons within type of care | N | % of persons within type of care | N | % |
| Center | | | | | | |
| Less than High School Diploma/GED | 178 | 2% | 224 | 2% | 46 | 0% |
| High School Diploma or GED | 2,335 | 24% | 3,489 | 25% | 1,154 | 1% |
| Some college, certificate, or foreign degree | 2,018 | 21% | 3,219 | 23% | 1,201 | 2% |
| Associate's degree | 1,544 | 16% | 2,014 | 14% | 470 | -2% |
| Bachelor's degree or higher | 3,581 | 37% | 5,024 | 36% | 1,443 | -1% |
| Large Home-Based | | | | | | |
| Less than High School Diploma/GED | 44 | 3% | 72 | 3% | 28 | 0% |
| High School Diploma or GED | 402 | 29% | 819 | 36% | 417 | 7% |
| Some college, certificate, or foreign degree | 381 | 28% | 535 | 23% | 154 | -5% |
| Associate's degree | 169 | 12% | 237 | 10% | 68 | -2% |
| Bachelor's degree or higher | 371 | 27% | 630 | 27% | 259 | 0% |
| Small Home-Based | | | | | | |
| Less than High School Diploma/GED | 196 | 10% | 173 | 11% | -23 | 1% |
| High School Diploma or GED | 784 | 40% | 679 | 44% | -105 | 4% |
| Some college, certificate, or foreign degree | 511 | 26% | 361 | 24% | -150 | -2% |
| Associate's degree | 220 | 11% | 157 | 10% | -63 | -1% |
| Bachelor's degree or higher | 234 | 12% | 164 | 11% | -70 | -1% |

Note: Data on education were not available for 4,670 (25%) individuals in centers, 1,039 (31%) in large home-based care, and 697 (31%) in small home-based care in 2018.

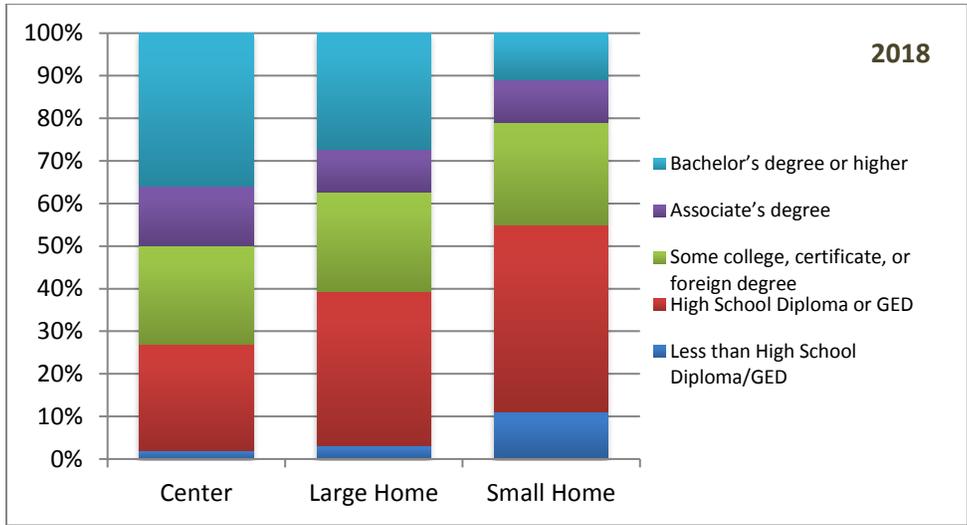


Figure 4

Education Level by Type of Care and Race/Ethnicity

In Figure 5, the difference in education level between white and persons of color are shown for each type of care. In each case, workforce members who were persons of color have lower levels of education. In 2018, the percentage of the workforce with a bachelor's or higher degree ranged from 40% of white staff working in centers to 5% of person of color providers in small home-based settings.

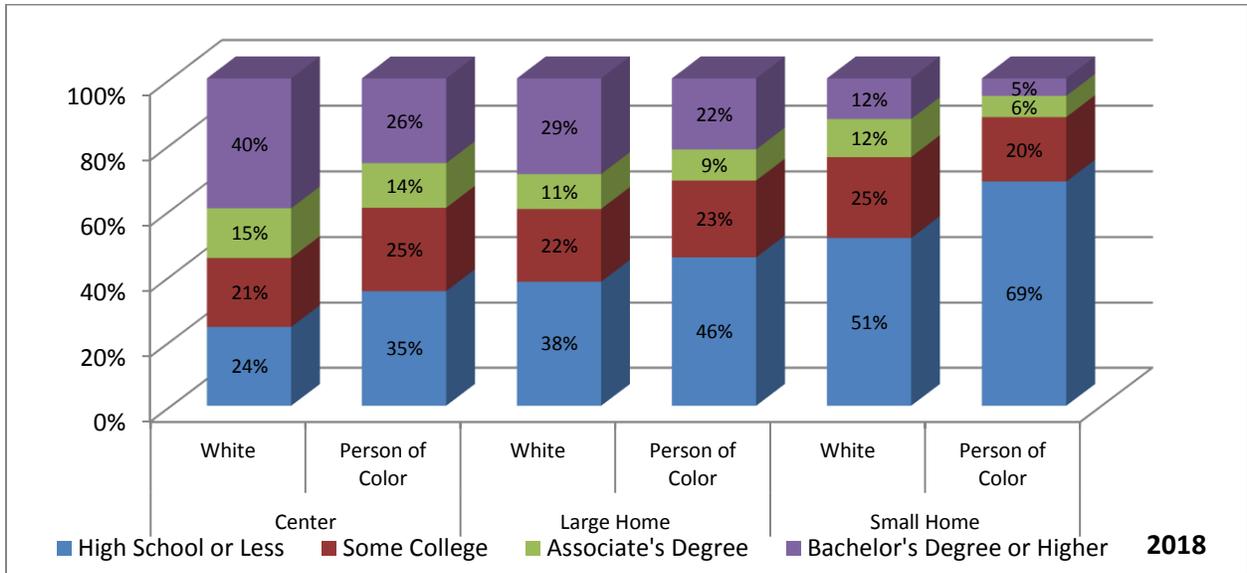


Figure 5

Education Level by Location

When examining education levels across metropolitan⁴ and non-metropolitan areas we again saw only small differences between 2012 and 2018 (see Table 10). Workforce members in metropolitan areas were more likely to have a bachelor's degree or higher but there has been an 2% increase in the percentage with a bachelor's degree or higher in non-metropolitan areas since 2012. Non-metropolitan individuals were slightly more likely to have some college or an associate's degree than individuals in metropolitan areas.

Table 10

| Education by Location | 2012 | | 2018 | | Difference 2012 to 2018 | |
|--|-------------------|----------------------|-------------------|----------------------|----------------------------|-----------|
| | Metro (10,838) | Non-Metro (2,027) | Metro (15,511) | Non-Metro (2,286) | Metro | Non-Metro |
| Less than High School Diploma/GED | 3% | 3% | 3% | 2% | 0% | -1% |
| High School Diploma or GED | 26% | 31% | 28% | 30% | 2% | -1% |
| Some college, certificate, or foreign degree | 22% | 27% | 23% | 26% | 1% | -1% |
| Associate's degree | 14% | 20% | 13% | 20% | -1% | 0% |
| Bachelor's degree or higher | 35% | 20% | 34% | 22% | -1% | 2% |

Note: In 2012, 202 individuals could not be given a metropolitan/nonmetropolitan distinction because of missing county information. In 2018, if individuals were missing resident county information, the county of their facility was used (n = 569). An additional 6,406 were missing education data.

Percentage of Center Staff that have a Bachelor's Degree or Higher

When we examined the percentage of staff with a bachelor's degree or higher, we saw that directors, site directors/supervisors, teachers, and head teachers were more likely to have a bachelor's degree than were other staff, see Table 11. Although the overall number of individuals with bachelor's degrees or higher increased for most positions, the percentage of individuals with bachelor's degrees or higher decreased for teachers, aides, assistant II, and small home-based providers.

⁴ The Office of Management and Budget (OMB) Core Based Statistical Area classification for counties was used to distinguish between individuals who live in urban and rural areas. Counties are classified as metropolitan if they include an urbanized area of 50,000 inhabitants or more, plus outlying counties with close economic or social ties to the central county. Nonmetropolitan counties include two groups: micropolitan and noncore. Micropolitan counties include at least one urban cluster of between 10,000 and 49,000 people, plus outlying counties. Noncore counties have no population cluster larger than 10,000. The 2012 results use the OMB 2003 definitions, whereas the 2018 results use the OMB 2013 definitions. Between 2003 and 2013, two Oregon counties (Linn, Josephine) moved from being defined as non-metropolitan to being classified as metropolitan.

Table 11

| Percent with Bachelor's or Higher | 2012 | | 2018 | | Difference 2012 to 2018 | |
|-----------------------------------|-------|---------------|-------|---------------|-------------------------|-----|
| | N | % of position | N | % of position | N | % |
| Center | | | | | | |
| Director | 464 | 51% | 546 | 57% | 82 | 6% |
| Site Director / Supervisor | 16 | 57% | 163 | 60% | 147 | 3% |
| Head Teacher | 818 | 44% | 1,211 | 49% | 393 | 5% |
| Teacher | 1,880 | 37% | 2,532 | 35% | 652 | -2% |
| Aide II | 122 | 21% | 227 | 18% | 105 | -3% |
| Aide I | 281 | 23% | 345 | 20% | 64 | -3% |
| Large Home-Based | | | | | | |
| Provider | 180 | 29% | 257 | 31% | 77 | 2% |
| Assistant II | 128 | 28% | 259 | 25% | 131 | -3% |
| Assistant I | 63 | 22% | 114 | 27% | 51 | 5% |
| Small Home-Based | | | | | | |
| Provider | 234 | 12% | 164 | 11% | -70 | -1% |

Note: There were 6,406 individuals (26%) who had not submitted data on education.

Training of the Workforce

Importance of this information: Studies have shown recent training to predict quality in both centers and home-based facilities (Raikes et al., 2005) and may be especially important to the quality of family child care (Burchinal, Howes, & Kontos, 2002; Hughes-Belding et al., 2012).

How measured: Community-based training includes in-service sessions, workshops, and trainings from local Child Care Resource and Referral (CCR&R) programs, and training from other training agencies or independent trainers. Providers submitted documentation of community-based training hours to OCCD in order to meet regulatory requirements. An individual may have also completed college course credit hours toward training requirements, but these are not reflected in these totals.

Average Community-Based Training and Child Development Hours by Position

Training hour requirements varied by type of care and by position, with not all positions required to have training hours. In Table 12 below, the positions with shaded rows were required to have 15 hours of training annually with the exception of small home-based providers who were required to have 10 hours over two years⁵. It is interesting to note that the individuals with required hours all exceeded what was required and that those in positions without required hours had substantial numbers of training hours. The number of community-based training hours increased for nearly all positions between 2012 and 2018.

⁵ The training hour requirement for small home-based providers increased from 8 hours over a two-year licensing period to 10 hours over two years on July 1, 2015.

Table 12

| Average Community-Based Training Hours by Position | 2012 | | 2018 | | Difference in Hours 2012 to 2018 | |
|--|-------------|------------------------|-------------|------------------------|----------------------------------|------------------------|
| | Total | Child Dev ^a | Total | Child Dev ^a | Total | Child Dev ^a |
| Center Staff | | | | | | |
| Director (N = 881) ^b | 22.8 | 17.9 | 27.1 | 21.0 | 4.3 | 3.1 |
| Site Director/Supervisor ⁶ (N = 247) | 17.2 | 14.7 | 30.8 | 23.0 | 13.7 | 8.4 |
| Head Teacher (N = 2,441) | 20.7 | 18.7 | 27.2 | 22.9 | 6.5 | 4.2 |
| Teacher (N = 7,739) | 18.8 | 17.4 | 23.0 | 19.8 | 4.2 | 2.4 |
| Aide II (N = 1,452) | 15.5 | 14.1 | 22.6 | 19.5 | 7.1 | 5.5 |
| Aide I (N = 2,283) | 14.3 | 12.9 | 15.7 | 13.6 | 1.5 | 0.6 |
| Large Home-Based Staff | | | | | | |
| Provider (N = 884) | 22.5 | 20.2 | 29.1 | 24.7 | 6.6 | 4.6 |
| Assistant II (N = 1,210) | 18.3 | 17.0 | 20.4 | 18.3 | 2.0 | 1.4 |
| Assistant I (N = 523) | 12.3 | 11.9 | 11.9 | 10.8 | -0.4 | -1.1 |
| Small Home-Based Staff | | | | | | |
| Provider^c (N = 1,664) | 12.9 | 11.8 | 16.1 | 13.8 | 3.2 | 2.1 |

^a The Office of Child Care categorizes training hours directly related to work with children as Child Development Hours. We show these hours separately from total hours, but they are also contained within the total hours.

^b N = the number of individuals in each position that had training hours for 2018.

^c Includes all small home-based providers regardless of renewal cycle. Small home-based providers are on a two-year licensing cycle, the training hours listed are for the 2018 calendar year.

Community-Based Training Hours By Location & Position

As can be seen in Table 13, the number of community-based training hours increased for nearly all positions in both metropolitan and non-metropolitan areas. The pattern of more training hours in non-metropolitan than metropolitan areas has been found in every year since 2012. For the most part, the average increase in the number of training hours between 2012 and 2018 were greater in non-metropolitan than in metropolitan areas.

Table 13

| Average Community-Based Training Hours by Location and Position | 2012 | | 2018 | | Difference in Hours 2012 to 2018 | |
|---|-------------|-----------|-------------|-----------|----------------------------------|-----------|
| | Metro | Non-Metro | Metro | Non-Metro | Metro | Non-Metro |
| Center | | | | | | |
| Director | 22.2 | 26.1 | 25.4 | 38.0 | 3.2 | 11.9 |
| Site Director/Supervisor ⁶ | 16.9 | 19.3 | 28.4 | 48.5 | 11.5 | 29.3 |
| Head Teacher | 20.1 | 24.1 | 26.4 | 34.0 | 6.3 | 9.8 |

Continued on next page

⁶ Site directors/supervisors who also served as teachers were counted in these data as teachers. Those who served only as a site director/supervisor (without teaching responsibility) were described in the line titled "Site Director/Supervisor". They were not required to have training hours

Table 13 (continued)

| Average Community-Based Training Hours by Location and Position | 2012 | | 2018 | | Difference in Hours 2012 to 2018 | |
|---|-------------|-----------|-------------|-----------|----------------------------------|-------------|
| | Metro | Non-Metro | Metro | Non-Metro | Metro | Non-Metro |
| Center (continued) | | | | | | |
| Teacher | 18.2 | 22.7 | 22.0 | 30.4 | 3.8 | 7.7 |
| Aide II | 14.5 | 19.3 | 21.5 | 27.5 | 7.0 | 8.1 |
| Aide I | 13.5 | 18.0 | 15.1 | 19.7 | 1.6 | 1.7 |
| Large Home-Based | | | | | | |
| Provider | 22.9 | 20.2 | 29.2 | 28.4 | 6.3 | 8.3 |
| Assistant II | 18.2 | 20.2 | 20.0 | 23.8 | 1.8 | 3.6 |
| Assistant I | 12.5 | 12.1 | 12.0 | 11.7 | -0.5 | -0.5 |
| Small Home-Based | | | | | | |
| Provider^a | 12.6 | 14.1 | 15.8 | 17.6 | 3.2 | 3.6 |

^a Includes all small home-based providers regardless of renewal cycle. Small home-based providers are on a two-year licensing cycle, yet the training hours listed are for the 2018 calendar year.

Training Hours through Credit Courses

Knowledge and competency of the workforce is a major contributor to the quality of early learning environments. As opposed to single workshops, college courses provide a broader and more in-depth exposure to the knowledge needed for work with young children (Raikes et al., 2006). Also, college credits facilitate the workforce member's progress toward a certificate or degree. Although there are mixed findings on the importance of a bachelor's degree to quality, there is recognition that postsecondary education in early childhood or a related field is foundational (Tout, Zaslow, & Berry, 2006).

Although the majority of workforce members continue to use community-based training rather than college courses for their training hours (see Table 14), 6% of the workforce had college credit hours in 2018 (1,130 out of 19,324 with training or education hours). For many positions there was a decrease in the use of college credits to meet training requirements for workforce members between 2012 and 2018. The following table shows the percentage of staff that had hours from credit courses for 2012 and 2018.

Table 14

| Training Hours from Credit Courses | 2012 | | 2018 | | Difference 2012 to 2018 | |
|------------------------------------|------|---------------|------|---------------|-------------------------|-----|
| | N | % of position | N | % of position | N | % |
| Center | | | | | | |
| Director | 25 | 3% | 30 | 3% | 5 | 0% |
| Site Director/Supervisor | 3 | 9% | 10 | 4% | 7 | -5% |
| Head Teacher | 92 | 5% | 137 | 6% | 42 | 1% |
| Teacher | 280 | 6% | 622 | 8% | 310 | 3% |
| Aide II | 42 | 6% | 110 | 8% | 64 | 2% |
| Aide I | 73 | 6% | 123 | 5% | 45 | -1% |
| Large Home-Based | | | | | | |
| Provider | 47 | 8% | 57 | 6% | 7 | -2% |
| Assistant II | 27 | 5% | 48 | 4% | 18 | -1% |
| Assistant I | 16 | 5% | 14 | 3% | -3 | -2% |
| Small Home-Based | | | | | | |
| Provider | 20 | 1% | 34 | 2% | 10 | 1% |

Note: College credit were taken in a calendar year, 2012 or 2018.

Professional Engagement of the Workforce

Importance of this information: Perceiving oneself as a member of a profession (in a career or following a calling) has been shown to predict observed quality (Kontos, Howes, Shinn, & Galinsky, 1995). Oregon has three major professional development initiatives for which data are available: a) the Oregon Registry⁷, b) Education Awards (monetary award based on achieving a Step on the Registry), and c) the Oregon Statewide Scholarship Program (specific funds may vary by program year, and in 2018 included the Betty Gray Early Childhood Training and Certification scholarship and Oregon’s Family Child Care scholarship). Engaging in one or more of these professional development initiatives indicated an individual’s engagement in professional activity.

How measured: Oregon’s three major professional development initiatives are managed by OCCD. Participation in each of the initiatives was documented in the workforce member's record. To further understand participation in these professional development initiatives, we calculated the percentage of the workforce who participated in these initiatives by type of care.

Persons noted as receiving an Education Award or Oregon Statewide Scholarship could have received the award at any time during their tenure in the workforce. Persons were considered enrolled in the Registry when they applied for, documented competency, and were awarded a Step. This does not include those that were automatically assigned a Step 1 or 2 because of their participation in a program such as the one to earn an enhanced subsidy rate that did not require applying for a Step. Although the vast majority of enrolled persons earned a Step 3-12, a small number earned a Step 1-2.

⁷ In addition to those who work directly with children in a regulated facility, the Registry includes others employed in the field of early childhood such as trainers, home visitors, staff of Child Care Resource and Referral agencies, and others. Thus enrollment is far greater than the workforce members whose participation is reported in this brief.

Engagement in Professional Development Initiatives

As can be seen in Table 15, workforce members were more likely to have enrolled in the Registry or have received an Education Award than to have received a Statewide Scholarship. The percent of workforce members who have ever received an Education Award increased by 13% and the number enrolled in the Registry increased by 20% from 2012 to 2018. The Statewide Scholarship program has fluctuated over time due to changes in funding sources⁸. In 2018, the number of workforce members who have received a scholarship were similar to those of 2012.

Table 15

| Engagement in Professional Development Initiatives | 2012 | | 2018 | | Difference 2012 to 2018 | |
|--|-------|----------------|--------|----------------|-------------------------|-----|
| | N | % of workforce | N | % of workforce | N | % |
| Enrolled in the Registry ^a | 4,601 | 22% | 10,100 | 42% | 5,499 | 20% |
| Received one or more Education Award | 3,838 | 18% | 7,382 | 31% | 3,544 | 13% |
| Received one or more Statewide Scholarship | 2,044 | 10% | 2,099 | 9% | 55 | -1% |

^a Persons were considered enrolled in the Registry when they applied for, documented competency, and were awarded a Step. This does not include those that were automatically assigned a Step 1 or 2.

Number of Professional Development Initiatives

As seen in Figure 6, over one-third of the 2018 workforce (42%) participated in one or more professional development supports, with 7% participating in all three. In 2012, only 24% of the workforce had participated in at least one professional development initiative, representing an 18% increase in overall participation from 2012 to 2018. Only small percentages of the workforce participated in only the Registry, only the BGECTC scholarship program, or a combination of those two programs (10%, 1%, and 1% respectively). Over half of the 42% who participated in at least one of the professional development initiatives combined enrollment of the Registry with receipt of an Education Award (23%).

⁸ The BGECTC scholarship program was reorganized after 2012 to address funding decreases and to better target the funding toward providers who had higher needs for advancing their professional development. The reorganization reduced the number of awards available through the Statewide Scholarship Program. Total program participation declined by 70% from the 2011-12 scholarship program year to the 2016-17 program year. Since that time, participation has rebounded to its 2012 level, likely due to the addition of the Oregon's Family Child Care scholarship in 2018.

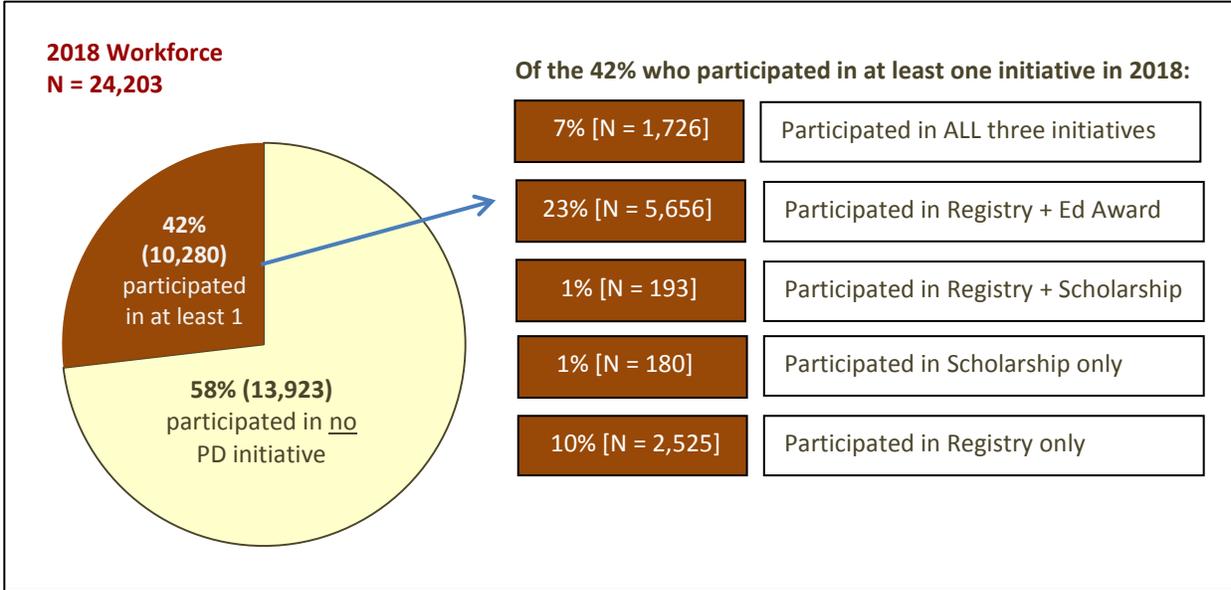


Figure 6

Table 16

| Combinations of Professional Development Initiatives | 2012 N = 20,873 | | 2018 N = 24,203 | | Difference 2012 to 2018 | |
|--|--------------------|-----|--------------------|-----|----------------------------|------|
| | N | % | N | % | N | % |
| None | 15,826 | 76% | 13,923 | 58% | -1,903 | -18% |
| All Three | 1,419 | 7% | 1,726 | 7% | 307 | 0% |
| Scholarship & Registry Step | 194 | 1% | 193 | 1% | -1 | 0% |
| Education Award & Registry Step | 2,403 | 12% | 5,656 | 23% | 3,253 | 11% |
| Scholarship only | 430 | 2% | 180 | 1% | -250 | -1% |
| Registry Step Only | 585 | 3% | 2,525 | 10% | 1,940 | 7% |

Note: Percentages are rounded, thus totals may exceed 100%.

Education Awards

Education Awards are payments that reward childhood care and education professionals for educational achievements and encourage continued training and education. When a person applies for a Step 3 through 12 on the Oregon Registry, they may be eligible for an Education Award. Award amounts are based on the professional development milestone achieved, including reaching Step 3-6, reaching Step 7-8.5, and reaching Step 9-12. Funding for these awards initially came from the 2009 American Recovery & Reinvestment Act and has continued thanks to support from the Oregon Community Foundation and Oregon’s Child Care Contribution Tax Credit.

Overall, 31% of the workforce has received an Education Award since 2012. As seen in Table 17, participation has varied by type of care. In 2018, 31% of center staff and small home-based providers have received an Education Award, compared to 27% of large home-based staff. Between 2012 and 2018, there were significant increases in Education Awards for all types of care.

Table 17

| Education Award by Type of Care | 2012 | | 2018 | | Difference 2012 to 2018 | |
|---------------------------------|--------------|----------------------------------|--------------|----------------------------------|-------------------------|------------|
| | N | % of persons within type of care | N | % of persons within type of care | N | % |
| Center | 2,878 | 19% | 5,790 | 31% | 2,912 | 12% |
| Large Home-Based | 452 | 20% | 907 | 27% | 455 | 7% |
| Small Home-Based | 508 | 14% | 685 | 31% | 177 | 17% |
| Total | 3,838 | 18% | 7,382 | 31% | 3,544 | 13% |

Oregon Statewide Scholarship Program for Professional Development

Since 2012, there have been three main scholarships administered as part of the Oregon Statewide Scholarship Program for Professional Development – 1) the Betty Gray Early Childhood Training and Certification scholarship, 2) the Race to the Top Early Learning Challenge Grant scholarships and 3) the Oregon’s Family Child Care scholarship.

The Betty Gray Early Childhood Training and Certification (BGECTC) scholarship has been available to members of Oregon’s childhood care and education workforce since before 2012. The BGECTC scholarship supports the growth of quality child care in Oregon by providing workforce members financial support for training and education. The Oregon Community Foundation's Betty Gray Early Childhood Development Endowment Fund provides funding for the scholarship.

From 2014 to 2016, with funding provided by the Oregon Race to the Top Early Learning Challenge Grant in partnership with the Early Learning Division, the Statewide Scholarship Program administered a Race to the Top (RTT) Supplemental scholarship and an Early Learning Professional Development scholarship (ELPDS). Both Race to the Top funded scholarships aimed to enhance the quality of childhood care and education in Oregon by supporting Early Childhood Educators to obtain associates degrees in the field.

Starting in 2018, Oregon’s Family Child Care (OFCC) scholarship supports professional development for large home-based and small home-based providers. OFCC scholarships help pay for the following professional development opportunities: college coursework; training; conferences; and credential, endorsement, accreditation.

In 2018, 9% of the workforce had received one or more of these Statewide Scholarships. but as can be seen in Table 18, participation has varied over time by type of care. In 2018, 7% of center staff had received a scholarship, compared to 13% of large home-based staff and 14% of small home-based providers. Whereas in 2012, large home-based providers were the most likely to have ever received at least one scholarship (13%), followed by center staff (10%) and small home-based providers (8%).

Table 18

| Statewide Scholarships by Type of Care | 2012 | | 2018 | | Difference 2012 to 2018 | |
|--|--------------|----------------------------------|--------------|----------------------------------|-------------------------|------------|
| | N | % of persons within type of care | N | % of persons within type of care | N | % |
| Center | 1,458 | 10% | 1,340 | 7% | -118 | -3% |
| Large Home-Based | 306 | 13% | 438 | 13% | 132 | 0% |
| Small Home-Based | 280 | 8% | 321 | 14% | 41 | 6% |
| Total | 2,044 | 10% | 2,099 | 9% | 55 | -1% |

Scholarships can be received for a wide variety of purposes, including to support training, college coursework, barrier reduction, child development associate, credentials, accreditation, attendance at conferences, and turning prior learning into college credit. Table 19 displays the number of 2018 workforce members who have received one or more scholarships in each of these areas since 2012.

Table 19

Number of 2018 Workforce Members Who Received One or More Scholarships in Each Type Since 2012

| Type of Scholarship | N |
|-------------------------------------|-------|
| Community-Based Training | 577 |
| College Coursework Credit | 519 |
| Barrier Reduction ⁹ | 426 |
| Child Development Associate Related | 194 |
| Oregon Registry Credential | 27 |
| Accreditation Support | 24 |
| Conferences | 1,247 |
| College Credit for Prior Learning | 26 |

Of 2018 workforce members who had received Statewide Scholarships, 83% had received scholarships that were funded by the Betty Gray scholarship program, 9% had received scholarships funded by the Early Learning Division (Race to the Top or Oregon’s Family Child Care scholarship), and 8% of individuals had received scholarships funded by both sources.

⁹ Barrier reduction includes scholarships for activities that are not narrowly defined as training and education but that reduce institutional or economic barriers to individual professional development. Barrier reduction scholarships have included funding for out-of-country degree translation/evaluation, GED exams, college student stipends, and the Oregon Registry Step application fee (discontinued because there is no longer a Registry Step application fee).

Workforce and Oregon's Registry

Importance of this information: Oregon aims to enroll each member of the workforce in the Registry. Not only does enrollment support professionalism, but having staff with Steps on the Registry is required for a facility's achievement of a level 3, 4, or 5 in *Spark*, Oregon's Quality Rating and Improvement System. The Step level of staff affects how high of rating a program can achieve.

How measured: Persons were considered enrolled in the Registry when they applied for, documented competency, and were awarded a Step. This does not include those that were automatically assigned a Step 1 or 2 because of their participation in a program such as the one to earn an enhanced subsidy rate that did not require applying for a Step. Although the vast majority of enrolled persons earned a Step 3-12, a small number earned a Step 1-2. Enrollment in the registry was explored by type of care, position, and location (metro/non-metro).

Registry by Type of Care

Overall, 42% of the entire workforce (10,100 individuals) were enrolled in the Registry in 2018 but as can be seen in Table 20, participation varied by type of care. Forty-four percent of center staff participated in the Registry, compared to 35% of large home-based staff and 36% of small home-based providers. Although the percentage only shows a 20% increase in overall Registry participation, it is noteworthy that the actual number of workforce members enrolled in the Registry more than doubled (4,601 to 10,100) in the seven years.

Table 20

| Registry Participation by Type of Care ^a | 2012 | | 2018 | | Difference 2012 to 2018 | |
|---|--------------|----------------------------------|---------------|----------------------------------|-------------------------|------------|
| | N | % of persons within type of care | N | % of persons within type of care | N | % |
| Center | 3,483 | 23% | 8,134 | 44% | 4,651 | 21% |
| Large Home-Based | 535 | 23% | 1,171 | 35% | 636 | 12% |
| Small Home-Based | 583 | 17% | 795 | 36% | 212 | 19% |
| Total | 4,601 | 22% | 10,100 | 42% | 5,499 | 20% |

^a Persons were considered enrolled in the Registry when they applied for, documented competency, and were awarded a Step. This does not include those that were automatically assigned a Step 1 or 2.

Registry by Position

The 2018 data showed that although 44% of the center-based workforce participated in the Registry, participation varied by position. Sixty-nine percent of center directors, 69% of head teachers, and 47% of teachers had enrolled in the Registry whereas only a combined average of 20% of aides in centers did. As seen in Table 21, 71% of large home-based providers had enrolled in the Registry whereas only a combined average of 21% of their assistants did. Only 36% of small home-based providers had enrolled in the Registry. For all positions, the percentage enrolled in the Registry was greater in 2018 than in 2012.

Table 21

| Registry Participation by Position | 2012 | | 2018 | | Difference 2012 to 2018 | |
|------------------------------------|--------------|-------------------------------|---------------|-------------------------------|-------------------------|------------|
| | N | % of persons in that position | N | % of persons in that position | N | % |
| Center | | | | | | |
| Director | 446 | 38% | 710 | 69% | 264 | 31% |
| Site Director/Supervisor | 7 | 17% | 191 | 65% | 184 | 48% |
| Head Teacher | 888 | 39% | 1,874 | 69% | 986 | 30% |
| Teacher | 1,875 | 24% | 4,302 | 47% | 2,427 | 23% |
| Aide II | 92 | 9% | 623 | 33% | 531 | 24% |
| Aide I | 175 | 6% | 434 | 12% | 259 | 6% |
| Large Home-Based | | | | | | |
| Provider | 364 | 49% | 668 | 71% | 304 | 22% |
| Assistant II | 106 | 14% | 421 | 29% | 315 | 15% |
| Assistant I | 65 | 8% | 82 | 9% | 17 | 1% |
| Small Home-Based | | | | | | |
| Provider | 583 | 17% | 795 | 36% | 212 | 19% |
| Total | 4,601 | 22% | 10,100 | 42% | 5,499 | 20% |

Note: Percentages are rounded.

Registry by Location

In both 2012 and 2018, workforce members in non-metropolitan areas were more likely to have a Step on the Oregon Registry than those in metropolitan areas. Forty percent of people in metropolitan areas were enrolled in the Registry versus 54% of people in non-metropolitan areas.

Table 22

| Registry Participation by Location | 2012 | | 2018 | | Difference 2012 to 2018 | |
|------------------------------------|-------|-----|-------|-----|-------------------------|-----|
| | N | % | N | % | N | % |
| Metropolitan | 3,707 | 22% | 8,484 | 40% | 4777 | 18% |
| Non-Metropolitan | 884 | 26% | 1,616 | 54% | 732 | 28% |

Notes: Metropolitan and non-metropolitan were determined using Office of Management and Budget Core Based Statistical Area classification for counties, see footnote on page 15 for more information.

Registry and College Credit Hours

In 2012 and 2018, over half of workforce members who were enrolled in the Registry had college credit hours (see Table 23).

Table 23

| Registry and College Credit Hours | 2012 N = 4,601 | | 2018 N = 10,100 | | Difference 2012 to 2018 | |
|---|-------------------|-----|--------------------|-----|----------------------------|----|
| | N | % | N | % | N | % |
| Percent of Registry enrollees with college credit hours | 2,514 | 55% | 5,984 | 59% | 3470 | 4% |

Note: College credits could have been taken prior to the time of the study (2012 or 2018).

| Predictors of Participation in Professional Development Initiatives |
|---|
| What workforce member characteristics predict that a person participates in one or more of the following: Registry, Scholarship, Education Awards? |
| Importance of this information: Increased understanding of who does and does not participate in professional development initiatives can strengthen efforts to target limited professional development resources. Findings from this analysis will assist in identifying those we are reaching as well as those we are not reaching. |
| How measured: We used a logit analysis to model how workforce members’ characteristics predicted engagement in professional development initiatives. Professional engagement was measured as a 1 if workforce members had engaged in at least one initiative (Registry, Scholarships, Education Awards), and a 0 if they had participated in no initiatives. |

The characteristics associated with participation in at least one professional development initiative are discussed and presented in the table below. The numbers in Table 24 describe the probability of engaging in an initiative associated with a change in that characteristic, controlling for the values of other characteristics. This enables us to assess the impact of each particular characteristic on probability of participating in professional development. Asterisks note the significance of the association. For example, in 2018 if the workforce member was an aide in a center the probability of engaging in an initiative was 10% less than the probability of a small home-based provider participating in professional development. The two asterisks show an association is highly significant, meaning it very unlikely that the difference was due to chance and highly likely to represent a real difference indicating a characteristic is associated with the probability of participating.

Table 24

| Variable description | 2012 N = 10,898 | 2018 N = 17,055 |
|------------------------------------|--------------------|--------------------|
| Age | 0.003** | 0.005** |
| Aide at a center | -0.158** | -0.102** |
| Director at a center | 0.096** | 0.136** |
| Teacher at a center | 0.052** | 0.085** |
| Assistant at large home-based care | -0.065** | -0.065** |
| Provider at large home-based care | 0.196** | 0.206** |
| Non-Metro [1=Non-Metro, 0=Metro] | 0.071** | 0.127** |

Continued on next page

Table 24 (continued)

| Variable description | 2012 | 2018 |
|---|------------|------------|
| | N = 10,898 | N = 17,055 |
| Training 1-8 hours | -0.017 | -0.001 |
| Training 9-15 hours | 0.007 | 0.019 |
| Training 16-25 hours | 0.043** | 0.074** |
| Training >25 hours | 0.175** | 0.238** |
| Gender [1=Female, 0=Male] | 0.117** | 0.073** |
| Race/Ethnicity [1=Person of Color, 0=White] | -0.032** | -0.009 |
| Primary language [1=Non-English, 0=English] | -0.008 | -0.095** |
| Some college, Certificate, foreign degree | 0.155** | 0.272** |
| Associate's Degree | 0.242** | 0.245** |
| Bachelor's Degree | 0.174** | 0.232** |

* Significant at the .05 level; ** Significant at the .01 level

Note: Marginal effects reflect the predicted probability of engaging in an initiative for a change in a characteristic. The sample size for the model is significantly lower than the 24,203 (2018) total workforce due to missing data on education, ethnicity, and primary language. Since in 2012 the results of an imputed missing data model yielded similar results to a model run without imputation, we did not impute missing values in 2018.

Age

Older members of the workforce were slightly more likely to participate in an initiative than were younger members of the workforce. As age increased, the likelihood of participating in an initiative also increased. There was no change in the size or significance of this predictor between 2012 and 2018.

Position

All positions were compared to a small home-based provider. In both 2012 and 2018, aide at a center and assistant at large home-based care facility were significantly less likely to participate in any initiative than a small home provider, while center directors, center teachers, and large home-based care providers had a greater probability of participating in at least one initiative.

Non-Metropolitan

Those living in non-metropolitan areas of Oregon were more likely than those living in metropolitan areas to engage in an initiative in both 2012 and 2018, with the likelihood increasing from 7% in 2012 to 13% in 2018.

Training Hours

Those with training hours were compared to those with no training hours. In 2012 and 2018, those with training hours greater than 15 hours were significantly more likely to have participated in an initiative than were those without any training hours.

Gender

Being female was significantly associated with participating in an initiative in both 2012 and 2018. If the workforce member was female they were about 12% more likely to participate in one or more initiatives in 2012 and about 7% more likely to do so in 2018.

Race/Ethnicity

Race/ethnicity was significantly and negatively associated with engagement in an initiative in 2012, but not in 2017. If the workforce member was a person of color, the probability of engaging in an initiative was not significant in 2018, whereas they had been 3% less likely to do so in 2012.

Primary Language

Having a primary language other than English was significantly and negatively associated with participation in professional engagement in 2018, but not 2012¹⁰. Workforce members whose primary language was not English were 10% less likely to participate in professional development opportunities than their English-speaking counterparts in 2018.

Education

Education comparisons were made to those with a high school diploma or less. In both 2012 and 2018, workforce members who had some college or a certificate, an associate's degree, or a bachelor's degree were significantly more likely to participate in at least one initiative compared to those with a high school diploma or less.

FINDINGS BASED ON DATA ABOUT THE WORKFORCE COLLECTED FROM CHILD CARE FACILITIES

The following section of the brief contains findings based on analysis of data collected from child care facilities about their employees. Compensation data were only collected from centers. Home-based providers have business income, but not typically wages. Therefore, compensation is not an appropriate characteristic for describing home-based providers.

Compensation Received by the Workforce

Importance of this information: Lower levels of compensation have been shown to be associated with higher teacher turnover, lower teacher morale, and lower levels of observed quality (Cochran, 2007; Torquati, Raikes, & Huddleston-Casas, 2007; Peisner-Feinberg et al., 2000). Stability of teachers and caregivers affects children both directly and indirectly. Directly, continuity in teachers is critical for children's ability to feel secure and to ensure that the adult knows the children. Indirectly, children are affected negatively when teachers and caregivers leave because of the negative impacts on staff morale and increased difficulty for remaining staff to train and integrate new teachers into the program. Nationally, as in Oregon, childhood care and education teacher wages are substantially lower than those occupations held by persons with similar education and experience (U.S. Bureau of Labor Statistics, 2013).

¹⁰ Prior to approximately 2014, most individuals' primary language defaulted to English if not otherwise given. Since then, system partners have increased the reliability of language data. This combination of factors could have influenced the results of this analysis.

Average Low and High Hourly Wage received by Center Teachers, by Facility

How measured: At the time of the annual recertification visit, directors were asked to report the lowest and highest teacher/head teacher wage and the benefits they provided to teaching staff. Prior to 2015, this was collected by licensing specialists. Starting in 2015, this was included as part of the child care center licensing application. Wage is available at the facility-level rather than that of the individual teacher level.

Between 2012 and 2018, center teachers experienced a slight increase in average wages, greater for those earning higher wages than those at the entry level. For context, Oregon’s minimum wage was \$8.80 in 2012 and ranged from \$10.00-12.00 in 2018¹¹.

Table 25

| Teacher/Head Teacher Wages | 2012 | | 2018 | | Difference 2012 to 2018 | |
|-----------------------------------|-------|-------|-------|-------|----------------------------|------|
| | Low | High | Low | High | Low | High |
| Median | 9.50 | 13.61 | 12.00 | 17.05 | 2.50 | 3.44 |
| Mean | 10.33 | 14.96 | 12.64 | 18.31 | 2.31 | 3.35 |
| Range (Lowest Low - Highest High) | 8.00 | 45.00 | 9.50 | 65.00 | --- | --- |
| Number of Centers Reporting | 805 | 814 | 926 | 925 | 121 | 111 |
| Percent of Centers Reporting | 83% | 84% | 77% | 77% | -3% | -4% |

Based on the 2018 median lowest and highest wage, teachers in Oregon’s early learning and child care settings make an average of \$25,000 to \$35,400 annually. In comparison, an analysis completed for the launching of Oregon’s Preschool Promise program found the average kindergarten teacher wage in Oregon ranged from \$48,000 to \$63,000 in 2016 (Mandell & Bachtle, 2016).

Association Between Teacher Education and Teacher Wages, by Facility

How measured: To answer the question of whether teacher education and wages in centers were related we relied on facility-level data. At the facility-level, we used highest wages paid and the percent of teachers who had an associate’s degree or higher. Wage estimates were divided into three equal parts and compared to whether facilities had more or less than 50% of their teachers with degrees. The table below shows how teacher education and wages were related.

The results indicated a relationship between higher education levels and wages. It is important to note that we viewed both teacher education and wages from a center level. For each center, we used the highest teacher wage paid to create three equal groups: lowest, mid, and highest. For education, we divided the percentage of teachers with a degree (associate’s degree or higher) into two groups: less

¹¹ In 2016, Oregon legislature established a series of annual minimum wage rate increases beginning July 1 of each year, as well as set separate rates for employers located in the Portland metropolitan area and within certain “nonurban” counties. Across the calendar year of 2018, the rates were \$11.25-12.00 for the Portland metro area, \$10.00-10.50 for nonurban counties (Baker, Coos, Crook, Curry, Douglas, Gilliam, Grant, Harney, Jefferson, Klamath, Lake, Malheur, Morrow, Sherman, Union, Wallowa, Wheeler), and \$10.25-10.75 for all other areas of the state.

than 50% of teachers with degrees and more than 50% of teachers with degrees. We then looked to see if there was an association – ***Did centers that paid higher wages also have teachers with higher levels of education?***

As can be seen in Figure 7, we found an association between teacher wages and teacher education. Centers who paid the highest wages had larger percentages of teachers with associate’s degrees or higher whereas those who paid the lowest wages had smaller percentages of teachers with degrees. Further, correlation results confirmed this association as median education was significantly correlated with the highest center wage ($r(832) = .241, p\text{-value} < .001$). This correlation would likely be stronger if data were available at the individual-level.

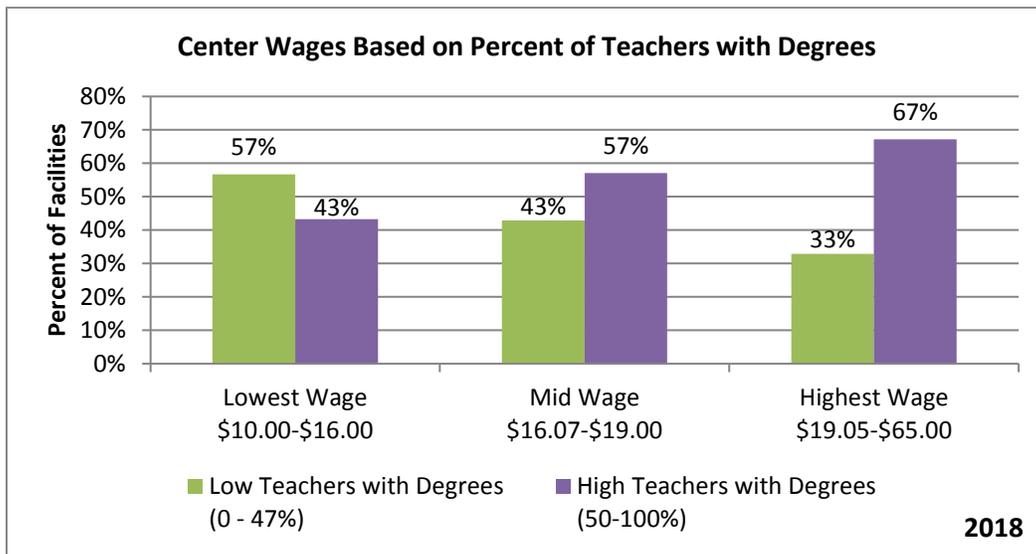


Figure 7

Benefits received by Center Teachers, by Facility

Importance of this information: Access to health and other benefits is vital to family well-being. It has also been linked to retention and staff morale, both of which have been linked to program quality (Whitebook, Sakai, Gerber, & Howes, 2001; Howes & Hamilton, 1993).

How measured: As noted above, center directors were asked to list the benefits they provided to at least some of their teaching staff. Prior to 2015, center directors were asked this in two questions: 1) whether they contribute any dollar amount toward medical benefits and 2) whether they contribute any dollar amount toward other benefits (if so, a list of other benefits was given). Responses to these questions were then compiled into six categories: 1) health insurance (includes medical, dental, vision, and supplemental), 2) paid time off, 3) retirement options, 4) financial supports for training and education, 5) free or reduced child care, and/or 6) paid membership in a professional organization.

In 2015, a change was made on the collection of benefits to collect all six categories individually, as well as breakdown the medical/health benefits into four sub-categories (medical, dental, vision, and supplemental). In order to compare to previous years, the health insurance category continues to be counted as only one benefit if a facility offers at least one of the four sub-categories.

The 2018 data showed improved provision of benefits to center staff. In 2018, 75% of facilities offered three or more benefits to their teachers, compared to only 25% of facilities in 2012. It is important to note that a change in data collection process occurred during this time. Therefore, it is unknown if the increase is due to the change in data collection or an actual increase in the number of benefits offered. We think collecting more specific information (starting in 2015) enabled the directors to report more accurately on the number of benefits they provide.

Table 26

| Benefit Counts for Reporting Facilities | 2012 | | 2018 | | Difference 2012 to 2018 | |
|---|------|-----------------|------|-----------------|-------------------------|------|
| | N | % of facilities | N | % of facilities | N | % |
| 0 benefits | 146 | 17% | 63 | 7% | -83 | -10% |
| 1 benefits | 269 | 32% | 62 | 6% | -207 | -26% |
| 2 benefits | 220 | 26% | 118 | 12% | -102 | -14% |
| 3 benefits | 144 | 17% | 187 | 20% | 43 | 3% |
| 4 benefits | 50 | 5% | 260 | 27% | 210 | 22% |
| 5 benefits | 23 | 3% | 193 | 20% | 170 | 17% |
| 6 benefits | | | 75 | 8% | 75 | 8% |

*Benefit information was reported by 88% (852) of centers in 2012 and 80% (958) of centers in 2018.

As seen in Table 27, there was substantial improvement in provision of most benefits in 2018 compared to 2012. Again, we cannot know if this improvement is due to real change or the changes in data collection that started in 2015.

Table 27

| Type of Benefits for Reporting Facilities | 2012 N = 852 facilities | | 2018 N = 958 facilities | | Difference 2012 to 2018 | |
|---|----------------------------|-----------------|----------------------------|-----------------|-------------------------|-----|
| | N | % of facilities | N | % of facilities | N | % |
| Health Insurance | 533 | 63% | 636 | 66% | 103 | 4% |
| Paid Time Off | 351 | 41% | 745 | 78% | 394 | 37% |
| Retirement Options | 197 | 23% | 507 | 53% | 310 | 30% |
| Training/Education | 221 | 26% | 681 | 71% | 460 | 45% |
| Free/Reduced Child Care | 154 | 18% | 500 | 52% | 346 | 34% |
| Membership Professional Org* | 0 | 0% | 245 | 26% | 245 | 26% |

*Providing professional membership for staff was not asked directly on the form in 2012, therefore this could account for the lack of facilities reporting it in 2012.

In 2018, sub-categories were collected under health insurance including medical, dental, vision, and supplemental¹⁰ insurance. In order to compare to previous years, the health insurance category was counted as only one benefit if a facility offered at least one of these sub-categories. However, it is important to note the difference in provision of these health benefits. Table 28 displays the number of overall facilities that reported offering each of the health sub-categories in 2018.

Table 28

| Health Sub-Categories | N | % of reporting facilities |
|----------------------------|-----|---------------------------|
| Medical | 617 | 64% |
| Dental | 531 | 55% |
| Vision | 467 | 49% |
| Supplemental ¹² | 175 | 18% |

*Percentages are out of all programs reporting benefits, so they do not total to 100%.

Of those offering health benefits in 2018, 23% offered all four categories, 46% offered three categories, 18% offered two categories, and 12% offered one category (mostly medical). Medical insurance was offered by 97% of those offering health benefits.

Teacher and Provider Retention in the Workforce

Importance of this characteristic: A higher percentage of teachers who remain in the same center for a year or more provides stability and continuity for children. As noted above teacher turnover negatively impacts children both directly by disrupting the child’s relationship with the adult and indirectly by negatively impacting the remaining staff and overall program.

Percentage of Teachers who Remain in the Same Center for a Year or More, by Facility

How measured: Administrative data enabled us to measure retention of the workforce employed in centers and home-based care. For each type of care we created the measure at the facility level. For centers, we calculated a facility-level percentage of teaching staff whose hire date was one or more years prior to the most recent licensing renewal. In addition to the facility-level measure, we also calculated a workforce measure of retention by analyzing the percentage of total teachers who were at their facility for a year or more.

At a facility-level, in the average center, 75% of teachers were at their center for more than one year in 2018. As seen in Table 29, about half of centers (48%) retained 75% or more of their head teachers and teachers for over a year. Low levels of stability (less than 25% of teachers retained) was an issue for 10% of facilities in 2018.

¹² A supplemental insurance plan is a health care plan that covers services and out-of-pocket expenses above and beyond what minimum essential medical insurance covers. This may include paying for out-of-pocket medical expenses, such as deductibles and copayments, or by providing an individual with a cash benefit to cover other expenses, such as transportation costs, lost wages, or lodging and meals incurred for medical reasons. Common types of supplemental insurance include accident insurance, hospital insurance, and critical illness insurance. It is often used to supplement other medical insurance or provided alone to cover unexpected injuries or illnesses.

Table 29

Center Retention: Percent of Centers at Each Level of Teacher Retention

| Percent of Teachers Retained at Centers | 2012 N = 850 facilities | | 2018 N = 1,117 facilities | | Difference 2012 to 2018 | |
|---|----------------------------|-----------------|------------------------------|-----------------|----------------------------|-----------------|
| | N | % of facilities | N | % of facilities | N | % of facilities |
| | 0% of teachers over a year | 71 | 8% | 69 | 6% | -2 |
| 1% – <25% of teachers over a year | 17 | 2% | 43 | 4% | 26 | 2% |
| 25% – <50% of teachers over a year | 126 | 15% | 186 | 17% | 60 | 2% |
| 50% – <75% of teachers over a year | 187 | 22% | 288 | 26% | 101 | 4% |
| 75% – 99% of teachers over a year | 141 | 17% | 204 | 18% | 63 | 2% |
| 100% of teachers over a year | 308 | 36% | 327 | 29% | 19 | -7% |

*In 2018, 78 facilities did not have any teachers reported and therefore retention was unable to be calculated.

School age programs have unique challenges related to retention, therefore we further explored their level of retention. Out of all 1,117 centers, 167 programs serve only school age children. These school age only programs have lower retention than programs that serve a variety of age groups. For instance, in the average school age only center, 50% of teachers were at their center for more than one year in 2018. In comparison, 75% of teachers who were not in school age only programs were at their centers for more than one year. Over half (51%) of school age only facilities had 50% or less of their teachers at the center for more than one year, compared to 22% of facilities that are not school age only.

Median Number of Years Home-Based Providers Provide Care in the Same Community

How measured: Calculating retention for home-based providers is more complicated because home-based providers could move within their own community, thus not disrupting the child’s relationship with the provider. Thus, unless a provider moved outside a 10-mile radius or had more than a 30-day gap in service, we did not count the move as a disruption. Years of operation were determined by subtracting the date the facility was certified or registered from the date of the most recent renewal. Note this retention measure is not a measure of how long the average home-based provider continuously maintains their child care business as it does not capture those who enter, stay a limited period of time, and exit. We measure the time that those currently providing care have been providing that care at that home or a home within a 10-mile radius of the original home.

The median number of years providing care remained consistent from 2012 to 2018. Large home-based providers averaged five years of providing care and small home-based providers averaged eight and a half years of providing care in 2018. It is important to note that Oregon created large home-based providers in 2002 and there has been a steady increase in their number since that time. Oregon has had registered small home-based providers since 1993. The number of small home-based providers continues to decrease each year.

Table 30

Home-Based Retention: Number of Years Providing Care in the Same Community

| | 2012 | 2018 | Difference 2012 to 2018 |
|-----------------------------------|---------------|---------------|------------------------------------|
| Large Home-Based Providers | N = 497 | N = 673 | |
| Median Number of Years | 5.0 | 5.0 | 0.00 |
| Range of Years | 1 - 20 | 1 - 32 | --- |
| Small Home-Based Providers | N = 1,084* | N = 1,838 | |
| Median Number of Years | 8.0 | 8.5 | 0.00 |
| Range of Years | 0 - 46 | 0 - 38 | --- |

*Small home-based providers have a two year licensing cycle. In 2012, only small home-based providers that renewed their license in 2012 (about half of all small home-based providers) were included in the analysis. In subsequent years, all small home-based providers who were active in the calendar year were included in the analysis, regardless of their license renewal date.

CHALLENGE TO PROFESSIONALIZATION OF THE WORKFORCE PRESENTED BY TURNOVER AND INSTABILITY

Turnover and instability of the workforce are complex and of high policy relevance due to their impacts on multiple individuals and organizations. High turnover and the related instability within the workforce negatively impact:

1. **Children**, as it represents a loss for them; it decreases the stability and continuity of children’s relationship with adults.
2. **Centers**, as they need to recruit and train new staff.
3. The **professional development system** designed to support, train, educate, and professionalize the workforce, as those supported leave and those entering require basics.

In addition, it has the potential to weaken support for investments in professional development as policy makers might worry about the effectiveness of their investments if large numbers of those served leave the workforce.

Data allow us to examine the extent to which turnover and instability are challenges in Oregon. We have two distinct although related measures of turnover: an individual workforce member measure and a facility-level measure by type of facility. In this section, we look first at measures of turnover and stability from the perspective of the individual, including person-level turnover and person-level stability. In the next section, we look at turnover at the facility level; that is, how stable are a center’s teachers. We end with a discussion of the implications of these findings.

| |
|---|
| Individual Child Care Workforce Member Measure of Turnover and Stability |
| Turnover of Workforce Members |
| How measured: A person is considered part of the workforce in a given year if they worked any part of that year based on ORO start, hire, and end dates. We created a longitudinal database of anyone who has been part of the workforce from 2012 through 2018. By matching data for multiple years using a person’s unique identification number, we are able to see which years the person has been in the workforce. |

It is important to note, however, that during the first few years of establishing the Oregon Registry Online database (linking Oregon Registry and licensing data), data accuracy issues were still being resolved as the system matured. Although initial analysis shows some trends in turnover of workforce members that are worth noting, implications of this analysis should be taken with caution. As more years of data are collected over time, confidence in trends associated with turnover increases.

By matching data for multiple years using a person’s unique identification number, we are able to track each person and look at trends over time. Having longitudinal data allows us to increase our understanding of turnover and stability and makes it possible to view changes in the workforce from multiple perspectives. We introduce each measure by defining the question it answers.

How many people leave the workforce each year?

Twenty-four percent of the 2017 workforce exited prior to 2018; that is they were not employed in a regulated facility in 2018 although they had been reported as employed in 2017¹³. This reflects a slight increase in the number of individuals leaving the workforce compared to the previous year. Over time, 23% of the 2016 workforce, 29% of the 2015 workforce, 16% percent of the 2014 workforce, 24% of the 2013 workforce, and 20% of the 2012 workforce left the workforce by the following year, see Figure 8. A two-year moving average is included in Figure 8 to smooth fluctuations due to the cyclical nature of regulatory cycles and position end dates¹⁴. The average turnover rate from year to year has remained fairly stable, with a slight trend upward.

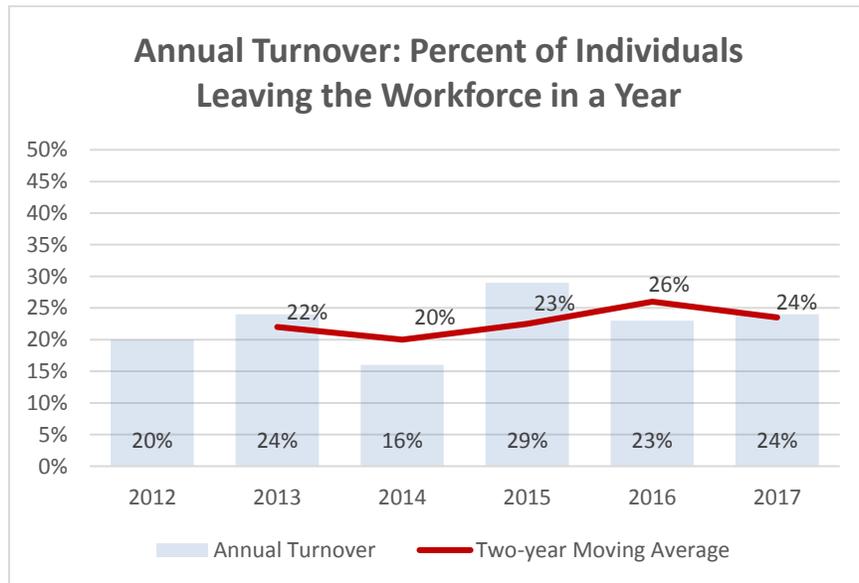


Figure 8

A 24% turnover rate translates to a 76% retention rate, meaning that 76% of individuals in the 2017 workforce were retained into 2018.

¹³ The year a person exits the workforce is based on their employment end date recorded in ORO.

¹⁴ End dates appear to be cyclically clustered in odd-numbered years, driven in part by regulatory cycles. A number of individuals may have left the workforce during the calendar year preceding that of their recorded end dates. Consequently, annual turnover may be overrepresented in odd years and underrepresented in even years. To account for this, a two-year moving average is being included to better represent the turnover rates across years.

How many people entered the workforce each year?

Of the 24,203 individuals in the 2018 workforce, 5,007 (21%) entered as new in 2018 and 762 (3%) returned after a gap of a year or more. The remaining 18,434 individuals were in both the 2017 and 2018 workforce. As seen in Figure 9, the percent of new individuals who entered the workforce in a given year has ranged from 29% in 2013 to 21% in 2018. Table 31 displays the number who entered, returned and remained in the workforce each year since 2013.

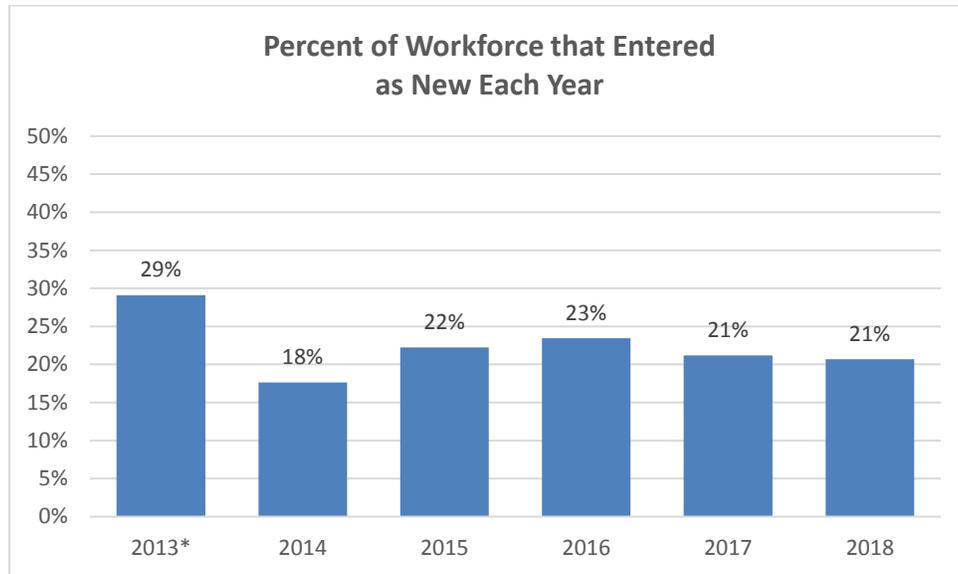


Figure 9

Table 31

| Year | Entered as New | Returned After a Gap | Remained | Total Workforce |
|-------|----------------|----------------------|----------|-----------------|
| 2013* | 6,836 | * | 16,652 | 23,488 |
| 2014 | 3,898 | 321 | 17,882 | 22,101 |
| 2015 | 5,510 | 701 | 18,550 | 24,761 |
| 2016 | 5,555 | 515 | 17,613 | 23,683 |
| 2017 | 5,115 | 663 | 18,346 | 24,124 |
| 2018 | 5,007 | 762 | 18,434 | 24,203 |

*For 2013, we are not able to separate the number of workforce members who returned after a gap from the number of new members. Therefore, numbers reported as new for 2013 may overestimate the number of new members entering the workforce. Other possible reasons for this higher number could be an increase in facilities or possibly economic factors as the economy improved.

Stability of Workforce Members

How measured: We use the longitudinal database of all individuals who had been part of the workforce from 2012 through 2018. By matching data for multiple years using a person’s unique identification number, we are able to see which years the person has been in the workforce.

In order to capture stability, we looked at the number of individuals at start of measurement period who remained employed for entire measurement period. More specifically, we followed individuals from the 2012 workforce over time. By assessing how many were still employed in a regulated child care facility in 2018, we can gauge the stability of the workforce.

How stable is the workforce over time? What percentage of the 2012 workforce remained in the workforce over all seven years?

Of the 20,873 individuals in the 2012 workforce, 5,486 individuals (26%) remained in the workforce for all years through 2018 (“Stayers”). In addition, 1,293 individuals were in and out of the workforce, meaning they were in the 2012 workforce and 2018 workforce, but had not been in all years in between. An additional 68% of the 2012 workforce (14,094) had left before 2018 (“Leavers”).

Table 32

| 2012 Cohort | N | Percent |
|--------------|---------------|-------------|
| Stayers | 5,486 | 26% |
| In and Out | 1,293 | 6% |
| Leavers | 14,094 | 68% |
| Total | 20,873 | 100% |

Of individuals in the 2012 workforce, 26% had been in the workforce for all seven years, 7% for six years, 7% for five years, 12% for four years, 12% for three years, 19% for two years, and 17% for one year, see Figure 10. It is also important to note that a significant percentage of individuals who were marked as in the workforce for seven years were likely in the workforce for years prior to 2012 when workforce data were first collected.

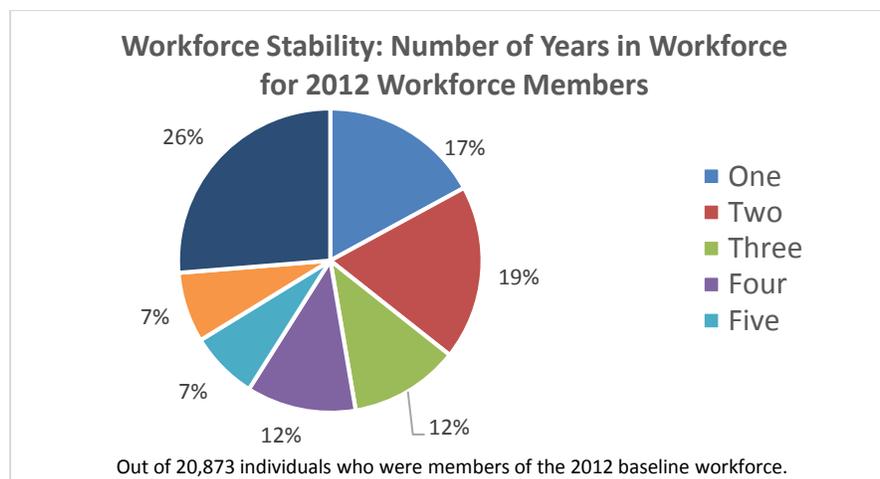


Figure 10

Did stability in the workforce vary by position and other demographic characteristics?

Stability of the 2012 workforce over time varied by position. In centers, head teachers and directors were the most likely to stay in the workforce, with 34% of head teachers and 36% of directors in the workforce for all seven years. This was followed by teachers (25%), site directors (17%), and aide IIs (17%).

Home-based providers were among the most likely to remain in the workforce for all seven years, with 54% of large home-based providers and 35% of small home-based providers remaining in the workforce for all seven years. The least likely positions to stay in the workforce were center aide I and large home-based assistant I positions with only 11% and 10% of the 2012 cohort staying in the workforce for all seven years.

Table 33

| 2012 Position* | "Leavers" | | "In and Out" | | "Stayers" | | Total | |
|----------------------------|-----------|------------|--------------|-----------|-----------|------------|-------|------|
| | N | % | N | % | N | % | N | % |
| Center | | | | | | | | |
| Director | 729 | 62% | 61 | 5% | 386 | 33% | 1,176 | 100% |
| Site Director / Supervisor | 31 | 76% | 3 | 7% | 7 | 17% | 41 | 100% |
| Head Teacher | 1,343 | 59% | 154 | 7% | 786 | 34% | 2,283 | 100% |
| Teacher | 5,194 | 68% | 545 | 7% | 1,933 | 25% | 7,672 | 100% |
| Aide II | 805 | 75% | 81 | 8% | 185 | 17% | 1,071 | 100% |
| Aide I | 2,333 | 83% | 177 | 6% | 316 | 11% | 2,826 | 100% |
| Large Home-Based | | | | | | | | |
| Provider | 312 | 15% | 34 | 5% | 399 | 54% | 745 | 73% |
| Assistant II | 512 | 70% | 55 | 7% | 168 | 23% | 735 | 100% |
| Assistant I | 680 | 83% | 55 | 7% | 80 | 10% | 815 | 100% |
| Small Home-Based | | | | | | | | |
| Provider | 2,155 | 61% | 128 | 4% | 1,226 | 35% | 3,509 | 100% |

*Based on the highest position an individual held during the 2012 calendar year.

In looking at demographic characteristics, "stayers" were on average older than those who were in and out or had left the workforce. The average age for "stayers" in 2018 was 42.17 years, compared to 36.59 for "in and out" and 37.16 for "leavers." Other demographic characteristics, including education, race/ethnicity, primary language, and location (metro/non-metro), did not appear to influence stability in the workforce.

Is there a relationship between stability and engagement in professional development initiatives?

As can be seen in Figure 11, engagement in professional initiatives varied by how stable a person was in the workforce. Of the 2012 cohort, those who remained in the workforce (“stayers”) had the highest percentage of participation in professional initiatives (71% participating in at least one initiative), compared to those who were in and out (59%) or had left the workforce (28%).

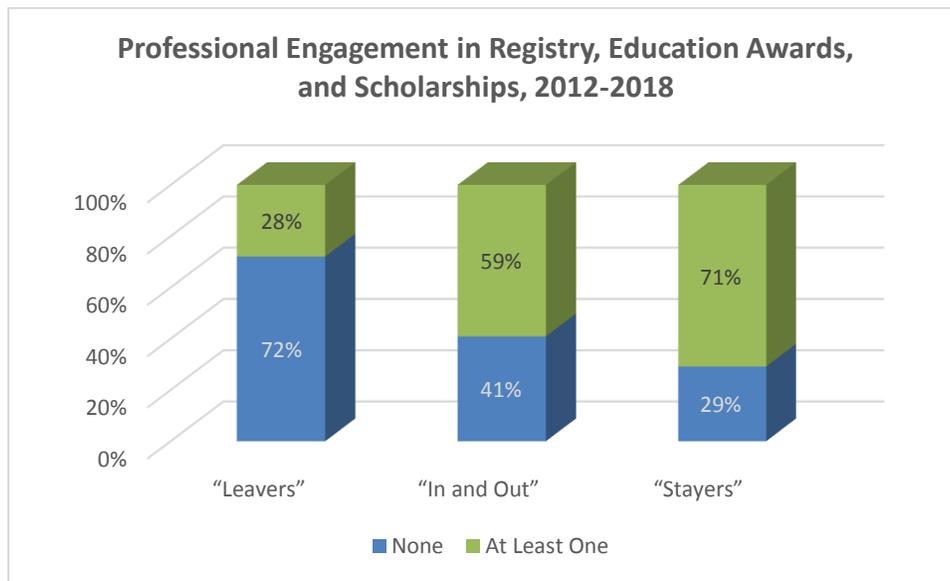


Figure 11

Looking at each type of professional engagement separately, a similar pattern is found. Those who stayed in the workforce were more likely to have been engaged in professional development compared to those who were in and out or had left the workforce. For example, 70% of “stayers” were enrolled in the registry, compared to only 26% of “leavers.” A similar pattern is seen for those receiving Education Awards and Scholarships, see Table 34.

Table 34

| Professional Engagement, 2012-2018 | “Leavers” N = 14,094 | | “In and Out” N = 1,293 | | “Stayers” N = 5,486 | |
|---|-------------------------|-----|---------------------------|-----|------------------------|-----|
| | N | % | N | % | N | % |
| Enrolled in the Registry ^a | 3,711 | 26% | 745 | 58% | 3,814 | 70% |
| Received one or more Education Awards | 3,064 | 22% | 591 | 46% | 3,391 | 62% |
| Received one or more Statewide Scholarships | 1,089 | 8% | 213 | 16% | 1,296 | 24% |

^a Persons were considered enrolled in the Registry when they applied for, documented competency, and were awarded a Step. This does not include those that were automatically assigned a Step 1 or 2.

Child Care Facility-Level Measure of Retention

At the facility level, we asked if there was an association between the level of retention and compensation offered (both wages and benefits) at the center.

Association Between Center Retention and Teacher Wages, by Facility

How measured: To answer the question of whether retention levels and hourly wages in centers were related we relied on facility-level data on highest wage paid at the center and the percent of teachers who were at the center for more than one year at the time of licensing renewal. The wage estimates were then divided into three equal parts and used to predict retention levels across Oregon centers.

To look at the association between teacher retention level and wages we viewed both retention and wages from a facility or center level. For each center, we had teacher wages and a measure of the percent of teachers who had been at the center for a year or more. We looked for a relationship between teacher retention (percent retained) in a center, and the wages the center paid teachers. Using highest reported wage we created three equal groups: lowest, mid, and highest wages reported by each center director. We then looked to see if there was an association – ***Did centers that reported higher wages tend to have higher retention levels than those reporting lower wages?***

Overall, we did not find a statistically significant association between facility teacher wages and teacher retention at the facility level ($r(859) = .106$, $p\text{-value} = .07$). However, when comparing across centers who reported low-wages (\$10-16), mid-wages (\$16-\$19), and high-wages (>\$19), regression analysis results provide partial evidence that teacher retention significantly differs across centers by wage. Centers that reported the highest wages (>\$19) tended to have significantly higher retention rates than those with the lowest wages reported (\$10-16). Yet, centers with wages between \$16-19 did not demonstrate differences in retention levels compared to the other two groups. Findings suggest that the association between wages and retention may be strongest among facilities with particularly high or low wage levels, with centers paying over \$19 an hour more likely to see higher levels of retention than those paying less than \$16 per hour.

These results are different from past workforce reports that detected a small, yet statistically significant, association between facility teacher wages and retention rates. We speculate that there may be both substantive and measurement reasons why this year has seen a change. Substantively, the findings this year suggest a potential change in relationship among wage and retention. It may be that there are more factors contributing to workforce retention, such as offering of benefits, workplace climate, and larger economic factors, that are playing a larger role in deciding to stay in the field than in years past. In terms of measurement, wage information is currently only available at the facility or center level. Directors report the highest and lowest hourly wage in their center. By using the highest hourly wage for this analysis, we must make assumptions about the variation in wages being paid in different centers. For example, one center may pay most of their staff \$12 an hour and have one or two individuals who are paid \$20 an hour, whereas another center may pay nearly all staff at \$20 an hour. In the current analysis, these two centers will look the same. Gathering more nuanced information about the nature of wages within centers from center directors or individual level wages from workforce members themselves would help clarify the complex relationship between wages and retention.

Reflections on Retention and Its Challenges to Professional Development

As noted at the beginning of this section, high levels of turnover raise concerns for children, early learning centers, and the professional development system. Data enable us to explore turnover/retention at the level of the individual and at the level of the facility (center, large- or small-home-based program).

When viewing turnover/retention from the level of the individual, we found that 76% of the 2017 workforce (all types of care and all positions who work with children included) had continued to work in the following year—a 76% retention rate. The same rate for K-12 school teachers nationally was 92% in the 2012-2013 academic year. However, that rate was only 85% in schools where the base salary rate was less than \$30,000 (Goldring, Taie, & Riddles, 2014). When using their reported highest wage, just under a third (30%) of early learning programs reported a salary under \$30,000 (an annualized estimate of \$15.21 per hour), the amount associated with low rates of retention in K-12 (Goldring, Taie, & Riddles, 2014). When looking at the lowest wage for teachers, 92% of early learning centers had a base salary under \$30,000. Using longitudinal data, we found that 26% of the 2012 cohort had been in the workforce for all seven years.

In terms of professional development, Oregon aims to train, support, educate, and professionalize the workforce including having all workforce members enroll in the Oregon Registry. Turnover, low retention rates, and instability challenge achievement of these goals to the extent that we lose those in whom we have made professional development investments. Luckily, the group that remained in the workforce (stayers) had higher levels of participation in professional development than did those who did not remain (leavers). But maintaining and hopefully growing the overall percentage of the workforce that has participated in professional development and enrolled in the Registry requires reaching large numbers of workforce members, especially if retention rates remain low and growth in the size of the workforce high.

Low levels of retention and overall instability over time decrease continuity for children, increase recruitment and training costs for centers, and challenge efforts to professionalize the workforce. In order to reach Oregon's goal of a stable professionalized workforce it seems clear that compensation issues need to part of the conversation. It would also seem that different quality engagement strategies are needed for facilities with higher levels of education, higher wages, and high levels of retention from those with the combination of lower levels of education, lower wages, and lower levels of retention. It seems unlikely that one strategy will work with facilities with such different conditions.

STUDY LIMITATIONS

The data used in this study were collected in the sixth year of a major transformation of Oregon's early learning system. Creation of the Oregon Registry Online (ORO) has enabled the state to collect workforce training and other data from all persons working in regulated child care facilities starting in 2012. Linking individual data with facility licensing data on a daily basis has allowed Oregon to associate each person with the facility in which they were employed at the time that facility was licensed. As with any major system transformation, there were challenges and these challenges likely resulted in missing or incomplete data. Missing data on key descriptors such as education, race, ethnicity, gender, and primary language were a major limitation, yet the percentage with these data has steadily increased and is now at 71% overall. In addition, data were available only for the members of the workforce employed

in regulated facilities. Thus, it did not include data on those employed in programs exempt from licensing such as part-day preschools.

Similarly, data at the facility-level were collected only from regulated facilities. Data were collected at the time of license renewal. The data captured a characteristic related to the workforce but was based on a characteristic of the facility, such as in the case of compensation (wages and benefits). The findings represent facility averages such as the lowest teacher wage paid or the highest teacher wage paid by centers. Were such data to be collected from individuals, more analyses could be conducted as the characteristic would be associated with an individual workforce member rather than with the facility which employed these workforce members.

CONCLUSION

As of 2012, Oregon has had in place a system that allows it to answer policy-relevant questions about the early learning workforce employed in regulated child care and education facilities. This brief describes the 2018 workforce and compares it with the 2012 workforce. Having a measure of turnover provides critical information for designing the training system. Comparing the 2017 and 2018 workforce, an average of 24% of the 2017 workforce exited; that is they were not employed in a regulated facility in 2018, although they had been in 2017. Twenty-one percent of the 2018 workforce entered, that is they were employed in 2018 but had not worked in a regulated facility in 2017. The 24% turnover rate in early learning facilities compares with an 8% national teacher turnover rate in K-12 and a 15% rate in K-12 schools with a base salary of \$30,000 or less. Low wages are associated with high turnover rates in both early learning and K-12. High turnover rates harm children and challenge professional development investments; although in Oregon's early learning workforce we find that those in whom we made professional development investments were mainly in the group who remained in the workforce.

Findings also support assessment of quality improvement efforts. In 2013, Oregon launched its Quality Rating and Improvement System (QRIS), known as Spark. Spark includes investments in individuals and facilities. Having 2012 baseline data allows Oregon to measure the impact of those investments on critical measures of workforce characteristics. This 2018 report is a measure of the impact of these investments. Workforce members earned higher numbers of training hours and slightly more of these hours were from college courses. Numbers participating in professional development increased substantially with 5,499 more workforce members having Steps on the Oregon Registry in 2018 than did in 2012. These findings enable decision makers to assess both the strengths and weaknesses of this workforce as well as change over time, information that is critical for making informed decisions about investments in professional development.

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