

Oregon Early Learning Workforce: Four Years Beyond Baseline Comparison of 2012 and 2016

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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 hours 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 (OCCD & OCCRP, 2014) with follow up reports one year (OCCD & OCCRP, 2015), two years (OCCD & OCCRP, 2016), and three years (OCCD & OCCRP, 2017) after the baseline. Working together, OCCD, ELD, and the Oregon Child Care Research Partnership at Oregon State University (OSU) have analyzed the data for a fifth year, 2016. 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 fourth of what will be annual reports 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, and
- 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 Directors/Supervisor, Teacher and
- known to be working in regulated facilities in 2016³. This criterion was based on the individual’s hire date as well as their position start and end dates.

23,683 people worked in Oregon regulated early learning facilities in 2016. This represents a decrease of 1,078 individuals from last year, but an overall increase of 2,810 individuals since 2012.

2012	2013	2014	2015	2016
20,873	23,488	22,101	24,761	23,683

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 2016, center staff comprised the majority of the workforce with 76% of individuals working in child care centers. Large family child care homes comprised 13% of the workforce, and small family child care homes comprised 11% 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 2016: Hire date and position start date needed to be less than 12/31/16; and end date needed to be greater than 12/31/15.

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 2016.

Table 1

Workforce by Type of Care	2012 N = 20,873		2016 N = 23,683		Difference 2012 to 2016	
	N	% of workforce	N	% of workforce	N	% of workforce
Center	15,069	72%	17,886	76%	2,817	4%
Large Home-Based	2,295	11%	3,197	13%	902	2%
Small Home-Based	3,509	17%	2,600	11%	-909	-6%

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 2016). Within centers we saw 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. We also saw a decrease of 909 in the number of small home-based providers since 2012.

Table 2

Workforce by Position	2012		2016		Difference 2012 to 2016	
	N	% of persons within type of care	N	% of persons within type of care	N	%
Center						
Director	1,176	8%	1,004	6%	-172	-2%
Site Director / Supervisor	41	0%	262	1%	221	1%
Head Teacher	2,283	15%	2,708	15%	425	0%
Teacher	7,672	51%	8,233	46%	561	-5%
Aide II	1,071	7%	1,636	9%	565	2%
Aide I	2,826	19%	4,043	23%	1,217	4%
Large Home-Based						
Provider	745	33%	883	28%	138	-5%
Assistant II	735	32%	1,228	38%	493	6%
Assistant I	815	36%	1,086	34%	271	-2%
Small Home-Based						
Provider	3,509	---	2,600	---	-909	---

Characteristics of the 2016 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, over 63% of workforce members provided all data for gender, race/ethnicity, and primary language in 2016. This reflects an 10% increase in the number reporting demographic data compared to 2012. Since 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		2016		Difference 2012 to 2016	
	N	%	N	%	N	%
All Demographics	11,150	53%	15,001	63%	3,851	10%
Some Demographics	2,404	12%	1,890	8%	-514	-4%
No Demographics	7,319	35%	6,792	29%	-527	-6%

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 2016 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		2016		Difference in Number or Percent*
Age	20,820		23,595		
Mean (SD)	38.44 (13.58)		37.14 (13.81)		-1.3
Range	18 to 91		18 to 89		
Gender	12,605		16,010		
Male	613	5%	876	5%	0%
Female	11,992	95%	15,134	95%	0%
Race/Ethnicity	11,310		15,250		
American Indian	181	2%	234	2%	0%
Asian	453	4%	653	4%	0%
Black	296	3%	499	3%	0%
Hispanic/Latino/Spanish	1,602	14%	2,599	17%	3%
Native Hawaiian	75	1%	132	1%	0%
White	8,517	75%	10,842	71%	-4%
Multiracial	55	0%	167	1%	1%
Other	131	1%	124	1%	0%
Primary Language	12,487		16,509		
English	10,569	85%	14,001	85%	0%
Spanish	1,222	10%	1,735	11%	0%
Russian	226	2%	177	1%	-1%
Vietnamese	130	1%	99	1%	0%
Chinese (Traditional)	99	1%	109	1%	0%
Other	241	2%	388	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 (29%) of Oregon's workforce are persons of color, which includes those who are Hispanic/Latino, Black, Asian, Native Hawaiian, American Indian, and multiracial. As seen in Table 5, the percentage of persons of color increased from 2012 to 2016 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 Non-White or Hispanic.

Table 5

Race/Ethnicity by Type of Care	2012 N = 11,255		2016 N = 15,250		Difference 2012 to 2016	
	White	Person of Color	White	Person of Color	White	Person of Color
Center	76%	24%	71%	29%	-5%	5%
Large Home-Based	78%	22%	70%	30%	-8%	8%
Small Home-Based	73%	27%	71%	29%	-2%	2%

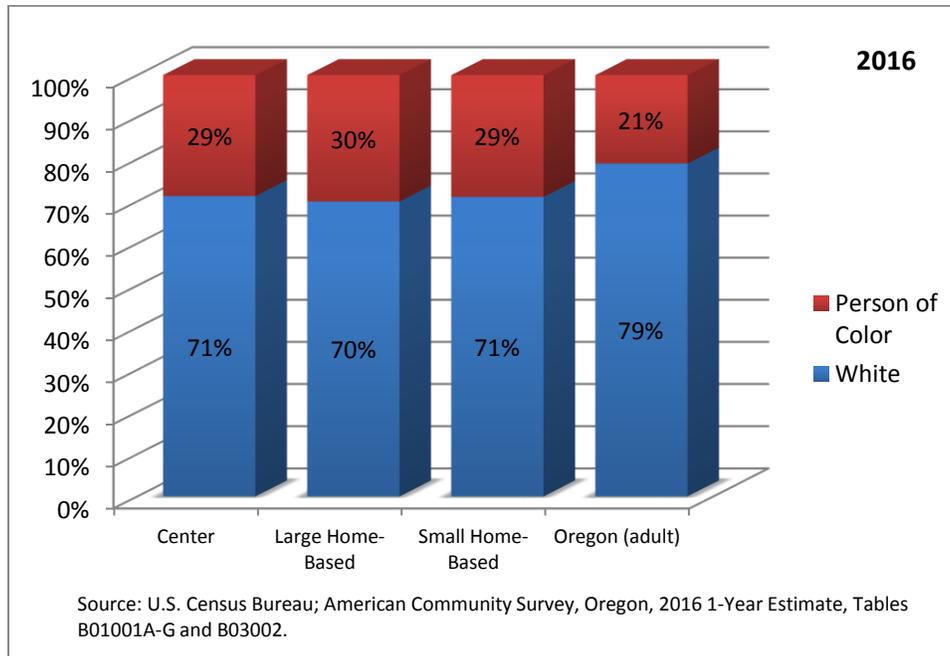


Figure 1

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 under 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 fairly consistent from 2012 to 2016, with slight increases for small and large home-based providers. 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		2016 N = 16,509		Difference 2012 to 2016	
	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%	68%	32%	-3%	3%

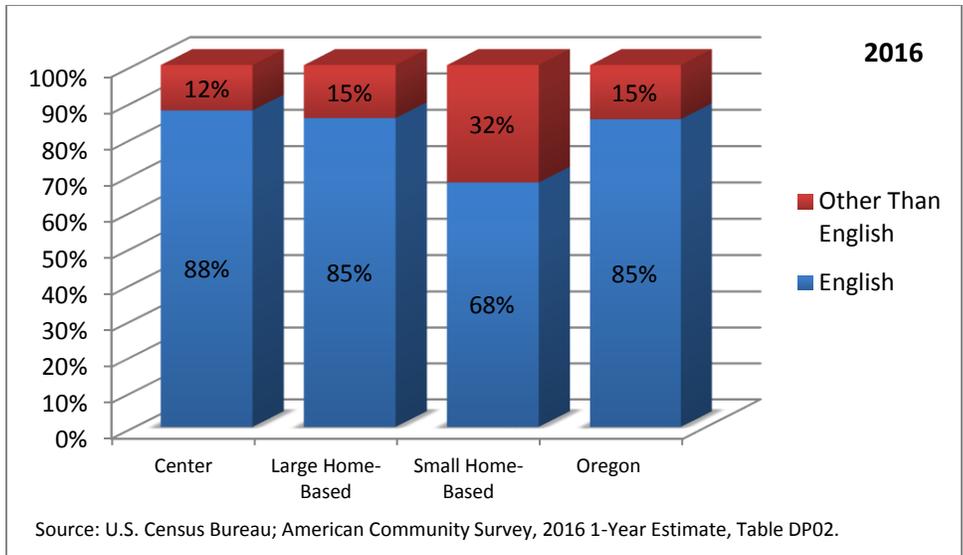


Figure 2

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 876 from 2012 to 2016. 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 2016 in all types of care.

Table 7

Gender by Type of Care	2012 N = 12,605		2016 N = 16,010		Difference 2012 to 2016	
	Female	Male	Female	Male	Female	Male
Center	94%	6%	94%	6%	0%	0%
Large Home-Based	94%	6%	93%	7%	-1%	1%
Small Home-Based	99%	1%	99%	1%	0%	0%

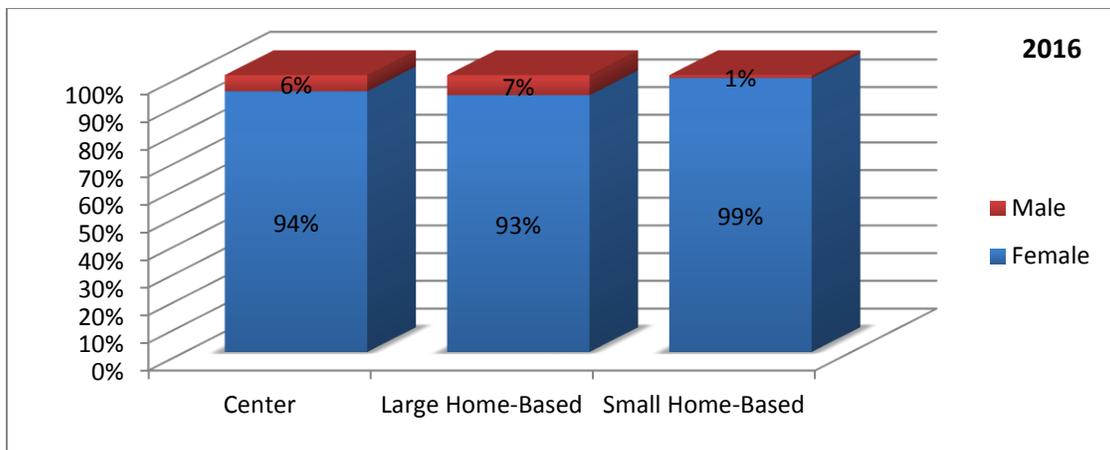


Figure 3

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 34% (7,937) of the 2016 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 2016 Workforce

The percentage of the workforce with a bachelor's degree or higher has remained relatively stable over time, however, this is a 2% increase compared to 2012. The percentage with some college or more (some college, associate's, or bachelor's) increased slightly from 69% to 72% of the workforce from 2012 to 2016. As seen in Table 8, over two-thirds of the workforce had education levels beyond a high school diploma or GED.

Table 8

Education of Workforce	2012 N = 12,968		2016 N = 15,746		Difference 2012 to 2016	
	N	%	N	%	N	%
Less than High School Diploma/GED	418	3%	448	3%	30	0%
High School Diploma or GED	3,521	27%	4,004	25%	483	-2%
Some college, certificate, or foreign degree	2,910	22%	3,743	24%	833	2%
Associate's degree	1,933	15%	2,174	14%	241	-1%
Bachelor's degree or higher	4,186	32%	5,377	34%	1,191	2%

Education Level by Type of Care

As can be seen in Table 9, in 2016 there continued to be wide differences in education levels across types of care, with 77% of center staff having more than a high school diploma or GED compared with 66% of those in large home-based and 46% of those in small home-based facilities. We observed a drop in the percentages of those with some college or an associate's degree in home-based programs, but the drop in percentage represented small numbers of workforce members. In the case of center

workforce members where the number with some college or an associate’s degree was substantially larger, we saw an increase in those with some college.

Table 9

Education by Type of Care	2012		2016		Difference 2012 to 2016	
	N	% of persons within type of care	N	% of persons within type of care	N	%
Center						
Less than High School Diploma/GED	178	2%	208	2%	30	0%
High School Diploma or GED	2,335	24%	2,753	22%	418	-2%
Some college, certificate, or foreign degree	2,018	21%	2,922	24%	904	3%
Associate’s degree	1,544	16%	1,808	15%	264	-1%
Bachelor’s degree or higher	3,581	37%	4,650	38%	1069	1%
Large Home-Based						
Less than High School Diploma/GED	44	3%	66	4%	22	1%
High School Diploma or GED	402	29%	559	31%	157	2%
Some college, certificate, or foreign degree	381	28%	430	24%	49	-4%
Associate’s degree	169	12%	212	12%	43	0%
Bachelor’s degree or higher	371	27%	541	30%	170	3%
Small Home-Based						
Less than High School Diploma/GED	196	10%	174	11%	-22	1%
High School Diploma or GED	784	40%	692	43%	-92	3%
Some college, certificate, or foreign degree	511	26%	391	24%	-120	-2%
Associate’s degree	220	11%	154	10%	-66	-1%
Bachelor’s degree or higher	234	12%	186	12%	-48	0%

Note: No data on education were available for 5,545 (31%) individuals in centers, 1,389 (43%) in large home-based care, and 1,003 (39%) in small home-based care in 2016.

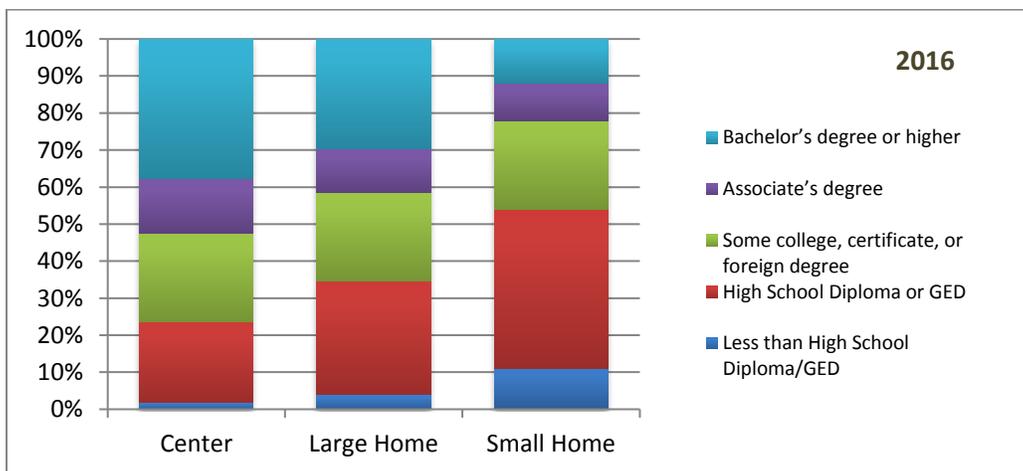


Figure 4

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 2016, the percentage of the workforce with a bachelor's or higher degree ranged from 41% of white staff working in centers to 7% of person of color providers in small home-based settings.

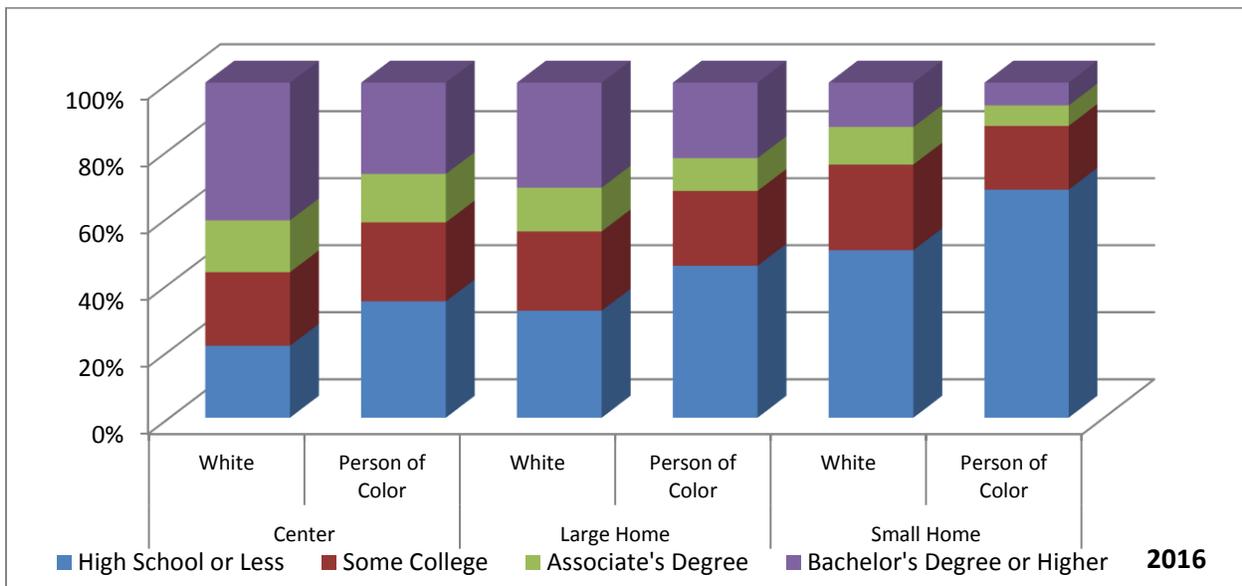


Figure 5

Education Level by Location

When examining education levels across metropolitan⁴ and non-metropolitan areas we again saw only small differences between 2012 and 2016 (see Table 10). Workforce members in metropolitan areas were more likely to have a bachelor's degree or higher but there was a slight increase in the percentage with a bachelor's degree or higher in non-metropolitan areas. Non-metropolitan individuals were slightly more likely to have some college or an associate's degree than individuals in metropolitan areas.

⁴ We use the Office of Management and Budget Core Based Statistical Area classification for counties 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.

Table 10

Education by Location	2012		2016		Difference 2012 to 2016	
	Metro (10,838)	Non-Metro (2,027)	Metro (13,101)	Non-Metro (2,645)	Metro	Non-Metro
Less than High School Diploma/GED	3%	3%	3%	2%	0%	-1%
High School Diploma or GED	26%	31%	25%	25%	-1%	-6%
Some college, certificate, or foreign degree	22%	27%	23%	29%	1%	2%
Associate's degree	14%	20%	13%	19%	-1%	-1%
Bachelor's degree or higher	35%	20%	36%	24%	1%	4%

Note: In 2012, 202 individuals could not be given a metropolitan/nonmetropolitan distinction of missing county information. In 2016, if individuals were missing county information, the county of their facility was used if known (n = 428). An additional 7,937 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. Most positions had an increase in the percentage with a bachelor's degree between 2012 and 2016.

Table 11

Percent with Bachelor's or Higher	2012		2016		Difference 2012 to 2016	
	N	% of position	N	% of position	N	%
Center						
Director	464	51%	539	59%	75	8%
Site Director / Supervisor	16	57%	142	58%	126	1%
Head Teacher	818	44%	1,209	49%	391	5%
Teacher	1,880	37%	2,267	36%	387	-1%
Aide II	122	21%	184	19%	62	-2%
Aide I	281	23%	309	21%	28	-2%
Large Home-Based						
Provider	180	29%	237	30%	57	1%
Assistant II	128	28%	230	31%	102	3%
Assistant I	63	22%	74	26%	11	4%
Small Home-Based						
Provider	234	12%	186	12%	-48	0%

Note: There were 7,937 (34%) individuals 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: Providers submitted documentation of training hours to OCCD in order to meet regulatory requirements. Hours may be underrepresented due to transitions in the data collection and how safety set training hours were entered.

Average 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 workforce members who were required to have 10 hours over two years⁵. 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 and the same was true for aides in centers and assistants in large home-based facilities. 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.

Table 12

Average Training Hours by Position	2012		2016		Difference in Hours 2012 to 2016	
	Total	Child Dev ^a	Total	Child Dev ^a	Total	Child Dev ^a
Center						
Director (N = 889) ^b	22.8	17.9	27.3	21.0	4.5	3.1
Site Director/Supervisor (N = 217)	17.2	14.7	29.2	22.5	12.0	7.8
Head Teacher (N = 2,410)	20.7	18.7	28.6	24.4	7.9	5.7
Teacher (N = 6,679)	18.8	17.4	22.2	19.5	3.3	2.1
Aide II (N = 1,254)	15.5	14.1	21.8	18.6	6.3	4.6
Aide I (N = 2,271)	14.3	12.9	15.2	13.3	0.9	0.4
Large Home-Based Staff						
Provider (N = 808)	22.5	20.2	32.2	27.2	9.7	7.0
Assistant II (N = 947)	18.3	17.0	20.9	19.0	2.6	2.1
Assistant I (N = 445)	12.3	11.9	14.4	13.7	2.1	1.8
Small Home-Based Staff						
Provider ^c (N = 1,803)	12.9	11.8	17.4	14.8	4.5	3.0

^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.

^b N = the number of individuals in each position that had training hours for 2016.

^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 2016 calendar year.

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.

Training Hours By Location & Position

As can be seen in Table 13, the number of training hours increased 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 number of training hours between 2012 and 2016 were greater in non-metropolitan than in metropolitan areas for all positions.

Table 13

Average Training Hours by Location and Position	2012		2016		Difference in Hours 2012 to 2016	
	Metro	Non-Metro	Metro	Non-Metro	Metro	Non-Metro
Center						
Director	22.2	26.1	25.4	35.0	3.2	8.9
Site Director/Supervisor	16.9	19.3	28.1	35.2	11.1	15.9
Head Teacher	20.1	24.1	27.6	33.5	7.6	9.4
Teacher	18.2	22.7	21.0	28.8	2.8	6.1
Aide II	14.5	19.3	20.4	26.4	5.9	7.1
Aide I	13.5	18.0	14.1	20.6	0.6	2.6
Large Home-Based						
Provider	22.9	20.2	32.0	33.4	9.1	13.2
Assistant II	18.2	20.2	20.8	21.7	2.6	1.5
Assistant I	12.5	12.1	14.7	12.6	2.2	0.5
Small Home-Based						
Provider ^a	12.6	14.1	16.8	19.8	4.2	5.7

^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 2016 calendar year.

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 Registry⁶, b) Education Awards (monetary award based on achieving a step on the Registry), and c) Betty Gray Early Childhood Training and Certification (BGECTC) scholarship program. Engaging in one or more of these professional development initiatives indicated an individual's engagement in professional activity.

Professional Engagement of the Workforce (continued)

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 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.

Engagement in Professional Development Initiatives

As can be seen in Table 14, workforce members were more likely to have enrolled in the Registry or received an Education Award than to have received a Betty Gray Early Childhood Training and Certification scholarship in 2016. The number of workforce members who received an Education Award increased by 13% and the number enrolled in the Registry increased by 17% from 2012 to 2016.

Table 14

Engagement in Professional Development Initiatives	2012		2016		Difference 2012 to 2016	
	N	% of workforce	N	% of workforce	N	%
Enrolled in the Registry ^a	4,601	22%	9,190	39%	4,589	17%
Received one or more Education Awards	3,838	18%	7,276	31%	3,438	13%
Received one or more BGECTC scholarships ⁷	2,044	10%	1,898	8%	-146	-2%

^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.

⁶ 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.

⁷ The BGECTC scholarship program was reorganized in 2012 to address funding decreases and to better target the funding towards providers who had higher needs for advancing their professional development. The reorganization reduced the number of awards available. Total program participation declined by 63% from the 2011-12 scholarship program year to the 2015-16 program year.

Professional Development Initiatives by Type of Care

Participation in professional development initiatives varies by type of care, see Table 15. In 2016, center staff were more likely to be enrolled in the Registry (41%) than large home-based providers (32%) and small home-based caregivers (31%). We saw the same pattern in receipt of Education Awards (32% of center staff, 26% of large home-based, and 27% of small home-based providers). We saw a different pattern in receipt of Betty Gray scholarships. Large home-based providers were the most likely to have received at least one scholarship (11%) whereas center staff and small home-based providers were less likely to do so (7% and 9% respectively). Between 2012 and 2016, there were increases in Registry enrollment and Education Awards for all types of care, whereas receipt of BGECTC scholarships stayed the same or decreased⁷.

Table 15

Professional Development Initiatives by Type of Care	2012		2016		Difference 2012 to 2016	
	N	% of persons within type of care	N	% of persons within type of care	N	%
Center						
Enrolled in the Registry ^a	3,483	23%	7,361	41%	3,878	18%
Received one or more Education Awards	2,878	19%	5,739	32%	2,861	13%
Received one or more BGECTC scholarships	1,458	10%	1,308	7%	-150	-3%
Large Home-Based						
Enrolled in the Registry ^a	535	23%	1,033	32%	498	9%
Received one or more Education Awards	452	20%	841	26%	389	6%
Received one or more BGECTC scholarships	306	13%	367	11%	61	-2%
Small Home-Based						
Enrolled in the Registry ^a	583	17%	796	31%	213	14%
Received one or more Education Awards	508	14%	696	27%	188	13%
Received one or more BGECTC scholarships	280	8%	223	9%	-57	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 workforce (39%) participated in one or more professional development supports in 2016, with 7% participating in all three. Only small percentages of the workforce participated in only the Registry, only the BGECTC scholarship program, or a combination of those two programs (8%, 1%, and 1% respectively). Over half of the 39% who participated in at least one of the professional development initiatives combined enrollment of the Registry with receipt of an Education Award (24%).

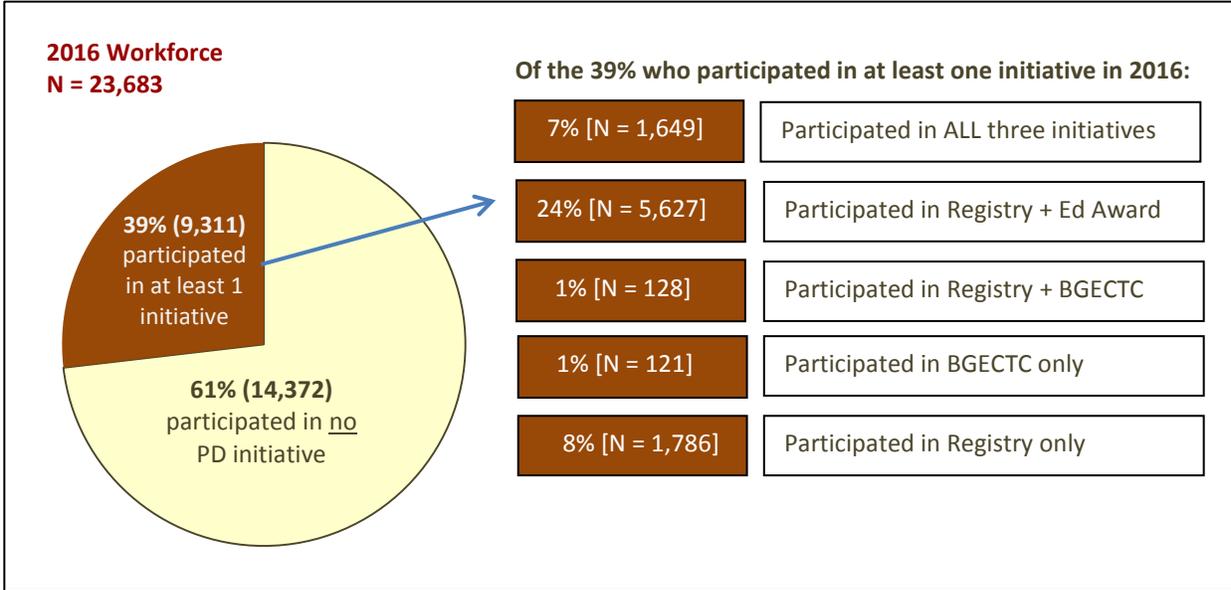


Figure 6

Table 16

Combinations of Professional Development Initiatives	2012 N = 20,873		2016 N = 23,683		Difference 2012 to 2016	
	N	%	N	%	N	%
None	15,826	76%	14,372	61%	-1,454	-15%
All Three	1,419	7%	1,649	7%	230	0%
Betty Gray & Registry Step	194	1%	128	1%	-66	0%
Education Award & Registry Step	2,403	12%	5,627	24%	3,224	12%
Betty Gray only	430	2%	121	1%	-309	-1%
Registry Step Only	585	3%	1,786	8%	1,201	5%

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

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 a 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, 39% of the entire workforce (9,190 individuals) were enrolled in the Registry in 2016 but as can be seen in Table 17, participation varied by type of care. Forty-one percent of center staff participated in the Registry, compared to 32% of large home-based staff and 31% of small home-based providers. Although the percentage only shows a 17% increase in overall Registry participation, it is noteworthy that the actual number of workforce members enrolled in the Registry doubled (4,601 to 9,190) in the five years.

Table 17

Registry Participation by Type of Care ^a	2012		2016		Difference 2012 to 2016	
	N	% of persons within type of care	N	% of persons within type of care	N	%
Center	3,483	23%	7,361	41%	3,878	18%
Large Home-Based	535	23%	1,033	32%	498	9%
Small Home-Based	583	17%	796	31%	213	14%
Total	4,601	22%	9,190	39%	4,589	17%

^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 2016 data showed that although 41% of the center-based workforce participated in the Registry, participation varied by position. Sixty-seven percent of center directors, 69% of head teachers, and 46% of teachers had enrolled in the Registry whereas only a combined 15% of aides in centers did. As seen in Table 18, 69% of large home-based providers had enrolled in the Registry whereas only a combined 18% of their assistants did. Only 31% of small home-based providers had enrolled in the Registry. For all but one position, the percentage enrolled in the Registry was greater in 2016 than in 2012. Large home-based assistant IIs participation in the Registry dropped from 8% in 2012 to 7% in 2016.

Table 18

Registry Participation by Position	2012		2016		Difference 2012 to 2016	
	N	% of persons in that position	N	% of persons in that position	N	%
Center						
Director	446	38%	677	67%	231	29%
Site Director/Supervisor	7	17%	172	66%	165	49%
Head Teacher	888	39%	1,880	69%	992	30%
Teacher	1,875	24%	3,786	46%	1,911	22%
Aide II	92	9%	535	33%	443	24%
Aide I	175	6%	311	8%	136	2%

Continued on next page

Table 18 (continued)

Large Home-Based						
Provider	364	49%	607	69%	243	20%
Assistant II	106	14%	349	28%	243	14%
Assistant I	65	8%	77	7%	12	-1%
Small Home-Based						
Provider	583	17%	796	31%	213	14%
Total	4,601	22%	9,190	39%	4,589	17%

Note: Percentages are rounded.

Registry by Location

In both 2012 and 2016, workforce members in non-metropolitan areas were more likely to have a step on the Oregon Registry than those in metropolitan areas. Thirty-seven percent of people in metropolitan areas were enrolled in the Registry versus 49% of people in non-metropolitan areas.

Table 19

Registry Participation by Location	2012		2016		Difference 2012 to 2016	
	N	%	N	%	N	%
Metropolitan	3,707	22%	7,322	37%	3,615	15%
Non-Metropolitan	884	26%	1,868	49%	984	23%

Notes: Metropolitan and non-metropolitan were determined using Office of Management and Budget Core Based Statistical Area classification for counties, see note for Table 10 for more information.

Use of College Courses to Fulfill Training and Registry Requirements

Importance of this information: 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).

How measured: Documentation of college credit and training hours were submitted to OCCD in order to meet regulatory requirements. 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.

Training Hours through Credit Courses

The majority of workforce members continued to use community-based training rather than college courses for their training hours (see Table 20). Only 7% of the workforce had college credit hours in 2016 (1,169 of 17,723 with training hours). For some positions there was a slight increase in the use of college credits to meet training requirements for workforce members between 2012 and 2016. The following table shows the percentage of staff that received some of their annual training hours through credit courses for 2012 and 2016.

Table 20

Training Hours through Credit Courses	2012		2016		Difference 2012 to 2016	
	N	% of position	N	% of position	N	%
Center						
Director	25	3%	53	6%	28	3%
Site Director/Supervisor	3	9%	8	4%	5	-5%
Head Teacher	92	5%	142	6%	50	1%
Teacher	280	6%	545	8%	265	3%
Aide II	42	6%	98	8%	56	2%
Aide I	73	6%	153	7%	80	1%
Large Home-Based						
Provider	47	8%	60	7%	13	-1%
Assistant II	27	5%	39	4%	12	-1%
Assistant I	16	5%	18	4%	2	-1%
Small Home-Based						
Provider	20	1%	53	3%	33	2%

Note: College credit were taken in a calendar year, 2012 or 2016.

Registry and College Credit Hours

In 2012 and 2016, just over half of workforce members who were enrolled in the Registry had college credit hours (see Table 21).

Table 21

Registry and College Credit Hours	2012 N = 4,601		2016 N = 9,190		Difference 2012 to 2016	
	N	%	N	%	N	%
Percent of Registry enrollees with college credit hours	2,514	55%	5,429	59%	2,915	4%

Note: College credits could have been taken prior to the time of the study (2012 or 2106).

Predictors of Participation in Professional Development Initiatives

What workforce member characteristics predict that a person participates in one or more of the following: Registry, Betty Gray Early Childhood Training and Certification 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, BGECTC, 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 22 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 2016 if the workforce member was an aide in a center the probability of engaging in an initiative was 8% 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 22

Variable description	2012	2016
	N = 10,898	N = 14,938
Age	0.003**	0.005**
Aide at a center	-0.158**	-0.079**
Director at a center	0.096**	0.138**
Teacher at a center	0.052**	0.117**
Assistant at large home-based care	-0.065**	-0.003
Provider at large home-based care	0.196**	0.202**
Non-Metro [1=Non-Metro, 0=Metro]	0.071**	0.115**
Training 1-8 hours	-0.017	0.038**
Training 9-15 hours	0.007	0.051**
Training 16-25 hours	0.043**	0.077**
Training >25 hours	0.175**	0.243**
Gender [1=Female, 0=Male]	0.117**	0.088**
Race/Ethnicity [1=Person of Color, 0=White]	-0.032**	-0.017
Primary language [1=Non-English, 0=English]	-0.008	-0.078**

Continued on next page

Table 22 (continued)

Variable description	2012 N = 10,898	2016 N = 14,938
Some college, Certificate, foreign degree	0.155**	0.263**
Associate's Degree	0.242**	0.247**
Bachelor's Degree	0.174**	0.252**

* 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 23,683 (2016) total sample 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 2016.

Age

Older members of the workforce were significantly 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 2016.

Position

All positions were compared to a small home-based provider. In 2012, aide at a center and assistant at large home-based care facility were significantly less likely to participate in any initiative, while center directors, center teachers, and large home-based care providers had a greater probability of participating in at least one initiative. In 2016, being an aide at a center made a workforce member significantly less likely than a small home-based provider to participate in any initiative. Assistants in large home-based facilities were no longer significantly less likely to participate in any initiative, although center directors, teachers, and providers in large home-based care were more likely to participate.

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 2016.

Training Hours

Those with training hours were compared to those with no training hours. In 2012, 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. In 2016, those with any training hours earned in that year were significantly more likely to have participated in an initiative than were those with no training hours.

Gender

Being female was significantly associated with participating in an initiative in both 2012 and 2016. If the workforce member was female they were about 12% more likely to participate in one or more initiatives in 2012 and about 9% more likely to do so in 2016.

Race/Ethnicity

Race/ethnicity was significantly and negatively associated with engagement in an initiative in 2012, but not in 2016. If the workforce member was a person of color, the probability of engaging in an initiative was not significant in 2016, 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 2016, but not 2012. Workforce members whose primary language was not English were 8% less likely to participate in professional development opportunities than their English-speaking counterparts in 2016.

Education

Education comparisons were made to those with a high school diploma or less. In both 2012 and 2016, 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).

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. Thus, data were available at the facility-level rather than that of the individual teacher level.

Between 2012 and 2016, 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 \$9.25-9.75 in 2016⁸.

Table 23

Teacher/Head Teacher Wages	2012		2016		Difference 2012 to 2016	
	Low	High	Low	High	Low	High
Median	9.50	13.61	11.00	15.61	1.50	2.00
Mean	10.33	14.96	11.56	17.10	1.23	2.14
Range (Lowest Low - Highest High)	8.00	45.00	8.09	50.00	---	---
Number of Centers Reporting	805	814	945	941	140	127
Percent of Centers Reporting	83%	84%	82%	82%	-1%	-3%

Based on the median lowest and highest wage, teachers in Oregon’s early learning system make an average of \$22,800 to \$32,400 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 & Bachtel, 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. These estimates were then divided into three equal parts for both variables. 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 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.

⁸ In 2016, Oregon legislature established a series of annual minimum wage rate increases beginning July 1, 2016, as well as set separate rates for employers located in the Portland metropolitan area and within certain “nonurban” counties. From January-June 2016, minimum wage was \$9.25 statewide. Starting July 1, the rates were \$9.75 for the Portland metro area, \$9.50 for nonurban counties (Baker, Coos, Crook, Curry, Douglas, Gilliam, Grant, Harney, Jefferson, Klamath, Lake, Malheur, Morrow, Sherman, Union, Wallowa, Wheeler), and \$9.75 for all other areas of the state.

Further, correlation results confirmed this association as median education was significantly correlated with the highest center wage ($r(856) = .248, p\text{-value} = .001$). This correlation would likely be stronger if data were available at the individual-level.

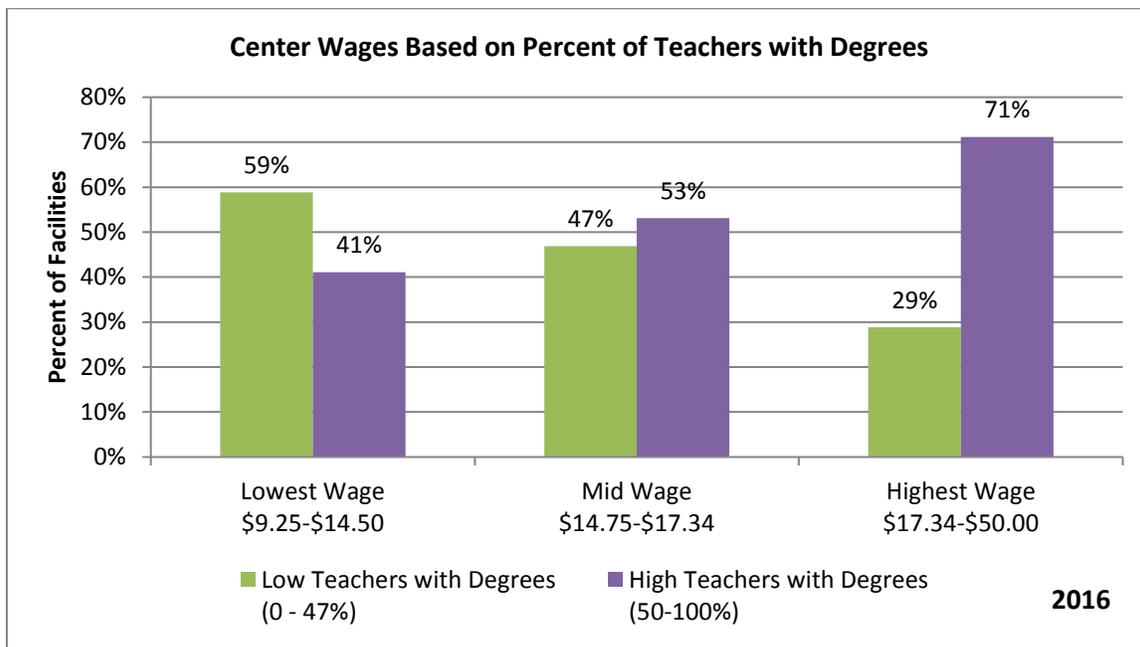


Figure 7

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 2016 data showed improved provision of benefits to center staff. In 2016, 72% 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 24

Benefit Counts for Reporting Facilities	2012		2016		Difference 2012 to 2016	
	N	% of facilities	N	% of facilities	N	%
0 benefits	146	17%	72	7%	-74	-10%
1 benefits	269	32%	83	8%	-186	-24%
2 benefits	220	26%	127	13%	-93	-13%
3 benefits	144	17%	162	16%	18	-1%
4 benefits	50	5%	261	26%	211	21%
5 benefits	23	3%	223	22%	200	19%
6 benefits			64	6%	64	6%

*Benefit information reported for 852 (88%) of centers in 2012 and 992 (86%) of centers in 2016.

As seen in Table 25, there was substantial improvement in provision of most benefits, especially health insurance, in 2016 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 25

Type of Benefits for Reporting Facilities	2012 N = 852		2016 N = 992		Difference 2012 to 2016	
	N	% of facilities	N	% of facilities	N	%
Health Insurance	533	63%	638	64%	105	2%
Paid Time Off	351	41%	739	75%	388	34%
Retirement Options	197	23%	491	50%	294	27%
Training/Education	221	26%	701	71%	480	45%
Free/Reduced Child Care	154	18%	539	54%	385	36%
Membership Professional Org*	0	0%	258	26%	258	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 2016, sub-categories were collected under health insurance including medical, dental, vision, and supplemental 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 26 displays the number of overall facilities that reported offering each of the health sub-categories.

Table 26

Health Sub-Categories	N	% of reporting facilities
Medical	597	60%
Dental	536	54%
Vision	448	45%
Supplemental ⁹	120	12%

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

Medical insurance was offered by 94% of those offering health benefits. Of those offering health benefits in 2016, 13% offered all four categories, 54% offered three categories, 21% offered two category, and 13% offered one category (mostly medical).

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 2016. As seen in Table 27, about half of centers (46%) retained 75% or more of their head teachers and teachers. Low levels of stability (less than 25% of teachers retained) was an issue for 9% of facilities in 2016.

⁹ A supplemental health 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 for unexpected injuries or illnesses.

Table 27

Center Retention: Percent of Centers Birth through School Age at Each Level of Teacher Retention

Percent of Teachers Retained at Centers	2012 N = 850 facilities		2016 N = 1,006 facilities		Difference 2012 to 2016	
	N	% of facilities	N	% of facilities	N	% of facilities
0% of teachers over a year	71	8%	67	6%	-4	-2%
1% – <25% of teachers over a year	17	2%	31	3%	14	1%
25% – <50% of teachers over a year	126	15%	174	16%	48	2%
50% – <75% of teachers over a year	187	22%	303	28%	116	6%
75% – 99% of teachers over a year	141	17%	208	20%	67	3%
100% of teachers over a year	308	36%	283	27%	-25	-10%

*In 2016, 88 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 looked at their level of retention separately. Out of all 1,006 centers, 166 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 2016. In comparison, 75% of teachers who were not in school age only programs were at their centers for more than one year. Almost half (57%) of school age only facilities had 50% or less of their teachers at the center for more than one year, compared to 20% 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 2016. Large home-based providers averaged 5.0 years of providing care and small home-based providers averaged 8.0 years of providing care in 2016. 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.

Table 28

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

	2012	2016	Difference 2012 to 2016
Large Home-Based Providers	N = 497	N = 614	
Median Number of Years	5.0	5.0	0.00
Range of Years	1 - 20	1 - 30	---
Small Home-Based Providers	N = 1,084*	N = 2,115	
Median Number of Years	8.0	8.0	0.00
Range of Years	0 - 46	0 - 36	---

*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 2016. 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? How did the 2016 workforce differ from the 2015 workforce?

Twenty-nine percent of the 2015 workforce exited prior to 2016; that is they were not employed in a regulated facility in 2016 although they had been reported as employed in 2015¹⁰. This reflects an increase in the number of individuals leaving the workforce in a given year. Sixteen 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.

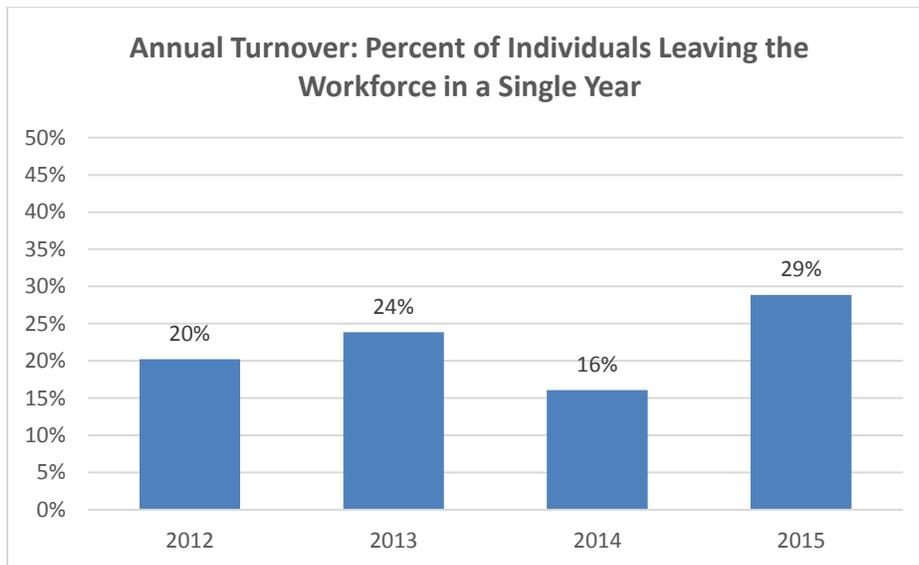


Figure 8

Of the 23,683 individuals in the 2016 workforce, 17,613 (74%) had been in the 2015 workforce, 5,555 (23%) had entered in 2016, and 515 (2%) had returned after a gap of a year or more.

¹⁰ The year a person exits the workforce is based on their employment end date recorded in ORO. 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.

Stability of Workforce Members

How measured: We use the longitudinal database of all individuals who had been part of the workforce from 2012 through 2016. 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 2016, 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 five years?

Of the 20,873 individuals in the 2012 workforce, 7,563 individuals (36%) remained in the workforce for all years through 2016 (“Stayers”). In addition, over half of the 2012 workforce (12,300) had left before 2016 (“Leavers”). An additional 1,010 individuals were in and out of the workforce, meaning they were in the 2012 workforce and 2016 workforce, but had not been in the workforce for all years in between.

Table 29

2012 Cohort	N	Percent
Leavers	12,300	59%
In and Out	1,010	5%
Stayers	7,563	36%
Total	20,873	100%

Of individuals in the 2012 workforce, 36% had been in the workforce all five years, 14% for four years, 13% for three years, 19% for two years, and 18% for one year, see Figure 9. It is also important to note that a significant percentage of individuals who were marked as in the workforce for five years were likely in the workforce for many years prior to 2012 when workforce data were first collected.

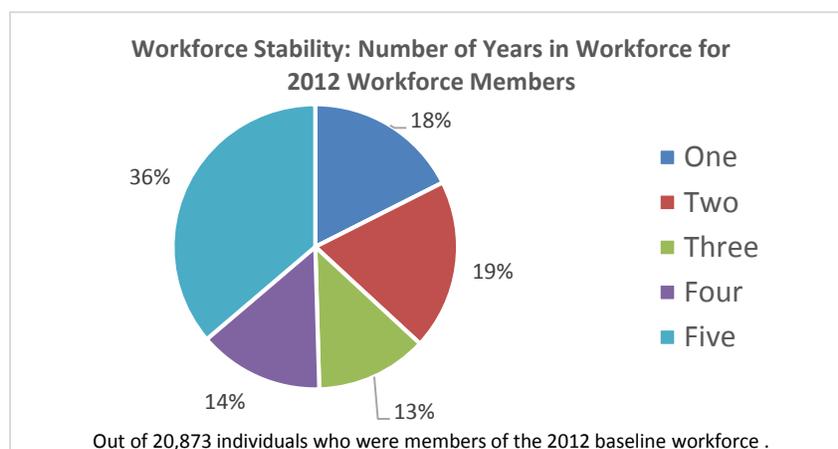


Figure 9

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 45% of head teachers and 44% of directors in the workforce for all five years. This was followed by site directors (39%), teachers (35%), and then aide IIs (25%).

Home-based providers were among the most likely to remain in the workforce for all five years, with 65% of large home-based providers and 47% of small home-based providers remaining in the workforce for all five years. The least likely positions to stay in the workforce were center aide I and large home-based assistant I positions with only 18% and 16% of the 2012 cohort staying in the workforce for all five years.

Table 30

2012 Position*	"Leavers"		"In and Out"		"Stayers"		Total	
	N	%	N	%	N	%	N	%
Center								
Director	606	52%	50	4%	520	44%	1,176	100%
Site Director / Supervisor	25	61%			16	39%	41	100%
Head Teacher	1,156	51%	102	4%	1,025	45%	2,283	100%
Teacher	4,519	59%	432	6%	2,721	35%	7,672	100%
Aide II	739	69%	60	6%	272	25%	1,071	100%
Aide I	2,172	77%	158	6%	496	18%	2,826	100%
Large Home-Based								
Provider	244	33%	20	3%	481	65%	745	100%
Assistant II	458	62%	39	5%	238	32%	735	100%
Assistant I	627	77%	58	7%	130	16%	815	100%
Small Home-Based								
Provider	1,754	50%	91	3%	1,664	47%	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 2016 was 45.15 years, compared to 39.93 for "in and out" and 37.85 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 10, engagement in professional initiatives varied by how stable a person was in the workforce. Those who remained in the workforce ("stayers") had the highest percentage of participation in professional initiatives (64% participating in at least one initiative), compared to those who were in and out (52%) or had left the workforce (23%).

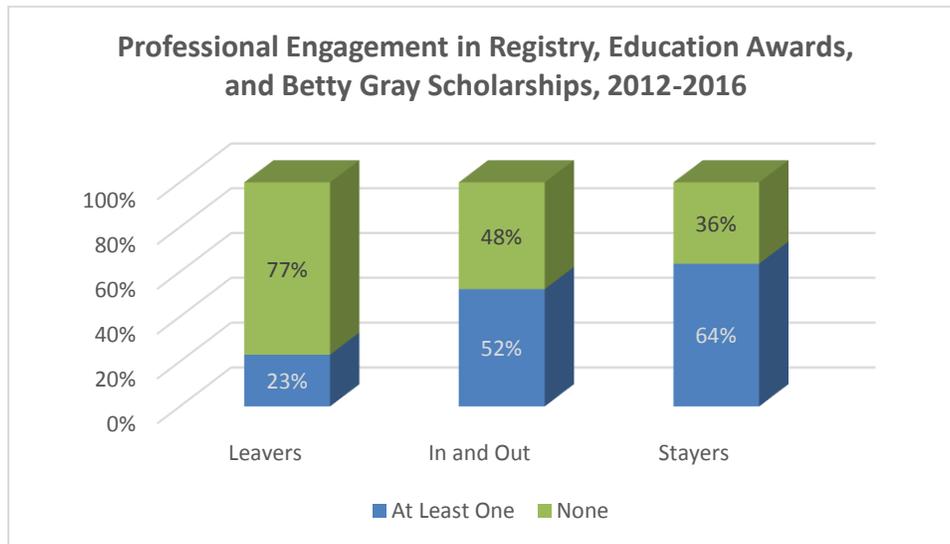


Figure 10

Looking at each type of professional engagement separately, those who engaged in professional development were more likely to have remained in the workforce. Of those enrolled in the Registry, 60% were “stayers,” 7% were “in and out” of the workforce, and 33% were “leavers.” A similar pattern is seen for those receiving Education Awards and Betty Gray Early Childhood Training and Certification scholarships.

Table 31

Professional Engagement, 2012-2016	“Leavers” N = 12,300		“In and Out” N = 515		“Stayers” N = 7,563		Total	
	N	%	N	%	N	%	N	%
Enrolled in the Registry ^a	2,627	33%	517	7%	4,716	60%	7,860	100%
Received one or more Education Awards	2,125	32%	414	6%	4,147	62%	6,686	100%
Received one or more BGECTC scholarships	844	35%	126	5%	1,433	60%	2,403	100%

^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 wages in centers were related we relied on facility-level data on highest wage paid and the percent of teachers who were at the center for more than one year at the time of licensing renewal. These estimates were then divided into three equal parts for both variables. The table below shows how retention scores and wages were related.

To look at the association between teacher retention 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 retention scores we created three equal groups: lowest, mid, and highest. We then looked to see if there was an association – *Did centers that had higher levels of retention also pay higher wages?*

As can be seen in Figure 11 below, we found an association between teacher wages and teacher retention. In centers with the lowest level of retention, the largest percentage (40%) also paid the lowest wages. In centers in the group with the highest level of retention, the largest percentage (39%) also paid the highest wage. Interestingly, the centers in the mid group in terms of retention were fairly spread out in terms of wages paid. Further, correlation results confirmed this association as teacher retention level was significantly correlated with the highest center wage ($r(867) = .099$, $p\text{-value} = .01$).

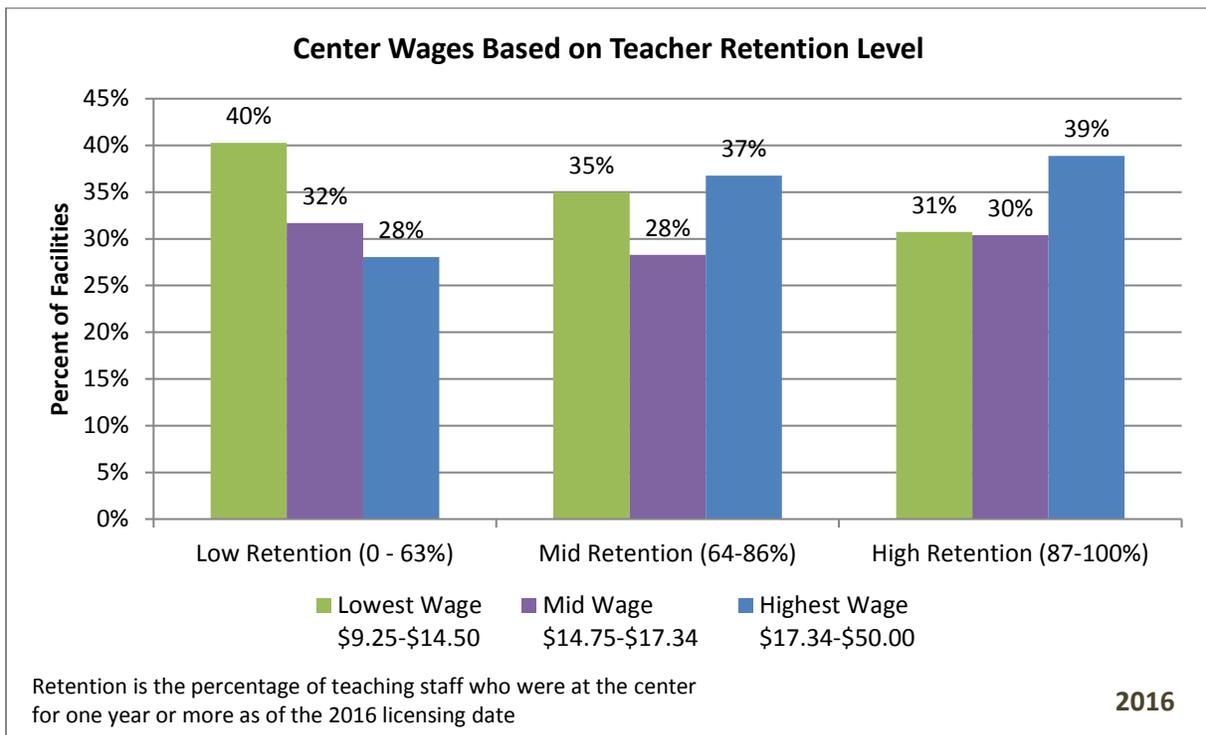


Figure 11

Association Between Center Retention and Benefits Offered, by Facility

How measured: To answer the question of whether retention levels and benefits in centers were related we relied on facility-level data on the number and type of benefits offered and the percent of teachers who were at the center for more than one year at the time of licensing renewal. Retention estimates were divided into three equal parts (low, mid, high), whereas benefits were explored using the number of benefits offered and whether medical benefits were offered.

To look at the association between teacher retention and benefits we viewed both retention and benefits from a facility or center level. For each center, we had the number of benefits offered and a measure of the percent of teachers who had been at the center for a year or more. Using retention scores we created three equal groups: lowest, mid, and highest. We then looked to see if there was an association – *Did centers that offer more benefits have higher levels of retention?*

As can be seen in Figure 12 below, we did not find association between benefits and teacher retention. The number of benefits offered does not appear to be related to the level of retention of teachers. Further, correlation results confirmed this association as the teacher retention level was not correlated with the number benefits offered ($r(928) = .042, p\text{-value} = .20$).

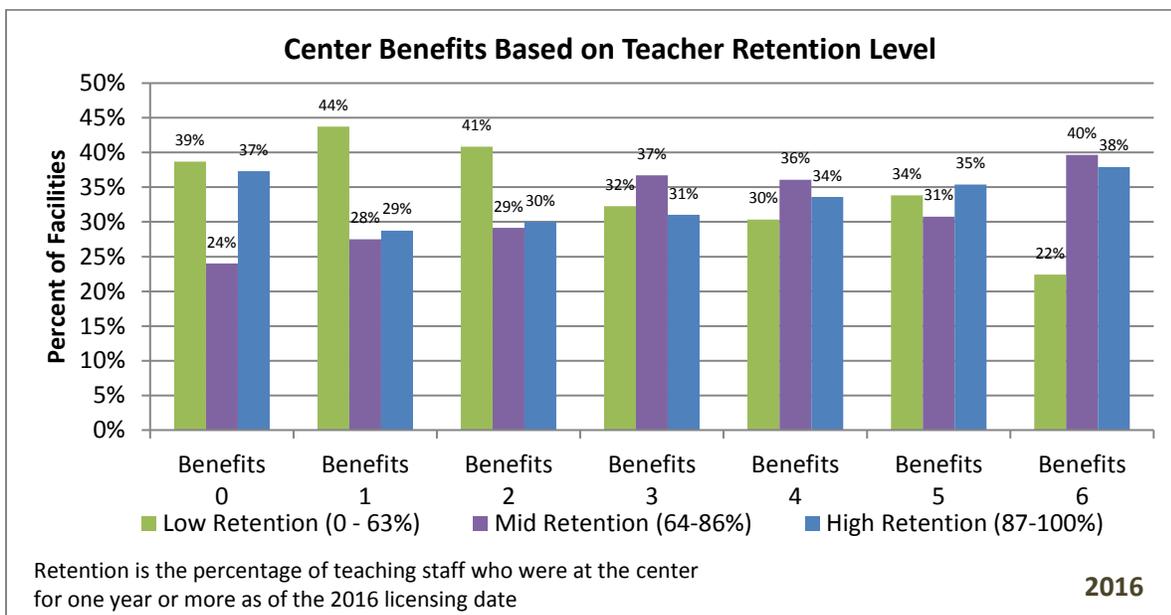


Figure 12

To explore this further, we looked at whether the level of retention was related to a center offering health/medical benefits (including medical, dental, vision, and supplemental). Using the three retention groups, we sought to answer the question – *Were centers that had higher levels of retention more likely to offer health benefits?*

As can be seen in Figure 13 below, we did not find an association between health benefits and teacher retention. The level of retention of teachers does not appear to be related to whether health insurance is offered by the center. Further, correlation results confirmed this association as the teacher retention level was not correlated with offering health benefits ($r(916) = .032, p\text{-value} = .34$).

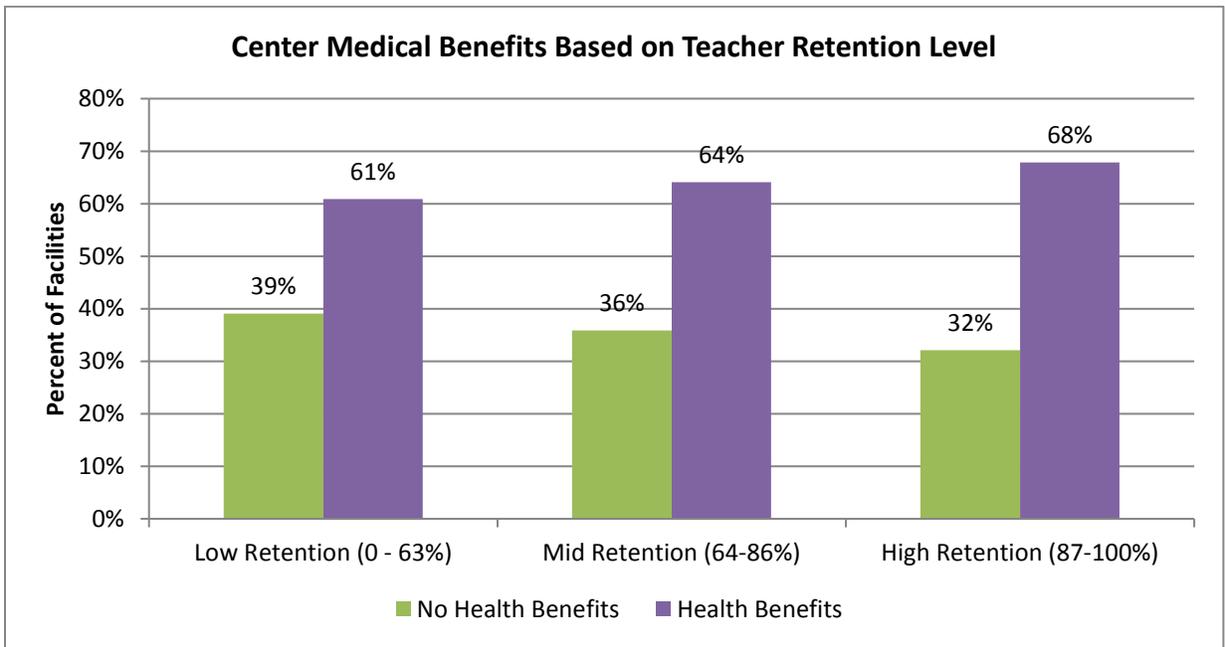


Figure 13

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 71% of the 2016 workforce (all types of care and all positions who work with children included) had worked in the previous year—a 71% 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). Using longitudinal data, we found that 36% of the 2012 cohort had been in the workforce for all five 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.

When viewing retention from the facility level, we found an interesting relationship between retention and wages paid. Centers that had teacher retention rates below 63% were more likely to pay the lowest

wage, whereas centers that had retention rates greater than 87% were more likely to pay the highest wages. With both early learning centers and K-12 schools, low salaries were associated with low rates of retention. When using their reported highest wage, almost half (47%) 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, 95% of early learning centers had a base salary under \$30,000.

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 fifth 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 63% 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. Compensation provided an example that was related to the workforce but measured at the facility level. 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 2016 workforce and compares it with the 2012 workforce. Having a measure of turnover provides critical information for designing the training system. Comparing the 2015 and 2016 workforce, 29% of the 2015 workforce exited; that is they were not employed in a regulated facility in 2016, although they had been in 2015. Twenty-three percent of the 2016 workforce entered, that is they were employed in 2016 but had not worked in a regulated facility in 2015. The 29% 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 2016 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 3,878 more workforce members having steps on the Oregon Registry in 2016 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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