

**Massachusetts Capacity Study
Research Brief:
Characteristics of the Current
Early Education and Care Workforce
Serving 3-5 Year-olds**



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INTRODUCTION

In 2004, the State Legislature passed, and Governor Romney signed, a law creating a new Department of Early Education and Care to administer the state's early education and care system, laying the groundwork for universal access to voluntary, high-quality programs for preschool-aged children in the Commonwealth. A Board of Early Education and Care was established to oversee the new agency, and charged with:

- overseeing and supervising the administration of a high-quality system of public and private early education and care;
- overseeing the development and implementation of a program of voluntary, universally accessible high-quality early childhood education for all preschool-aged children in the commonwealth;
- overseeing the development and management of a kindergarten readiness assessment system and a comprehensive evaluation of early education and care programs; and
- overseeing the development and implementation of a workforce development system designed to support the education, training and compensation of the early education and care workforce, including all center, family child care, infant, toddler, preschool and school-age providers.

In order to achieve the goals of Universal preschool set out by this legislation, Massachusetts will need to expand and maintain a skilled and educated early education and care workforce.

This research brief outlines the characteristics of the current workforce serving children ages 3-5 years, and begins the discussion of the needs of the field to implement universal preschool in Massachusetts. Specifically, this brief addresses two questions about the workforce:

1. What are the characteristics, including educational qualifications, compensation, benefits, and turnover or retention of the current early care and education (ECE)¹ workforce serving preschool² children in Massachusetts?
2. How are these characteristics distributed across the various licensed preschool ECE sectors (centers, public school preschools, family child care, Head Start) and geographic regions in the State?³

MASSACHUSETTS CURRENT SERVICE DELIVERY SYSTEM

Massachusetts currently provides early education and care for children birth through 14 years (16 years with special needs) through a mixed delivery system. This delivery system includes

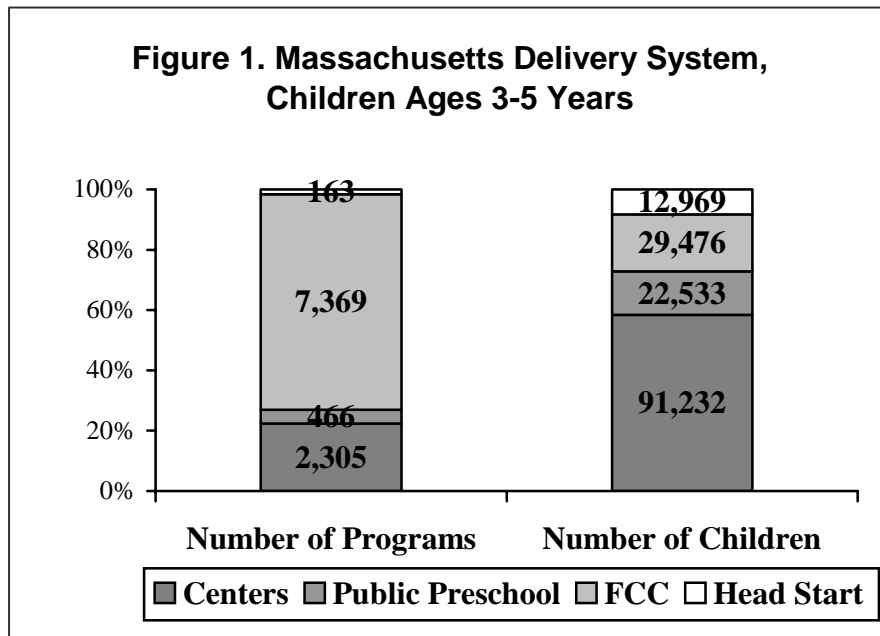
¹ We use ECE (early childhood education, or early care and education) interchangeably with EEC (early education and care). While the terms have different histories and different original meanings, they are now used interchangeably in the field to refer to early education and care programs.

² In this research brief, we use the term "preschool" to refer to children ages 3-5 years old, or programs serving those children. In a future research brief we will address the workforce in programs serving infants and toddlers.

³ While the EEC workforce also encompasses those who work in Resource and Referral agencies, Early Intervention, Home Visiting, and other roles, this research brief is limited to those who are currently providers, assistant teachers or teachers in centers, public school preschool classrooms, Head Start programs and family child care homes.

centers, family child care homes, school-age programs, and public school preschool programs, Early Head Start and Head Start programs, and early intervention programs.

The majority of 3-5 year-old children are served in centers (see Figure 1). In 2004, centers had the capacity to serve 91,232 children ages 3-5. In addition, there were 7,369 family child care homes in 2004, with an estimated capacity to serve 29,476 children ages 3-5. In 2003-2004, Head Start, a federally-funded and locally-administered program, provided preschool education and comprehensive family services for 12,969 children in 163 programs. Finally, in 2004, there were 22,533 children ages 3-5 enrolled in preschool classrooms in 466 different public schools in 265 school districts (DOE 2003-2004 Enrollment by Grade Report).



Source: See Table A1 in Appendix A for data sources.

BACKGROUND

The Commonwealth of Massachusetts and its early education and care community has been struggling with issues related to workforce education, compensation, and employment in various ways for more than a decade, and those issues have become more urgent as public funding for early education and care services has expanded.

In the relatively strong economic era of the 1990’s, Massachusetts, like other states, primarily focused on issues related to recruitment and retention of the ECE workforce. In a time where high quality and well-educated workers were in demand in many industries, early education and care faced tough competition – a challenge compounded by relatively low wages and benefits available in the field. Positions remained open for weeks and even months at a time, and turnover among early childhood teachers nationally and in Massachusetts hovered around the rate of 30% annually. Policy solutions were aimed at raising salaries and benefits, and models like North Carolina’s TEACH and WAGE\$ were adopted in several states. In Massachusetts, state agencies attempted to improve staff recruitment, turnover and qualifications through several short term initiatives:

- In FY 2001 the Office of Child Care Services (OCCS) created a tiered reimbursement rate system for subsidized care, with a portion of the related rate increase tied to early childhood programs having professional development plans in place for their staff; and
- The Department of Education sponsored Advancing the Field, which made higher education more accessible to the early education and care workforce, while providing comprehensive career and education counseling and support.

As the economy declined in recent years, and as more potential employees became available, recruitment and retention measures (including compensation initiatives) took a back seat to workforce policy aimed at improving the quality of teaching in the classroom. Nationally and locally, the public discussion surrounding early education and care began looking more closely at emerging research around the academic and social benefits of high quality early education and care, and the related indicators of high quality programs. As a result, policy at the federal and state level has shifted to focus more intensely on raising the education levels of the early childhood workforce through higher standards and stronger licensing regulations. In 2000, the National Research Council released *Eager to Learn*, a report on preschool education recommending that every preschool classroom have a teacher with a Bachelor's degree. That recommendation, and others like it, reinforced and drove both federal and state policy. For example:

- Federal Head Start regulations required that 50% of teachers in Head Start programs hold Bachelor's Degrees by 2003, although proposals for Head Start reauthorization in 2004 extended that timeline to 2010;
- The Massachusetts Department of Education's Early Childhood Program Standards for Three and Four Year olds require that within seven years of implementation all staff hired into teacher positions hold an Associate's degree, and that within 14 years all teacher's hired hold Bachelor's Degrees; and
- Ad hoc groups studying state early education and care policy exhibited a new interest in higher education and more demanding teacher qualifications.

In 2001, the Governor's Commission on School Readiness released a report that listed among its Guiding Principles the following: "Programs have sufficient numbers of personnel who are well trained, well compensated (including benefits); having the personal qualities necessary to relate positively to young children, and who find their jobs fulfilling and enjoyable."⁴ In keeping with this principle, the Commission recommended a combination of strategies directed at both recruitment and retention, and at raising the quality of the services provided to young children. The Commission's Report reflected an emerging consensus in Massachusetts that recruitment and retention of the early education and care (EEC) workforce (and related attention to compensation and benefits) are linked inexorably with the state's capacity to provide high quality programs for young children.

With the creation of the Department of Early Education and Care, Massachusetts has the opportunity to "build upon what already has been accomplished in Massachusetts and to continue to move the Commonwealth forward in providing quality early education and care."⁵

⁴ Cited in *The Report of the Early Education and Care Advisory Committee*, page 13.

⁵ *The Report of the Early Education and Care Advisory Committee*, page 8.

As the next step in this process, Massachusetts has made a commitment to universal access to high-quality preschool. The work-to-date toward this goal has continued to recognize that recruiting and retaining a qualified workforce is essential to providing high quality programs. *The Report of the Early Education and Care Advisory Committee* (2004, p. 76) concluded with the following statement:

The General Court and the Governor have an opportunity to lay the foundation for a universally accessible, high-quality preschool program that will prepare children for a successful future. Such a goal goes hand-in-hand with the creation of an early education and care system that is effective, efficient and developed with the needs of children central to its mission.

AVAILABLE DATA ON MASSACHUSETTS WORKFORCE

Massachusetts has a wide variety of data collection activities in place that provide information about the current early education and care workforce. Below is an inventory of the resources consulted in developing this brief:

- The Massachusetts Cost Quality Studies.

The Cost and Quality of Full Day, Year-round Early Care and Education in Massachusetts: Preschool Classrooms. (Marshall et al, 2001), referred to as the “Cost Quality (CQ) Center Study.”

Early Care and Education in Massachusetts Public School Preschool Classrooms. (Marshall et al, 2002), referred to as the “Cost Quality (CQ) Public Preschool Study.”

Family Child Care Today: A Report of the Findings of the Massachusetts Cost/Quality Study: Family Child Care Homes. (Marshall et al, 2003). Referred to as the “Cost Quality (CQ) Family Child Care (FCC) Study.”

- Massachusetts Department of Education Community Partnerships for Children (CPC) Community Profile Surveys of Center/Head Start programs, Public Preschool, and Family Child Care Homes.

We consulted preliminary data provided to us by the Department, based on merged data for 2000-2003, referred to as “Community Profiles merged data” in this brief. We also consulted Community Profile reports for individual years as appropriate; these are referred to as “Community Profile Survey for [specific] Program Year.”

- *The Massachusetts Early Care and Education Staff Recruitment and Retention Research and Recommendations*, a report prepared by Mills & Pardee, Inc., for the Recruitment and Retention Task Force of the Massachusetts Office of Child Care Services. (2001). Referred to as the “Recruitment and Retention Study.”
- *Massachusetts Child Care Center & School Age Program Salary and Benefits Report*, (2000). Massachusetts Child Care Resource and Referral Network. Conducted for the Massachusetts Office of Child Care Services. Referred to as the “Salary and Benefits Report.”

- Preliminary data on family child care providers, collected and analyzed by the Massachusetts Child Care Resource and Referral Network, 2004. Referred to as the “CCRR Network FCC data.”
- Head Start Program Information Reporting (PIR) system, which contains data on individuals employed in Head Start programs during the 2002-03 Program Year.
- Other data sources, such as U.S. Census data, are described in the research brief as appropriate.

FINDINGS

Education

We know that early education and care programs are important preparation for young children, and that well-trained, qualified teachers and providers are necessary for programs to promote children’s development. In an extensive review of the state-of-the-field, the National Research Council (1998, pg 316) found that “both formal education levels and recent, specialized training in child development have been found quite consistently to be associated with high-quality interactions and children’s development in center-based, family day care and even in in-home sitter arrangements.”

“Quality of care ultimately boils down to the quality of the relationship between the...provider or teacher and the child. A beautiful space and an elaborate curriculum – like a beautiful home – can be impressive, but without skilled and stable...providers, they will not promote positive development.”
– *From Neurons to Neighborhoods*, National Research Council (1998)

In a series of studies of Massachusetts’ early education and care programs in centers, public schools and family child care homes, teacher and provider education was found to be a strong and consistent predictor of the quality of the program.⁶ Center-based preschool classrooms with smaller ratios of children-to-teachers and in which teachers had more formal education provided higher quality early education and care (Marshall, et al, 2001). In public school preschool classrooms, where all teachers have at least a bachelor’s degree, additional training in early childhood education was linked to a more stimulating learning environment; smaller ratios and smaller groups of children were also important to overall quality (Marshall, et al, 2002). In family child care homes, with smaller group sizes required by regulations, providers’ formal education was the strongest predictor of the quality of the program (Marshall, et al, 2003); the more years of formal education that a provider had completed, the higher the quality scores she received. In addition, holding constant the number of years of formal education, providers who held a CDA credential offered significantly higher quality programs than did providers who did not hold a CDA credential, but had similar levels of formal education. For example, among providers without a college education, providers with a CDA provided higher quality programs than did providers without a CDA.

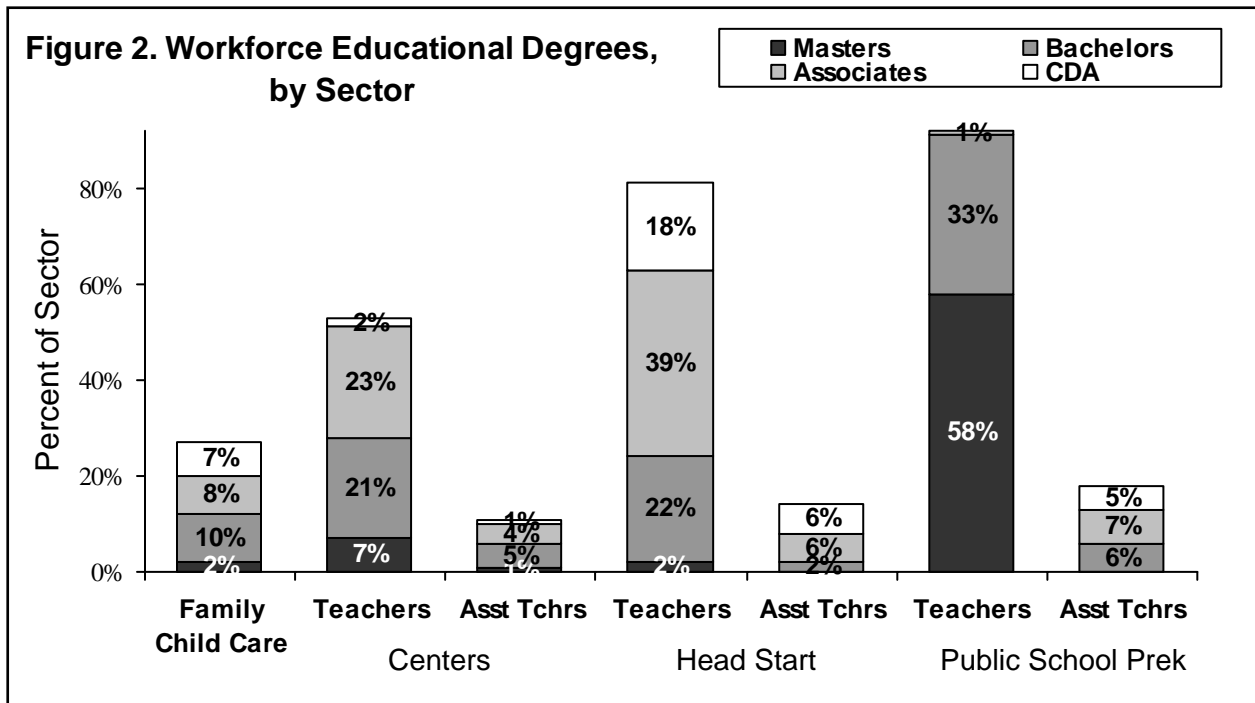
Both national research and research conducted on Massachusetts’ own early education and care programs provide strong evidence of the importance of professional development to program quality, and to young children’s school readiness. To ensure that every child “has access to a high-quality education and care program which meets professionally-accepted standards,” the Massachusetts General Court established the Department of Early Education and Care in the Acts of 2004. In the same legislation, the General Court identified the importance of “well-trained early educator[s] in a variety of public and private settings” as part of a “first-rate early education and care system”. To meet this goal, *The Report of the Early Education and Care Advisory Committee* (2004) recommended the development of a comprehensive professional

⁶ These studies were commissioned by the Massachusetts Department of Education, and funded by the Department and by the U.S. DHHS Administration for Children, Youth and Families (ACYF).

development system that would provide the existing workforce with opportunities to transition to higher standards, and attract new recruits to the field of early education and care (Recommendation WF1). Several of the other recommendations of The Advisory Committee Report (WF3, WF9) identify the importance of studying the existing workforce to determine professional development needs across all sectors of a mixed system of delivery.

Toward that end, this research brief makes findings on the education of the current workforce in centers, public school preschool programs, Head Start programs and family child care homes. These findings provide a description of the current qualifications of the workforce, based on a review and analysis of multiple data sources. These findings serve as a basis for determining the professional development needs across all sectors.

Finding 1. A greater percentage of teachers in centers and Head Start programs, compared to family child care providers, have completed an associate’s degree or a bachelor’s degree or higher in early childhood education or a related field. Teachers in public school preschool classrooms are required to hold at least a bachelor’s degree, and over 90% hold a degree in education or a related field. Assistant teachers in all settings are unlikely to hold a CDA or higher degree.



Source: See Table A2 in Appendix A for details and data sources.

Centers. The Cost Quality Center Study reported that 28% of all teachers (including lead or head teachers and teacher/directors) held a bachelors or a masters degree in the field in 1999-2000; an additional 23% held an associates degree in the field, while 19% had completed graduate courses in the field. A separate data source, the Community Profiles merged data (2000-2003), indicated that 31% of all teachers held a bachelors degree or higher in ECE field, and 17% held an associates. Considering both of these datasets, we would estimate that about 30% of the

workforce employed in centers hold a bachelors or higher degree in the field, and about 20% hold an associates degree.

Head Start. According to the Massachusetts Head Start Program Information Report 2002-03, 24% of Head Start teachers have a bachelors or graduate degree in ECE or related field, 39% hold an associates in ECE or related field, and 18% hold a CDA as their highest level of education.⁷ The Head Start PIR data shows slightly higher qualifications for Head Start teachers than that reported by the Community Profiles merged data from 2000-2003 (which includes data collected prior to 2003, when the federal mandate for higher qualifications went into effect). The Community Profiles merged data shows that 18% of Head Start teachers had a bachelors degree or higher in ECE or a related field, 2% had a bachelors degree or higher in another field, 31% had an associates degree, and 24% had a CDA.

Family Child Care. The Family Child Care Data Report (FCC Data Report, December 2004) is based on a survey of all 7,369 active family child care providers in the state during the fall of 2004. The FCC Data Report found that 12% of family child care providers hold a bachelors or higher degree in the field; 8% hold an associates (4% in the field, and 4% in an unrelated field); 17% have taken at least one college course in the field (but do not hold a degree) and 7% hold a CDA.

Other studies provide comparable data, after considering differences in the populations studied. The Cost Quality Family Child Care Study (CQ FCC Study) reported that 4% of Family Child Care providers had a bachelors degree or higher in an ECE or related field. In addition, 3% had graduate courses in the field (and may also hold a bachelors degree in the field), 10% had an associates, and 10% held a CDA as their highest level of education. The CQ FCC Study differs most strongly in its estimates of the number of providers who have taken a college course in the field – an estimated 29%, compared to only 17% in the Family Child Care Data Report. The CQ FCC Study did not include providers who had entered the field within the previous 12 months, who are less likely to have taken a college course to begin working towards a credential or degree than are providers with more experience. The Community Profiles merged data (2000-2003) found that 12% of FCC providers had a CDA, 11% had an associates, and 12% had a bachelors degree or higher in Education or a related field. Community Profiles data is collected from family child care providers who are participants in the Community Partnerships for Children, and who are likely to have more education than the state average.

Public School Preschools. Teachers in public school preschool classrooms are required to hold at least a bachelor's degree. The Community Profiles merged data for 2000-2003 found that 91% of preschool teachers had a bachelors, masters or advanced degree in Education or a related field and that 7% had a bachelors or masters degree in an unrelated field. The Cost Quality Public Preschool Study found that 93% of public preschool teachers held a bachelors or higher degree in ECE or a related field, including education. The CQ Public Preschool Study reported that 2% of public school preschool teachers held an associates degree as the highest level of education; the Community Profiles merged data reported 1% of teachers.

⁷ A 1998 federal mandate required that by September 30, 2003 at least half of all Head Start teachers in center-based programs must have an associates degree or higher; other teachers (without at least an associates) must have at least a CDA.

Finding 2. Lead teachers and directors in centers are more likely to hold a bachelor’s degree in the field than are assistant teachers or teachers in centers. About half of all lead teachers and about two-thirds of directors in centers hold a bachelors degree or higher. In contrast, less than a third of teachers and 13% of assistant teachers hold a bachelors degree or higher. Similar patterns are seen in public school preschool classrooms and Head Start classrooms.

The Salary and Benefits Report (2000) reported that 50% of lead teachers held a bachelors degree or higher -- 34% of center lead teachers⁸ held a bachelors degree in child development or a related field, 7% held a bachelors degree in another field, 8% held a master’s degree in the field, and less than 1% held an advanced degree in another field (see Table 1). The Community Profiles merged data indicated a similar figure – 52% of lead teachers held a bachelor’s degree or higher in any field.

Teachers are less likely to hold a bachelors degree. The Salary and Benefits Report (2000) found that a total of 32% of teachers held a bachelors degree or higher – 22% held a bachelors degree in the field, 6% held a bachelors degree in another field, 4% held a master’s degree in the field, and less than 1% held an advanced degree in another field. The Community Profiles merged data had similar findings – 27% of teachers held a bachelors degree or higher.

Assistant teachers are even less likely to hold a bachelors degree. In fact, almost half of all assistant teachers (46%) held a high school diploma or equivalent, or less. About one in 20 held a CDA or associates degree, and 13% held a bachelor’s degree or higher, according to the Salary and Benefits Report (2000) – a total of 17% hold a CDA or higher degree in any field (10% hold a CDA or higher degree in the field).

Table 1. Education Levels by Job Title

Education Level	Assistant Teacher	Teacher	Lead Teacher	Director
College courses in field	35.2%	46.8%	19.0%	10.6%
CDA	1.3%	5.4%	6.9%	3.4%
Associates degree	4.4%	15.3%	22.9%	16.7%
Bachelors in field	4.8%	21.6%	34.4%	36.4%
Bachelors in other field	6.0%	5.5%	6.6%	6.2%
Masters degree or advanced degree in field	1.0%	3.9%	8.0%	21.8%
Adv degree in other field	0.7%	0.6%	0.8%	2.7%
None of the above	46.8%	0.9%	1.4%	2.2%
<i>Number responding</i>	<i>3993</i>	<i>6181</i>	<i>2919</i>	<i>1452</i>

Source: Calculated from Salary and Benefits Report (2000), page 7.

The Salary and Benefits Report (2000) found that 67% of directors held a bachelors degree or higher; both the Community Profiles Survey for the 2002-2003 program year and the Cost Quality Center Study reported 63% of directors held a bachelors degree or higher. The Salary and Benefits Report also reported that 17% of directors held an associates; comparable figures

⁸ The job titles used in each of the data sources described in this research brief are self-reported titles (i.e., the titles used by centers or staff in the questionnaires they completed) – they are not necessarily identical to OCCS licensing titles.

from the Community Profiles Survey for the 2002-2003 program year and the Cost Quality Center Study were 18% and 14%, respectively.

Assistant teachers in other sectors are also less likely to hold a CDA or other degree. According to the Massachusetts Head Start Program Information Report 2002-03, 15% of assistant teachers in Head Start hold a CDA or higher degree in the field. The CQ Public Preschool Study found that public school assistant teachers were also less likely to have a CDA or higher degree; only 6% hold a bachelors, 7% hold an associates degree and 5% hold a CDA – a total of 18% with a CDA or more.

Finding 3. At the classroom level, 28% of center preschool classrooms have at least one teacher holds a bachelor's degree or higher in the field. In 22% of classrooms, the highest qualified teacher holds an associates degree; in an additional 19% of classrooms, the highest qualified teacher has taken graduate courses in the field (with or without a bachelor's degree in the field).

So far, this report has discussed the education levels of individual teachers, irrespective of classroom. However, OCCS regulations require that a preschool classroom with more than 10 children have an OCCS-qualified teacher, as well as a second teacher or assistant.⁹ It is possible that the more qualified teachers are concentrated in the same classroom or center, creating an uneven distribution of teachers across classrooms or centers. To address this question, we used the CQ Center Study data to calculate the highest level of education held by a teacher (including lead or head teachers and teacher/directors) in each of the classrooms in the Study. The Cost Quality Center Study data indicated that, in 28% of classrooms, the highest-qualified teachers have a bachelors or masters degree in an ECE field; in 22% of the Cost Quality Center Study classrooms, the most qualified teacher had an associates degree. In addition, in 19% of classrooms, the most-qualified teacher has taken graduate courses in the field (these teachers may or may not hold bachelors in the field).

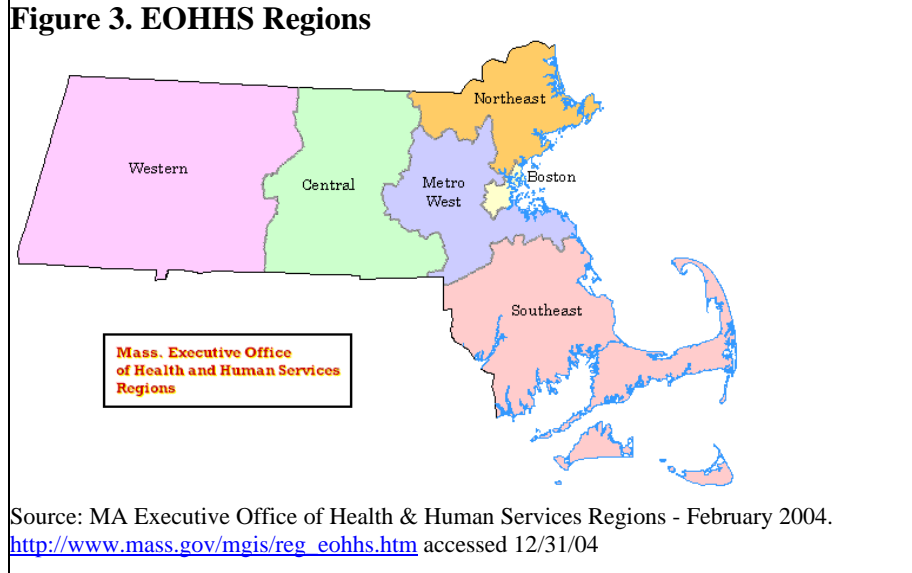
These distributions are similar to those for individual teachers in the Cost Quality Center Study, suggesting that individual teachers with degrees are distributed across preschool classrooms. However, when we look at regional patterns, we see that this is not true in all regions of the state. We will discuss this point in greater detail in the following section.

Regional Variations in Education

This research brief examines regional variation using the Executive Office of Health and Human Services (EOHHS) six regions of the state (see Figure 3). These six regions are commonly referred to as: Region 1: Western MA; Region 2: Central MA; Region 3: Northeast MA; Region 4: MetroWest; Region 5: Southeast MA, Region 6: Boston area. These regions are used by OCCS and DPH for statistical, care coordination and administrative purposes. The regional patterns vary by sector, with each region having particular strengths and unique needs for more trained personnel—See Table A3 in Appendix A for data sources and details. Variations between

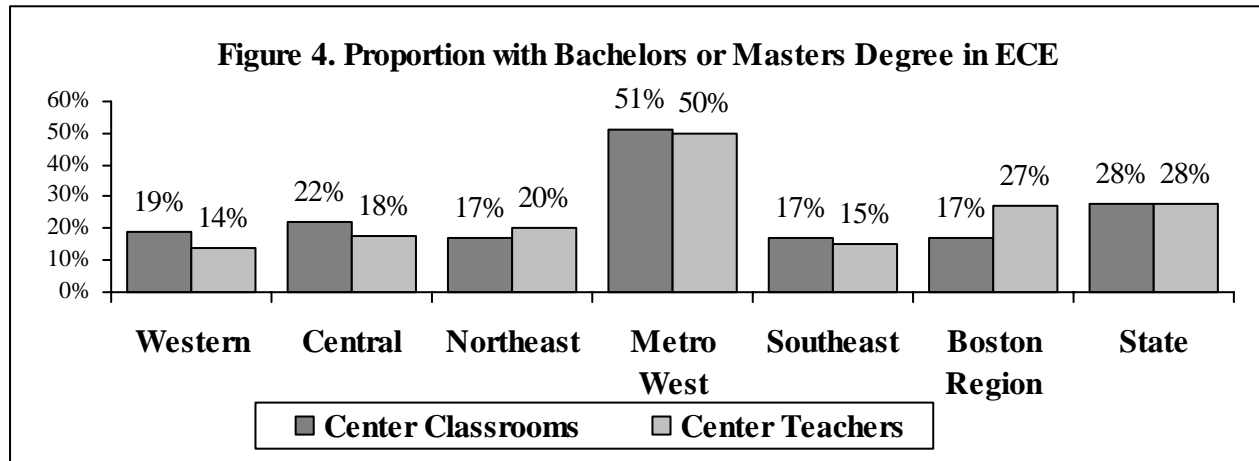
⁹ **SECTION 102 CMR 7.00: STANDARDS FOR THE LICENSURE OR APPROVAL OF GROUP DAY CARE AND SCHOOL AGE CHILD CARE PROGRAMS.** Accessed at <http://www.qualitychildcare.org/regulations.shtml>, January 19, 2005.

regions likely reflect a number of factors, including, but not limited to, regional variations in the supply of qualified teachers and providers, in revenue sources of centers (parent fees, government subsidies) and in household incomes.



Finding 4. There are important regional differences in the training and education of the current early education and care workforce.

Regional variations in teacher qualifications. Half of all center teachers in Region 4: Metro West held a bachelors or masters degree in ECE or a related field in 1999-2000, compared to 27% of teachers in the Boston region, and fewer than one in five teachers in the Western, Central, Northeastern and Southeastern regions of the state (see Figure 4, Center Teachers).



Source: See Table A3 in Appendix A.

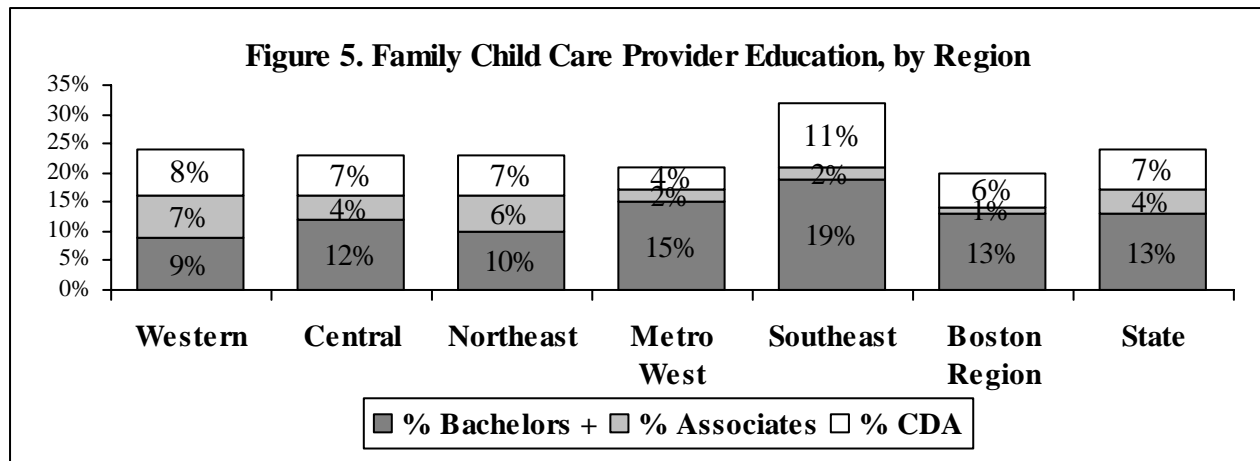
Regional variations in classroom qualifications. We reported above that, at the state level, the proportion of classrooms with a teacher with a bachelors degree or more was similar to the proportion of all individual teachers with a bachelors degree or more, suggesting that teachers with degrees are distributed evenly across preschool classrooms. However, when we look at regional patterns, we see that this is not true in all regions of the state.

In Western and Central Massachusetts, the classrooms were more likely to have a teacher with a

bachelors degree than one would expect, given the small proportion of the workforce with a bachelors degree or more (see Figure 4). In Western and Central Massachusetts, where there is a limited supply of teachers with a bachelors degree or more, qualified teachers appear to be distributed to maximize effectively the proportion of classrooms with a teacher with a bachelors degree or more. However, in the Boston region, where the workforce is more qualified (27% of individual teachers had a bachelors or higher degree), only 17% of classrooms had a teacher with a bachelors or higher degree. This indicates an unequal distribution of teachers across classrooms – with some classrooms having more than one bachelor-level teacher and others having none – and perhaps across centers.

Regional variations in family child care provider education. A greater proportion of providers in Southeastern Massachusetts hold a CDA or higher, or a bachelor’s degree, compared to other regions of the state (see Figure 5). There were no other significant regional variations among family child care providers.

CDAs are an important pathway to quality for family child care providers – as noted above, providers with CDAs provide higher quality care than comparably-educated providers without CDAs. CDAs are particularly important in Southeastern Massachusetts, where 11% of providers held CDAs, and only 2% held an associates degree.



Source: See Table A3 in Appendix A.

Diversity of the Workforce

The current early childhood workforce in Massachusetts is quite diverse – representing a number of ethnic, racial, linguistic, and socioeconomic populations. For example, as the numbers below demonstrate, approximately 22% of center staff (teachers and assistant teachers) are Hispanic or Latino, compared to 11% nationally, according to estimates made by the Center for the Child Care Workforce (Burton et al, 2002). The report of the Governor’s Commission on School Readiness (2001) recognized the importance of a diverse workforce, and included as one of its Guiding Principles the following: “The workforce reflects the rich ethnic, racial, and cultural diversity of Massachusetts families ... and ensures that this diversity is reflected in all roles and at all levels within the workforce.” Massachusetts is not only racially and ethnically diverse, it also has a number of language groups represented in its child care workforce, including Spanish,

Chinese, Hmong, Cape Verdean, Haitian, and others.

Recognizing the value of a diverse workforce, in its report to the legislature in December 2004, the Early Education and Care Advisory Committee reflected on that need and challenge, recommending that the General Court and the Council on Early Education and Care:

Facilitate access to higher education and on-going professional development opportunities for all sectors of the diverse early education and care workforce. In particular, accommodate for: the limited financial resources of the workforce; the need for career counseling; the need for general academic and literacy support; the linguistic diversity of the workforce; the unique needs of adult learners and non-traditional students; and scheduling and location difficulties.

– *The Report of the Early Education and Care Advisory Committee*, page 20

Finding 5. Family child care providers and Head Start staff are similar to, or more diverse than, Massachusetts children ages 3-5 years. Center staff are less likely to be Hispanic/Latino or Asian/Pacific Islander than are the state’s children. Center directors and public school principals are less diverse than are the state’s children.

Almost three-quarters (74%) of Massachusetts children ages 3-5 years in 2000 were non-Hispanic white; 11% of the state’s 3-5 year-olds were Hispanic/Latino, 6% were Black or African American, 4% were Asian or Pacific Islander, and 4% were multi-racial or of another race/ethnic group.

Table 2. Race/Ethnicity of ECE Staff by Sector

	Massachusetts children, ages 3-5	Family Child Care	Head Start	Center staff	Center directors	Public School Principals
White, non-Hispanic	74%	77%	49%	80%	91%	88%
Black or African American, non-Hispanic	6%	8%	11%	8%	5%	3%
Hispanic/Latino (of any race)	11%	11%	22%	8%	2%	1%
Asian, Pacific Islander	4%	1%	3%	2%	< 1%	-
Other	4%	3%	9%	2%	1%	1%

Sources: “Massachusetts children ages 3-5” calculated from US Census Bureau, Census 2000 Summary File 1 (SF 1) 100-Percent Data, downloaded from <http://factfinder.census.gov>, 4/2/05. FCC data from Cost Quality Family Child Care Study; Head Start from the Head Start PIR; Center data is from the Salaries & Benefits Report, Public School Principals from Community Profiles merged data.

Note: ‘Other’ includes multi-racial individuals.

Head Start staff are the most diverse among all the sectors, with 22% Hispanic/Latino and 11% Black or African American. Family child care providers mirror the children of the state. Approximately three-quarters (77%) of family child care providers were non-Hispanic white, as reported by the CQ Family Child Care Study; 11% were Hispanic; 8% were reported as Black or African American, 1% Asian, and 3% were from other race/ethnic groups. Similarly, the

Community Profiles merged data indicated that 77% of family child care providers were non-Hispanic white, 10% were Hispanic, 4% were African American, 2% were Asian, and 4% were from other race/ethnic groups. However, family child care providers who belong to family child care systems¹⁰ were more likely to be Hispanic (46%) and less likely to be non-Hispanic white than were independent providers (84% of whom were non-Hispanic white) (Robeson & Roberts, 2002; analysis of Community Profiles data for 2000-2001 program year).¹¹

Center staff are slightly less likely to be Hispanic/Latino or Asian and slightly more likely to be non-Hispanic white or non-Hispanic Black, compared to the children of the state. However, there is evidence that non-Hispanic whites are more likely to be center directors and public school principals. The Salary and Benefits Report found that 91% of directors were white, compared to 80% of teachers (including assistant teachers, teachers and lead teachers). Similarly, the Community Profiles merged data reported that 88% of principals of public schools housing preschool classrooms were white.

Salary, Benefits, Recruitment and Retention

As in most other fields, salary and benefits are a significant consideration when early childhood educators are preparing for and planning their careers. Unfortunately, as several reports have shown, educators in some sectors of the field receive pay that is low compared to their counterparts in public schools and other sectors. According to a 2003 report published by the Center for the Study of Child Care Employment (Whitebook, 2003), “the low wages that characterize child care employment have been identified as the strongest predictor of instability among teaching staff.”

To address this salary and compensation gap and address the resulting recruitment and retention challenges in the field, policy makers have taken a variety of approaches linking increased compensation and benefits to educational attainment and job retention. Some initiatives, such as well-known scholarship programs, are directed at individuals within the field. Others, such as tiered reimbursement rate policies, are more systematic and directed at employers of early childhood educators.

A 2002 study by the Institute on Women’s Policy Research (IWPR) reviewed the evaluation data on seven major compensation initiatives across the country. Four of the seven initiatives were able to document salary increases among participants. Of those, three of the initiatives were able to document some positive impact on staff retention. Based on its study of evaluated compensation initiatives, IWPR recommends policies that increase starting salaries, link professional development to bonuses or increased pay, are long enough and well-funded enough to demonstrate effects, and replicate other successful compensation initiatives (IWPR, 2002).

¹⁰ Family child care systems have contractual arrangements with providers to offer administrative services. Family child care systems may supply training, technical assistance, inspections, evaluations and supervision to its members. Additionally, family child care systems contract with families and state or local governmental agencies to provide family child care services. These families are then referred to provider members, allowing system providers to fill slots or vacancies.

¹¹ We do not have data on language of staff. Nor do we have data that matches the race of teachers and caregivers with the race of specific children in care. This is a goal for future study.

Among the most replicated policy initiatives related to professional development and compensation is North Carolina's TEACH and WAGES combination. North Carolina's Teacher Education And Compensation Helps (TEACH) Early Childhood Project was launched in 1990, and has since been replicated in 21 other states. The TEACH initiative is attractive as a policy because it addresses the needs of the individual and the field by linking scholarships, educational attainment, increased compensation, and a commitment by the participant to remain in the field for a minimum amount of time (retention). Its companion piece, WAGES, began in North Carolina in 1994, and has since been replicated in Oklahoma, Florida, and Kansas. WAGES focuses more directly on retention and low wages, by providing monetary rewards for increased education and job permanency.

While the majority of state policy initiatives have focused on salaries, stipends, and scholarships, some have addressed the need for other types of compensation such as health care benefits. Once again, North Carolina has taken a leading role in this area with its TEACH Early Childhood Insurance Program. The program uses federal child care dollars to provide eligible early childhood programs with one third of the cost of health coverage for their teaching staff.

In Massachusetts, salary, benefits and turnover have been viewed as interrelated and chronic problems in the early education field since at least the 1990's. In April 2001, the Office of Child Care Services released *The Massachusetts Early Care and Education Staff Recruitment and Retention Research and Recommendations* – a commissioned study that took an in-depth look at staff recruitment, retention, and compensation and made policy recommendations related to those areas. The study found that early childhood program directors, early childhood staff, educators in institutes of higher education, and other community stakeholders all agreed that low compensation was a key barrier to both recruiting and retaining staff. The study made a series of policy recommendations, including a three-year public investment in compensation to raise salary scales in early childhood programs. That initiative has not been funded or implemented by the Commonwealth to date.

However, Massachusetts has implemented several smaller efforts to affect early childhood compensation, recruitment and turnover rates. The Office of Child Care Services has implemented a series of adjustments to subsidy reimbursement rates, with the increases targeted specifically toward workforce compensation. Most recently, a \$12.5 million rate reserve in the Fiscal Year 2001 state budget was partially directed toward stipends for professional development, and \$5 million in the current fiscal year budget was targeted to addressing recruitment and retention through salaries, benefits, and stipends for professional development. Some large early childhood providers have also made an effort to improve recruitment and retention through comprehensive career ladders that increase compensation according to education levels and years of employment. The Early Education and Care Advisory Committee's December 2004 report noted: "Compensation, recruitment and retention are overarching issues within the workforce that must be addressed. Research indicates that compensation is linked closely to provision of quality services" (page 38). The Advisory Committee recommended that the Commonwealth, "Design a plan for increased and equitable compensation that reflects uniform higher professional standards, as well as improves recruitment and retention" (WF5, page 20).

Salaries and Wages

Finding 6. Center preschool teachers, with a bachelors degree in ECE, earn less than half the hourly wages of public school preschool teachers.

Preschool teachers with a bachelors degree in ECE, working in centers, earned an average of \$11.91/hour¹², according to the CQ Center Study, compared to \$35.00/hour earned by public school preschool teachers (calculated from Community Profiles Survey data for 2000-2001 program year¹³). While public school preschool teachers are more likely to have an advanced degree than are center teachers – only 33% of public school preschool teachers had only a bachelors degree – the Community Profiles merged data (2000-2003) found that the lowest paid full-time public school preschool teacher in a program still earned an average of \$28/hour.

Other studies report similar figures for the wages of teachers in centers. The Salary and Benefits Report reported the median highest wage was \$11.49 for teachers. Community Profiles data shows the average teacher wage in centers (including school-age teachers and infant/toddler teachers) was \$10.89 in 2002-03. Finally, according to the U.S. Bureau of Labor Statistics, the median annual earnings for Massachusetts' preschool teachers (most of whom were employed in centers) were \$22,600 in 2002. In contrast, Massachusetts' kindergarten teachers' median earnings were \$46,550 and elementary school teachers earned a median of \$49,970 in 2002.¹⁴

Family child care providers do not earn a salary or wage. Rather, their compensation is estimated considering their revenues and their costs. The Cost Quality Family Child Care Study estimated that providers earned an average effective wage of \$7.65/hour, net of costs (in 2002 dollars). In comparison, average hourly wages of home health aides in Massachusetts (in 2002 dollars) were \$10.78, of nursing aides, \$11.79/hour, couriers and messengers, \$11.02, data entry keyers, \$12.33.

Finding 7. Wages for teachers vary by region of the state (see Figure 6), reflecting regional variations in household income (see Figure 7).

Wages, for both public school preschool teachers and lead teachers in centers¹⁵, were highest in Metro West (EOHS Region 4) and the Boston region (EOHS Region 6). Wages were lower in Western MA (EOHS Region 1), Central MA (EOHS Region 2) and Southeastern MA (EOHS Region 5). This reflects the distribution of household income in the state, with the cities and towns with the highest incomes located in Metro West and the greater Boston area, and the cities and towns with the lowest incomes concentrated in Western MA, Central MA, and in

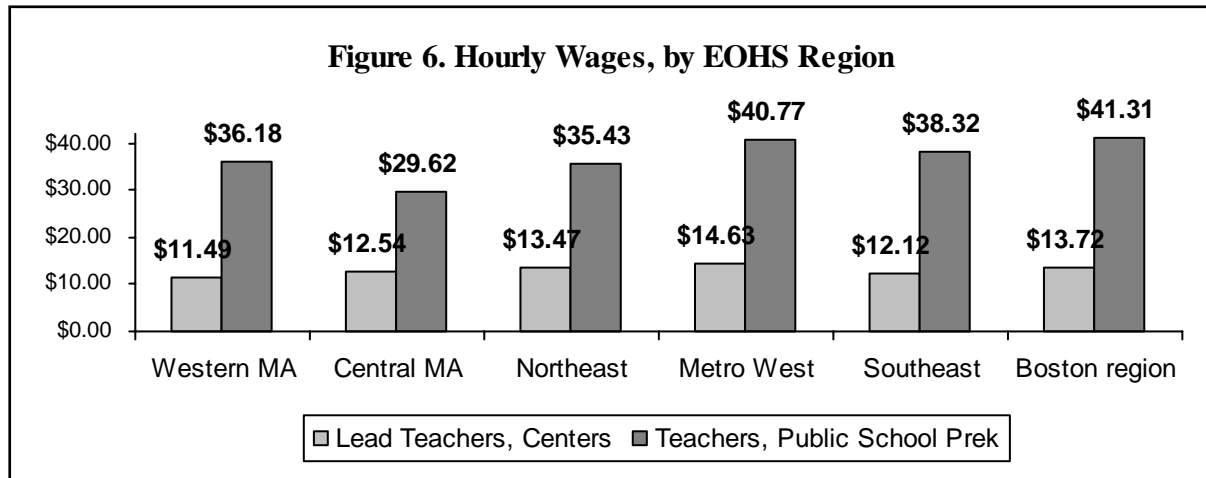
¹² All wages are reported in 2002 dollars, that is, the values of all wages have been converted from the year of data collection to the equivalent purchasing power in 2002, using the U.S. Department of Labor, Bureau of Labor Statistics, CPI inflation calculator (accessed at <http://www.bls.gov/bls/inflation.htm>), which allows one to calculate the current value of dollar amounts from previous years.

¹³ Reported in Center for the Childcare Workforce, 2004. *Current Data on the Salaries and Benefits of the U.S. Early Childhood Education Workforce*.

¹⁴ Source: *Occupational Employment Statistics 2002 State Cross-Industry estimates*, http://www.bls.gov/oes/oes_dl.htm#2002 Accessed 12/30/04. All salaries exclude special education teachers.

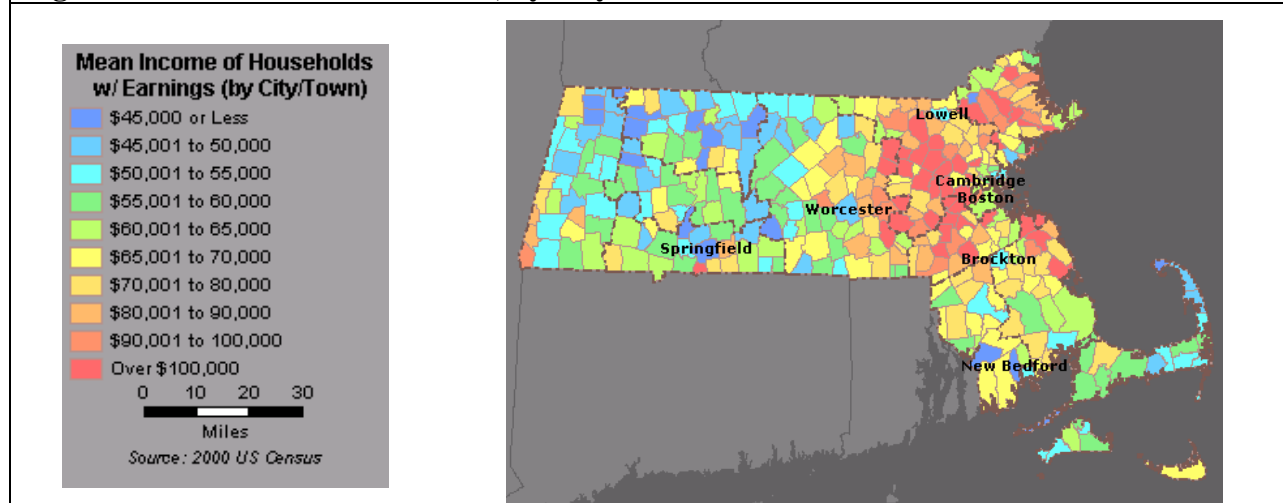
¹⁵ Similar patterns are seen for other job titles in centers – see the *Salary and Benefits Report*.

Southeastern MA (see Figure 7).



Source: Lead teachers’ median highest hourly wage rate from the *Salary and Benefits Report*; Public School Preschool teachers’ mean hourly wage rate from CQ Public Preschool Study.

Figure 7. Mean Household Income, by City/Town



All data from the U.S. Census Bureau 2000. Source: <http://www2.massstats.com> Accessed 12/30/04

Employer-based Health Care Benefits

Finding 8. Between one-half and two-thirds of teachers and administrators at centers have employer-provided health insurance. However, part-time staff are less likely to be covered.

The Community Profiles merged data (2000-2003) found that 75% of Centers reported providing a health plan for their full-time staff, but only 27% provided it for part-time staff.¹⁶ The

¹⁶ The Salary and Benefits Report (2000) reported higher levels of benefits provided. However, only 56% of centers responded to the Salary and Benefits Report, and centers were more likely to answer the questions about wages than to answer the questions about benefits. In fact, if we re-calculate the proportion of centers making health insurance available to full-time teachers, assuming that centers who answered the wage questions, but skipped the health

Community Profiles merged data also found that 97% of Head Start programs offered health insurance to full-time employees and 63% of Head Start programs offered health insurance to part-time employees.

These findings are consistent with a forthcoming report which finds that, when combining full and part time employees, slightly more than half (56%) of all Massachusetts teachers and administrators in child care centers had employer-provided health insurance between 1998-2002 (Keystone Research Center, forthcoming).¹⁷

Table 3. Access to Health Care Benefits by Source and Sector

	FCC homes	Centers		Public School Preschools		Head Start Programs	
	FCC Providers	Full-time Staff	Part-time Staff	Full-time Teachers	Part-time Teachers	Full-time Staff	Part-time Staff
No health insurance	11%	DK	DK	DK	DK	DK	DK
Through Employer/ Business	17%	75%	27%	69%	12%	97%	63%
Provided by Spouse	72%	DK	DK	DK	DK	DK	DK

Source: FCC homes from CQ FCC Study; Centers/ Head Start and Public Preschool from Community Profiles Surveys merged data (2000-2003). “DK” = Don’t Know, data not available.

Finding 9. Family Child Care providers are largely covered under their spouses’ health insurance, rather than through their family child care business.

The Cost Quality Family Child Care Study reported that, while 11% of Massachusetts FCC providers did not have health insurance of any kind, and 1% only had health insurance for their dependents, 88% had health insurance for themselves and their dependents. Among providers who had health insurance coverage, 17% paid for their own insurance, 5% were covered by Medicaid, and 72% were covered under their spouse’s health insurance.

The Community Profiles Survey for the 2002-2003 program year reported that 27% of Family Child Care providers had no health insurance at all.

Finding 10. 69% of Public School Preschool programs report that full-time teachers have access to health insurance through their employment and 19% of programs report that part-time teachers have access to health insurance through their employer.

benefits questions, did so because they did not offer health insurance to their employees, we find that 73% of centers offered health insurance to their full-time teachers – comparable to the Community Profiles findings.

¹⁷ Figures are based on Keystone Research Center analysis of Current Population Survey (CPS) data for 1998-2002. The CPS is a monthly survey of 60,000 US households, conducted by the U.S. Bureau of the Census. “Child care workers” is a job title used by the Census Bureau, which is distinct from the Census job title of “preschool teacher”.

The Community Profiles merged data (2000-2003) analyses found that 69% of public school preschool programs reported that full-time teachers have employer-provided health insurance. This is consistent with US Census Bureau CPS data for 1998-2002, which indicated that 66% of Massachusetts elementary school teachers had employer-provided health insurance (Keystone Research Center, forthcoming).

Turnover & Retention

Finding 11. Turnover rates are higher among Massachusetts early education and care providers, compared to national turnover rates in all educational services occupations.

In the CQ Center Study, directors reported that 26% of their teaching staff had left in the previous 12 months; nationally, the annual turnover rate for 2003-2004 in educational services was only 9.8% (Nobscot Corporation).¹⁸ The Community Profiles merged data found a turnover rate of 30% among center and Head Start full-time teachers. Turnover rates were higher among staff with lower qualifications. For example, the Salary and Benefits Report found that 12-month turnover rates were highest for assistant teachers in centers (36%), mid-range for teachers (30%) and lowest for lead teachers (18%).¹⁹ Similarly, the Community Profiles merged data 2000-2003 reported that turnover rates were higher among full-time public school preschool paraprofessionals (14%) than among full-time public school preschool teachers (12%).

Table 4. Turnover Rates (within 12 months) by Sector

	Centers: Teachers ¹	Centers & Head Start: ft Teachers ²	Public Preschool: ft Teachers ²	FCC Providers
Turnover Rate	30.6%	30.4%	11.7%	16%

Source: ¹ *Massachusetts Child Care Center and School Age Program Salary and Benefits Report*, Massachusetts Child Care Resource and Referral Network for the Massachusetts Office of Child Care Services, October 2000, cited in *Facts in Action*, a project of Associated Early Care and Education, Inc.; ² Community Profiles merged data 2000-2003

According to the CQ FCC Study, 16% of family child care providers expected to stop providing care within the year, or were uncertain whether they would continue beyond a year. Another 20% of providers expected to stop within the next three years. When asked what would keep them in the field longer, more than half of the providers cited retirement savings, better pay, health benefits, and more respect for the work they do.

Finding 12. Many qualified teachers are leaving the field of early education and care. Teachers entering the field, and new hires, are often less well-qualified than are their predecessors.

In 2001, the Recruitment and Retention Study found that center directors reported that two out of three employees who leave their centers were leaving the field of early care and education

¹⁸ From *Latest BLS Employee Turnover Rates* - Released Nov 9, 2004, Nobscot Corporation. <http://www.nobscot.com/survey/index.cfm> accessed 1/3/05. Data supplied by the U.S. Department of Labor, Bureau of Labor Statistics (BLS).

¹⁹ Calculated from Table 3 of the Salary and Benefits Report.

entirely. In the CQ Center Study, directors reported that 41% of teachers who left, and 39% of assistant teachers who left, left the field of early care and education completely. Based on these figures, the CQ Center Study estimated that 10% of all teaching staff in centers left the field in the previous 12 months.

In the Recruitment and Retention Study, both center directors and college and university administrators reported that entering students/new hires were not as qualified as previous cohorts were. College and university administrators felt that the best students were seeking degrees and careers in the public school systems, which “offer better benefits, higher salaries, greater prestige, and longer vacations.” (Recruitment and Retention Study, Executive Summary, page 10). In the CQ Center Study, directors reported that it took more than a month to fill the majority of teacher vacancies in the previous year, and that, more than a third of the time, newly hired staff were less qualified than the staff who had left. This was most difficult when hiring new teachers; 48% of newly hired teachers were less qualified than were their predecessors. Similarly, the Salary and Benefits Report found that it took more than a month to fill two-thirds of the teacher vacancies in the previous 12-months.

CONCLUSION

The Commonwealth is committed to universal access to high-quality preschool. To meet that goal, the Commonwealth must both expand the number of programs in the state and raise the quality of both new and existing programs. Workforce development is central to those efforts – the Commonwealth needs to increase the qualifications of the current workforce and recruit and retain new, qualified teachers and providers.

Both the Early Education and Care Council and the Early Education and Care Advisory Committee have recommended continuing Massachusetts’ mixed delivery system that provides access to preschool in public school settings, centers, Head Start programs and family child care homes. The workforce issues for each sector of this system must be addressed to meet the goal of universal preschool.

Currently, the majority of children participating in preschool programs are in centers. While many of the teachers in centers exceed the minimal requirements set by OCCS, with 53% of teachers holding a CDA or higher degree in ECE or a related field, a significant portion of the current center-based workforce will need additional education or training to raise the quality of early education and care provided. As the Cost Quality Center Study found (Marshall et al, 2001), teaching staff in centers serving predominantly low-income children have less formal education and training in ECE, and children in these centers are less likely to receive the same quality education that children receive in centers serving higher income families. Therefore, it is important that, as we address workforce issues for all center-based teachers, we continue to respond to the needs of teachers working with low-income children.

Conversely, almost all teachers in public school preschool programs hold a bachelors degree or higher in education or a related field. However, even among a workforce with high levels of formal education, the Cost Quality Public Preschool Study (Marshall et al, 2002) found that classrooms that were NAEYC-accredited or in which teachers had additional training in early childhood education provided higher quality programs. As we move to adopt uniform program standards and guidelines, it is essential that the public school workforce receive the training

needed to provide the developmentally-appropriate experiences for preschool-age children that are reflected in NAEYC accreditation or ECE training. In addition, while many existing public school preschool programs are high quality, these programs currently serve only a small portion of the Commonwealth's preschoolers.

Head Start programs provide preschool education and comprehensive services to low-income children. Under the federal mandate to increase the proportion of teachers with an associates degree or higher, 61% of teachers in Massachusetts' Head Start classrooms hold an associates or higher degree. However, 18% of Head Start teachers hold a CDA as their highest credential – a much greater portion than in other sectors.

Family child care providers are an important sector of Massachusetts mixed delivery system of early education and care, serving more children than in public school preschool programs and Head Start programs combined. Many family child care homes met accepted standards for good quality in the Cost Quality Family Child Care Study (Marshall et al, 2003) – 30% of homes compared to 45% of center preschool classrooms and 70% of public school preschool classrooms. However, only 27% of family child care providers have a CDA, associates or higher degree; providers without a CDA or higher formal education were less likely to provide high quality early education and care.

Providing pathways from a CDA to an associates or bachelors degree credential would be particularly important in the development of a career ladder for family child care providers and Head Start teachers. In recognition of this, *The Report of the Early Education and Care Advisory Committee* recommended that “credit should be provided when providers can document attainment of core competencies through college courses, achieved certificates such as the child development associate credential (CDA), life experience, and/or performance and standardized assessments” (page 38).

To recruit and maintain a qualified early education and care workforce, it will be necessary to address issues of compensation and benefits, and the related issue of turnover. As *The Report of the Early Education and Care Advisory Committee* noted: “Compensation, recruitment and retention are overarching issues within the workforce that must be addressed. Research indicates that compensation is linked closely to provision of quality services” (page 38). Compensation currently varies by education level and by sector of Massachusetts' mixed delivery system. Within a sector, individuals that are more qualified tend to receive higher compensation. However, a center teacher with a bachelors degree in the field is paid less than a comparably educated public school preschool teacher. The low wages associated with employment in centers have been found to be related to staff turnover. In fact, turnover among teaching staff in Massachusetts' centers is significantly higher than national averages for all employees working in education. Turnover is costly – young children lose when they experience unstable care, and the Commonwealth loses on its investment when highly trained teachers leave the field.

Finally, Massachusetts' early education and care workforce is diverse in race/ethnicity, language and social class background, as are the children of the Commonwealth. The diversity of the workforce is a strength, expanding the pool of qualified teachers and providers and ensuring that children benefit from the diversity of our communities. However, family child care providers and Head Start staff are more diverse than are center staff. If we are to maintain the diversity of the EEC workforce, it will be important to accommodate the needs of family child care providers

and Head Start staff, as well as center staff from diverse backgrounds, in efforts to increase access to higher education and on-going professional development. The Early Education and Care Advisory Committee, recognizing the value of a diverse workforce, recommended that the General Court:

Facilitate access to higher education and on-going professional development opportunities for all sectors of the diverse early education and care workforce. In particular, accommodate for: the limited financial resources of the workforce; the need for career counseling; the need for general academic and literacy support; the linguistic diversity of the workforce; the unique needs of adult learners and non-traditional students; and scheduling and location difficulties.

This research brief has provided a snapshot of the current early education and care workforce serving children ages 3-5 years, including education levels, race/ethnic diversity, compensation, health benefits and turnover rates. Our hope is that this knowledge will prove useful as the newly-created Board of Early Education and Care meets the General Court's charge:

...oversee the development and implementation of a program of voluntary, universally accessible high-quality early childhood education to all preschool-aged children in the commonwealth, subject to appropriation... [and] oversee the development and implementation of a workforce development system designed to support the education, training and compensation of the early education and care workforce, including all center, family child care, infant, toddler, preschool and school-age providers.

— Chapter 205 of the Acts of 2004, Section 3(a)

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Appendix A. Tables

Table A1. Number of Programs and Children Served (Ages 3-5 Years)

	Centers	Public Preschool	Head Start	FCC
Number of Programs	2,305 (1)	466 (3)	163 (4)	7,369 (6)
Number of Children	91,232 (2)	22,533 (3)	12,969 (5)	29,476 (7)

1 OCCS Research & Reports: Number of OCCS Licensed Programs (as of May 1, 2003). Accessed at <http://www.qualitychildcare.org/pdf/LicensedProgramCount.pdf> January 19, 2005.

2 Calculated from OCCS Regional Provider Lists. Accessed at http://www.qualitychildcare.org/childcare_region_list.asp January 19, 2005.

3 2003-04 Enrollment By Grade Report. Accessed at <http://profiles.doe.mass.edu/enrollmentbygrade.aspx> January 19, 2005.

4 *The Report of the Early Education and Care Advisory Committee*, December 15, 2004.

5 Massachusetts Head Start PIR 2002-03.

6 CCR&R FCC Data Report 2004.

7 FCC homes are licensed to care for up to 6 children, not including school-age children (see Appendix C). In our analyses of the Cost Quality FCC data (unpublished), we found that, on average, there are 1.97 infants per home (and 81% of providers care for one or more infants). Therefore, we have estimated the maximum capacity of FCC homes to care for children ages 3-5 years is 29,476, or an average of 4 preschoolers in each of 7,369 homes.

Table A2. Workforce Education Levels - Percent of Each Sector

Education Level	FCC homes ¹	Centers ²			Public School Preschools ³		Head Start ⁴	
	FCC Providers	Directors	Teachers	Assistant Teachers	Teachers	Asst Teachers/ Instructional Aides	Teachers	Asst Teachers
College courses in field	16.96	20.44	25.49	35.2	-	36.65	Not available	Not available
CDA	7.07	-	1.69	1.3	-	4.51	18.34	6.37
Associates degree	8.03	13.95	22.96	4.4	1.1	7.21	38.73	5.68
Bachelors degree in field	10.33	12.87	20.89	4.8	33.3	6.19	22.43	2.43
Graduate courses in field	Not available	29.76	19.13	1.0	Not available	-	Not available	Not available
Masters degree or advanced degree in field	1.94	19.87	7.30	0.7	57.8	-	1.83	0.12
None of the above	59.74	3.12	2.53	52.6	-	45.43	18.67	85.4

Source: ¹ Massachusetts CCR&R Network, Family Child Care Data Report, Part I. December 2004. Reports *all* Bachelor's degrees and *all* Advanced degrees, not only degrees in the field. ² Source: Teacher data from Massachusetts Cost/Quality Studies: State-wide weighted data for teachers, lead teachers and teacher/directors. Assistant Teacher data from *Salary and Benefits Report* (2000). ³ Source: CPC merged data 2000-2003; "degree in field" includes degrees in education. ⁴ Source: Massachusetts Head Start Program Information Report 2002-2003 Program year.

Table A3. Regional Variation in Education by Sector: Percent of each sector meeting given standards*

Sector	Education Level	Region 1 Western MA	Region 2 Central MA	Region 3 Northeast MA	Region 4 Metro West	Region 5 Southeast MA	Region 6 Boston Region	State
FCC	CDA + ³	24%	23%	23%	21%	32%	20%	24%
	Associates+ ²	16%	16%	16%	17%	21%	14%	17%
	Bachelors+ ¹	9%	12%	10%	15%	19%	13%	13%
Center Teachers	CDA+ ³	59%	28%	45%	57%	53%	52%	53%
	Associates+ ²	59%	18%	43%	57%	53%	48%	51%
	Bachelors+ ¹	14%	18%	20%	50%	15%	27%	28%
Center Classrooms	CDA+ ³	58%	29%	43%	58%	47%	60%	52%
	Associates+ ²	58%	22%	40%	58%	47%	56%	50%
	Bachelors+ ¹	19%	22%	17%	51%	17%	17%	28%
Public Preschool Teacher	CDA+ ³	98%	89%	100%	100%	97%	83%	95%
	Associates+ ²	98%	89%	100%	100%	97%	83%	95%
	Bachelors+ ¹	85%	89%	100%	100%	97%	83%	93%

* Bold percents are at least 5% higher than state averages; shaded percents are at least 5% lower than state averages. Sources: FCC data from Massachusetts R&R Network. Center and Public School Preschool data from Cost/Quality Studies.

¹ Holds a bachelors or masters degree in an ECE-related field. ² Holds an associates in ECE-related field or higher (includes teachers/providers with a bachelors or higher degree in ECE). ³ Holds a CDA or higher (includes teachers/providers with an associates, bachelors or higher degree in ECE).

Appendix B. Detailed Data Sources

The Massachusetts Cost Quality Studies

The Cost and Quality of Full Day, Year-round Early Care and Education in Massachusetts: Preschool Classrooms. Nancy L. Marshall, Cindy L. Creps, Nancy R. Burstein, Frederic B. Glantz, Wendy Wagner Robeson, Steve Barnett. 2001. Wellesley Centers for Women and Abt Associates Inc.

Description: 90 Observations and interviews conducted 1999-2000.

Data: education, salary, turnover, observed quality

Contact: *Center for Research on Women, Wellesley College, Nancy Marshall, 781-283-2551*
<http://wcwonline.org/earlycare/index.html>

Methods: 90 community based centers serving preschoolers on a full-day, full-year basis, randomly selected from the OCCS licensing list. Head Start programs were not included in the sample. Centers were drawn from across the state in direct proportion to each region's market share. A single preschool aged classroom was observed by trained observers and center directors / owners were interviewed by trained interviewers. Response rate 65%.

Early Care and Education in Massachusetts Public School Preschool Classrooms. Nancy L. Marshall, Cindy L. Creps, Nancy R. Burstein, Frederic B. Glantz, Wendy Wagner Robeson, Steve Barnett, Jennifer Schimmenti, Nancy Keefe. 2002. Wellesley Centers for Women and Abt Associates Inc.

Description: 95 observations and teacher interviews conducted in 2000-2001

Data: education, observed quality

Contact: *Center for Research on Women, Wellesley College, Nancy Marshall, 781-283-2551*
<http://wcwonline.org/earlycare/index.html>

Methods: 95 school-based, publicly-administered preschool classrooms randomly selected from a list of all schools housing preschool classrooms. Each classroom was observed by trained observers and teachers were interviewed by trained interviewers.

Family Child Care Today: A Report of the Findings of The Massachusetts Cost/Quality Study: Family Child Care Homes. Nancy L. Marshall, Cindy L. Creps, Nancy R. Burstein, Kevin E. Cahill, Wendy Wagner Robeson, Sue Y. Wang, Jennifer Schimmenti, Frederic B. Glantz. 2003. Wellesley Centers for Women and Abt Associates, Inc.

Description: 203 observations and interviews conducted in 2001 - 2002

Data: education, salary, turnover, observed quality

Contact: *Center for Research on Women, Wellesley College, Nancy Marshall, 781-283-2551*
<http://wcwonline.org/earlycare/index.html>

Methods: Stratified random sample of licensed family child care homes from across the state proportional to the region's share of the OCCS-licensed homes. Each home was observed by trained observers and providers were interviewed by trained interviewers. 57% Response Rate.

Head Start Program Information Report for the 2002-2003 Program

Head Start Program Information Report for the 2002-2003 Program

Description: State-level data as of 2/1/2004, including AI/ANPB and Migrant Grants. Report dated November 29, 2004

Data: staff qualifications

Contact: Nicole Harmon, Research and Program Services, Xtria.LLC

Methods: Program Information from 45 programs (33 Head Start, 12 Early Head Start). This research brief uses data in the Head Start PIR on 981 Classroom Teachers and 863 Classroom Assistant Teachers.

Massachusetts Department of Education Community Partnerships for Children

Community Profiles

Description: data collected annually beginning in 1999 by one-third of communities participating in state pre-kindergarten program, Community Partnerships for Children, with all participating communities completing every three years.

Data: demographics of providers; education; salary; turnover, employee benefits

Contact: *Massachusetts Department of Education*, Jason Sachs, 781-338-6361;

<http://www.doe.mass.edu>

Methods: Mailed Surveys conducted by DOE Early Learning Services and local Community Partnerships for Children Councils. Center/Head Start Survey: 62% return rate for centers and 80% return rate for Head Start programs; 23% of all providers participated in the Family Child Care Survey; Public School Survey 85% return rate.

Office of Child Care Services Reports

Massachusetts Child Care Center & School Age Program Salary and Benefits Report. Survey conducted by the Massachusetts Child Care Resource & Referral Network, Inc. for the Massachusetts Office of Child Care Services.

Description: data collected between March and June 2000; survey based on Center for Childcare Workforce Study.

Data: demographics of providers; education; salary; turnover; health care benefits

Contact: *Massachusetts Office of Child Care Services*, Rod Southwick

@ 617-988-6616; <http://www.qualitychildcare.org>

Methods: survey mailed to all licensed center-based and school age programs; response rate for centers 56.2% (1310 programs, 14,960 staff) and SACC 46.8% (404 programs, 3,088 staff)

Massachusetts Early Care and Education Staff Recruitment and Retention Report and Recommendations

Description: written and telephone interviews with staff, program directors and college administrators regarding turnover and retentions issues

Data: demographics of providers; education; salary; turnover, recruitment and retention strategies

Contact: *Massachusetts Office of Child Care Services*, 617-626-2040;
<http://www.qualitychildcare.org>

Methods: Telephone interviews with 146 center directors, stratified random sample. New hire interviews 29 new staff members. Interviews and focus groups with diverse populations. Interviews with the offices of Admissions, Career Services, and Early Childhood Education at six community colleges, six private colleges, and six public colleges.

Massachusetts CCR&R Network

Family Child Care Data Report – preliminary data, 2004

Description: interviews completed with all currently active family child care providers.

Data: preliminary data on education and training

Contact: *Sue Halloran, Massachusetts Child Care Resource & Referral Network, Inc & Child Care Circuit*, 978-722-2529

Methods: Interviews completed with population of 7,369 currently active family child care providers, by staff at CCR&R agencies.

Appendix C: Minimum Qualifications for Preschool Staff

Public School Preschool Programs

www.doe.mass.edu/educators/e_license.html

Assistant Teacher

- High School Diploma

Teacher:

Massachusetts allows one of four licenses:

1. Preliminary

- Bachelor's degree
- pass Communication and Literacy, subject matter, and Foundations of Reading tests
- "evidence of sound moral character"
- Several additional seminars

2. Initial

- Above, plus...
- Field experience/practicum
- Seminars that address "Professional Standards"

3. Professional

- Possession of initial license
- 1 year "induction period" with mentor, plus additional 50 hours
- 3 full years of employment with license
- Master's (with certain required courses), or a substitute

4. Temporary

- Valid educator license or certificate from another state of a type comparable to initial MA license
- At least 3 years employment under such license
- Has not failed any part of applicable licensure tests
- Evidence of sound moral character

Minimum Training Requirements

Program provides or makes available at least 20 hours of staff development per year (25% devoted to inclusion)

OCCS - Center-based Preschool Programs

www.qualitychildcare.org

Assistant Teacher

- 16 yrs. old OR have a high school diploma or equivalent; under direct supervision of a teacher-qualified staff person

Teacher

- 21 yrs. of age OR high school diploma or equivalent *and* meet one of the following sets of requirements:
- 3 credits in Child Growth and Development (or approved substitution) *and* 9 months supervised work experience or one practicum (note: if associates or bachelors degree in ECE or related, need only 3 months work experience; if bachelors degree in unrelated field, need only 6 months experience) – 3 months of work experience must be with

preschool age children; OR

- Have a Child Development Associate (CDA) credential; OR
- Have graduated from a 2-year high school vocational program in ECE, approved by OCCS, and have been evaluated and recommended by the program instructor.

Lead Teacher :

- 21 yrs of age and meet one of the following sets of requirements. At least 9 months of work experience or one practicum must be with preschoolers.
- High school diploma or equivalent; and 12 credits in 4 categories of study, including 3 credits in Child Growth and Development, and 2 credits in Planning Programs, Curriculum or Classroom management; and 36 months work experience OR
- High school diploma or equivalent; CDA and 3 credits in Child Growth and Development; and 27 months work experience OR
- Associate's degree in ECE or related field; and 12 credits in 4 categories of study, including 3 credits in Child Growth and Development, and 2 credits in Planning Programs, Curriculum or Classroom management; and 18 months work experience OR
- Bachelor's degree in an unrelated field; and 12 credits in 4 categories of study, including 3 credits in Child Growth and Development, and 2 credits in Planning Programs, Curriculum or Classroom management; and 18 months work experience OR
- Alternative Early Childhood Training Program; and 12 credits in 4 categories of study, including 3 credits in Child Growth and Development, and 2 credits in Planning Programs, Curriculum or Classroom management; and 27 months work experience OR
- Department of Education Pre K-3 Early Childhood Teacher Certificate

Director I:

Above plus:

- 2 credits or 3 CEUs in Day Care Administration *and* 2 credits or 3 CEUs in any approved category and 6 months experience as Lead Teacher

Director II:

Above plus:

- 2 credits or 3 CEUs in other Administrative Topics

Minimum Training Requirements

Staff working in group child care centers must have 20 hours of in-service training every year. Fewer training hours are required for staff in programs that only open for part of the year or only for limited hours. A quarter of the training must address the care of children with disabilities.

OCCS - Family Child Care

www.qualitychildcare.org

Family Child Care Providers:

- 18 years or older
- 1 year experience (as parent or caretaker, or substitution)
- Must complete pre-service training or orientation given by CCRR agency
- Must be certified in CPR/First Aid (renewed annually)
- Must be in good physical and mental health, and be able to be responsible for children, etc.

Family Child Care Plus Provider:

Above, plus:

- 2 years experience as licensed family provider or equivalent

Large Family Child Care Provider:

Above, plus:

- 3 years full time experience as licensed family provider or equivalent
- Have staff available

Certified Assistants:

- Demonstrate ability to meet qualifications of provider and replace provider

(Regular Assistant:

- Qualifications not equal to provider
- Must be supervised, over 18, CORI, etc.)

If CPC Funded:

Family child care providers must

- Hold current license from OCCS *and*
- Hold or commit to achieving:
 - 1) an Associates or Bachelors degree in early childhood.(or related field)
 - 2) CDA credential
 - 3) accreditation for their homes through the National Association of Family Child Care

Minimum Training Requirements (from www.qualitychildcare.org)

- **Providers** must complete a minimum of **15 hours of training during the 3-year term of their license**. Certified Assistants must also complete 15 hours of training for renewal of their certificates.
- **Family Child Care Plus Providers**, who care for up to eight children provided two are school-aged, must complete at least **20 hours** of training that includes training on the care of infants, toddlers and school age children. Certified Family Child Care Plus Assistants must also complete 20 hours of training for renewal of their certificates.
- **Large Family Child Care Providers**, who care for up to 10 children with the aid of an approved assistant, must complete a minimum of **30 hours** of training, including training on infant and toddler development, during the 3-year term of their license. Certified Large Family Child Care Assistants must also have 30 hours of training to renew their certificates.

Head Start

from: <http://www.acf.hhs.gov/programs/hsb/> (Administration for Children and Families, part of the US Dept. of Health and Human Service)

A mandate in the Head Start Act (October 27, 1998) requires that by September 30, 2003:

- at least half of all Head Start teachers in center-based programs must have an associate, bachelors, or advanced degree in Early Childhood Education or a degree in a related field, with preschool teaching experience.
- Where a classroom in a center-based program does not have a teacher with a degree in early childhood education, or a related field with experience in teaching preschool

children, the teacher must have a Child Development Associate (CDA) credential or a State awarded certificate for preschool teachers that meets or exceeds the requirements of a CDA credential.

Minimum Training Requirements

The Head Start Program Performance Standards, 45CFR1306.23, specifies:

“(a) Head Start grantees must provide pre-service training and in-service training opportunities to program staff and volunteers to assist them in acquiring or increasing the knowledge and skills they need to fulfill their job responsibilities. This training must be directed toward improving the ability of staff and volunteers to deliver services required by Head Start regulations and policies.
(b) Head Start grantees must provide staff with information and training about the underlying philosophy and goals of Head Start and the program options being implemented.”
