Workforce Characteristics of Infant and Toddler Caregivers in Centers, Family Child Care Homes and Early Head Start Programs: A Massachusetts Capacity Study Research Brief

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This research brief is the product of the contributions of many people. First, we wish to acknowledge all the efforts in Massachusetts to develop a statewide system of workforce development for early education and care providers – it is this effort that served as the impetus for this research brief. Key to the development of a statewide professional development system is accurate data on the status of the current workforce and the capacity of the higher education system to train them. In anticipating the need for such data, Strategies for Children worked with researchers at the Wellesley College Center for Research on Women and the National Institute for Early Education Research to help design a multi-part research study and secure funding. The National Institute of Early Education Research and Strategies for Children provided funding for the Massachusetts Capacity Study for the Preschool Workforce. The United Way of Massachusetts Bay and the A.L. Mailman Family Foundation provided funding for the Massachusetts Capacity Study for the Infant/Toddler Workforce, of which this research brief is one result.

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INTRODUCTION

On July 1, 2005, the new Department of Early Education and Care began work on the goals set forward by the Massachusetts legislature, including:

[to] 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)

To meet this goal, The Report of the Early Education and Care Advisory Committee (2004) recommended that the new department:

Develop a comprehensive professional development system that supports the early education and care field (birth through school-age). The system's elements should provide the existing workforce (teachers, paraprofessionals, administrators, directors, supervisors, and others who work directly with teaching staff) opportunities to transition to higher standards, should improve retention rates, and should attract new recruits to the field of early education and care.

The Massachusetts Capacity Study was funded by the National Institute on Early Education Research, with additional funding from Strategies for Children, the United Way of Massachusetts Bay, the A.L. Mailman Family Foundation and the Boston Foundation, to [1] provide up-to-date research on the current early education and care (EEC) workforce serving children birth through school-age and [2] survey Massachusetts Institutions of Higher Education to determine their current capacity to prepare the EEC workforce.

This research brief is part of the Massachusetts Capacity Study and focuses on the characteristics of the workforce caring for infants and toddlers in licensed or regulated early care and education in Massachusetts.¹ The brief will review the latest information on workforce education, staff-child ratios, group size, teacher tenure and turnover, and staff wages and benefits.

THE IMPORTANCE OF QUALITY INFANT AND TODDLER EEC PROGRAMS

More than half of all infants are in homes where either both parents work, or there is only one parent and that parent is employed (Children’s Defense Fund, 2003). Over the past 25 years, the U.S. has seen dramatic changes in the economy and in families that have transformed the experiences of many young children. The 1996 federal welfare legislation added further impetus to this trend by requiring that low-income mothers on welfare with young children participate in job training programs and seek employment in order to continue receiving benefits.

For infants and toddlers of working parents, formal EEC programs both keep children safe while parents are at work and provide the developmental supports that young children need to learn and grow. Infants and toddlers are in non-parental care for an average of 25 hours per week, with 39% of infants/toddlers in care full-time (Ehrle, Adams & Tout, 2001). In Massachusetts, one in five (20%) infants and toddlers attend center-based programs, one in ten (9%) attend family child care programs, one in four (27%) are cared for by relatives, one in ten (9%) are cared for by nannies or in-home sitters and about one third (35%) are cared for by

¹ The Massachusetts Department of Early Education and Care licensing regulations define “infant” as a child less than 15 months and “toddler” as a child ages 15 months to 33 months of age.
parents\(^2\) (Capizzano, Adams & Sonenstein, 2000).

As early education and care programs become the norm, even for our youngest children, parents and policy makers have asked what the consequences are for children’s development. The NICHD Study of Early Child Care and Youth Development, an in-depth study of children from birth to school-age, has found that families are still the most important influence on children’s development, but early education and care programs are an important context for young children’s growth and development (NICHD ECCRN, 2005). The cumulative evidence of the research on early child care and children’s development is clear; for children in non-parental care, the quality of that care is consistently associated with children’s development. As the National Research Council notes (2000, pg. 313), “...high-quality care is associated with outcomes that all parents want to see in their children, ranging from cooperation with adults to the ability to initiate and sustain positive exchanges with peers, to early competence in math and reading.”

While the quality of non-parental care for infants and toddlers is important to young children’s development, studies have raised serious concerns about the availability of affordable, high-quality EEC, particularly for lower income children. The Cost, Quality and Child Outcomes Study (Helburn, 1995) provided dramatic evidence of the lack of quality early care and education in the four communities studied, with 76% of the observed preschool classrooms in centers rated “poor” or “mediocre” on the Early Childhood Environment Rating Scale. Infant/toddler rooms were of even lower quality, with about 90% rated less than “good”. The Relative and Family Day Care Study (Galinsky et al. 1994) found that relative care was of lower quality than regulated family child care, with 69% of relative caregivers rated “inadequate,” compared to only 13% of regulated family child care providers.

Similar patterns are found in Massachusetts. The Massachusetts Cost and Quality Study found that only one-quarter of infant classrooms and less than one-third of toddler classrooms provided early care and education that met professional standards for developmentally-appropriate infant/toddler programs (Marshall, Creps, Burstein et al, 2004). Similarly, the Massachusetts Cost and Quality Study found that only 30% of family child care homes met professional standards for family child care homes (Marshall, Creps, Burstein, et. al., 2003).\(^3\)

In addition, lower-income families are less likely to receive quality EEC. The Massachusetts Cost and Quality Study found that infants and toddlers attending centers that served predominantly low-income or low-moderate income families were less likely to receive the level of early care and education that will prepare them for school and later life, with toddlers in low-income centers at the greatest risk.\(^4\) Similarly, the Massachusetts Cost and Quality Study found that family child care homes serving low income children were less likely to meet professional standards than were homes serving higher income children.

How, then, do we ensure that young children receive quality EEC? The overwhelming research evidence supports the importance of teacher and provider qualifications, and the conditions under which they work – group size, adult-child ratios, and compensation (NRC IM 2000). In the Massachusetts Cost and Quality Study, infant/toddler classrooms and family child care homes were more likely to provide higher quality care when teachers and providers had more education and worked in environments with smaller ratios and fewer children (Marshall et al.,

\(^2\) Working parents can provide care for their own children if they work at home, take their child to work, or, in 2-parent families, work opposite work schedules so that a parent is available most of the time.

\(^3\) However, these same studies did find that more than one-third of infant/toddler classrooms and family child care homes provided the levels of language stimulation (talking and listening) and the social interactions that young children need.

\(^4\) The sample consisted of community-based centers, but did not include Early Head Start programs.
2003, 2004). This research brief describes the current Massachusetts workforce caring for our infants and toddlers, as a first step towards the development or expansion of policies and programs that will ensure that infants and toddlers receive the quality early care and education that is important to their development.

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

In 2000, there were 243,133 infants and toddlers (birth through 2 years 11 months) in Massachusetts (Massachusetts DOE, 2001, p75). Based on 2002 population estimates and labor force participation rates, NEDLC estimated that there are 60,100 infants and 72,900 toddlers with working parents in Massachusetts (Traill & Wohl, 2004). Of these 133,000 children, an estimated 86,450 are in regular non-parental care.

Based on capacity figures for centers and licensed family child care homes, and enrollment figures for Early Head Start, we estimate that Massachusetts currently has the capacity to care for 34,608 infants and toddlers in regulated programs, or 40% of infants and toddlers in non-parental care (See Figure 1 and Table A1 in Appendix A).

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:

5 Other infants and toddlers are in relative care or in unregulated in-home care. While some families may choose these arrangements, particularly because they tend to be more flexible in hours, and are sometimes more affordable, other families choose these arrangements because of the limited capacity of the current Massachusetts service delivery system for infants and toddlers. While some research shows that care by relatives, particularly when there is only one child in care, can be higher quality (NICHD ECCRN 1996), other research raises concerns about the quality of unregulated providers, including relatives (Galinsky et al., 1994; Coley et al., 2002). Relative and unregulated in-home care is beyond the scope of this research brief, but warrants further study.
The Massachusetts Cost Quality Studies.

The Cost and Quality of Full Day, Year-round Early Care and Education in Massachusetts: Infant and Toddler Classrooms. (Marshall et al, 2004), referred to as the “Cost Quality (CQ) Infant Toddler (IT) 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 Services6. (2001). Referred to as the “Recruitment and Retention Study.”


Head Start Program Information Reporting (PIR) system, which contains data on individuals employed in Early Head Start programs during the 2003-04 Program Year.

Other data sources, such as U.S. Census data, are described in the research brief as appropriate.

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6 The functions of the Massachusetts Office of Child Care Services (OCCS) were combined with those of the Early Learning Services Division (ELS) at the Department of Education in the new Department of Early Education and Care (EEC), as of July 1, 2005. We use OCCS and ELS to refer to reports and policies in place at the time the original data in this report was collected (prior to July 1, 2005).
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 (2000, 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.”

In a review of the research in infant and toddler caregiving, Phillips and Adams (in The Future of Children, Volume 11, Number 1, 2001) found that young children in child care benefit most when the care they receive is warm and responsive. Phillips and Adams also found that, across types of care, providers with more education and specialized training in infant-toddler development, offered more responsive and stimulating care to infants and toddlers (Phillips & Adams, 2001).

The Massachusetts Cost and Quality Study7 found that toddler classrooms provided more age-appropriate learning opportunities when teachers had higher levels of education, and warmer interactions when classrooms had smaller ratios of children to teaching staff (Marshall et al, 2004). Infant classrooms with smaller ratios and smaller group sizes, as well as more experienced teachers, provided higher quality care. In family child care homes, 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. 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 development system that would provide the existing workforce with opportunities to transition to higher standards, and

7 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).
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 serving infants and toddlers in centers, Early Head Start programs and family child care homes.

**Finding 1.** In centers, 13% of Infant Teachers and 17% of Toddler Teachers have a Bachelors or more in the field of early care and education. In EEC-licensed Family Child Care Homes, 13% of providers have a Bachelors or more. In Early Head Start (EHS) classrooms, 53% of Teachers have a Bachelors or more; of the 13 EHS Family Child Care Teachers, 6% have a Bachelors or more.

![Figure 2. Education of Infant & Toddler Caregivers](image)

Note: See Table A2 in Appendix A for sources of data.

**Staff To Child Ratio & Group Size**

Teachers and providers offer the best care in environments that are characterized by smaller ratios of children to adults, and smaller group sizes. For infants and toddlers, ratios and group size are particularly important, given the developmental needs of young children. Studies have found that smaller ratios and fewer children per group or classroom are associated with more sensitive and age-appropriate caregiving and better child outcomes (Howes et al., 1992; Burchinal et al., 1996; NICHD ECCRN 1996, 1999; Burchinal, et al., 2000). In the Massachusetts Cost and Quality Study, teachers in infant and toddler classrooms with fewer children provided warmer and more sensitive care, while teachers in infant classrooms with smaller ratios provided more age-appropriate language stimulation (Marshall et al., 2004).^8^

^8^ Massachusetts regulations effectively limit the number of infants and toddlers (under the age of 2 years) to 3 per home in most circumstances, which keeps family child care home ratios of infants and toddlers to adults lower than the ratios found in classrooms. Therefore, it is not surprising that the Massachusetts Cost and Quality Study did not
The U.S. Department of Health and Human Services recommends a ratio of 1 teacher for every 3 infants, and 1 teacher for every 4 toddlers in center-based care (US DHHS, 2002). As Table 1 indicates, Massachusetts regulations meet these recommendations. While family child care homes have more children, Massachusetts regulations limit family child care homes to no more than three children under the age of two years (see Appendix C for complete details).

**Finding 2.** Group composition (ratios and group size) is important to the quality of early education and care that infants and toddlers receive. Current regulations in Massachusetts are consistent with recommended ratios from the U.S. Department of Health and Human Services.

### Table 1. Group Composition by Child Age and Care Setting

<table>
<thead>
<tr>
<th>Group Composition</th>
<th>Family Child Care</th>
<th>Center- Based</th>
<th>Early Head Start</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Infants</td>
<td>Toddlers</td>
<td>Infants &amp; Toddlers</td>
</tr>
<tr>
<td>MA Regulations - Maximum</td>
<td>6 ²</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Observed</td>
<td>5</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>MA Regulations - Maximum</td>
<td>1:6 ²</td>
<td>1:3</td>
<td>1:4</td>
</tr>
<tr>
<td>Observed</td>
<td>1:5</td>
<td>1:3</td>
<td>1:4</td>
</tr>
</tbody>
</table>

1. If a classroom includes infants and toddlers, the more stringent group size and ratio rules apply.
2. Family child care providers may care for up to 3 children under the age of two; the total group size is limited to 6.
3. Observed ratios and group sizes tend to be lower than allowed maximums and lower than enrollments, because observations use head-counts that exclude children temporarily out of the classroom and children absent on the day of the observation.
4. Head Start regulations allow for a ratio of 1:4, however, if state regulations require more stringent ratios, than the state rules apply.

### Salaries and Benefits

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 similar workers in comparable fields. According to a 2003 report published by the Center for the Study of Child Care Employment (Whitebook & Sakai, 2003), “the low wages that characterize child care employment have been identified as the strongest predictor of instability among teaching staff.” In *Neurons to Neighborhoods* the National Research Council (2000) argues that adequate compensation is one of the key factors “critical to sustaining high-quality child care for young children.”

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).

**Finding 5.** Center teachers with bachelor’s degrees in ECE earn less than half the wages of public school preschool teachers.

find that ratios or group size were related to quality in family child care homes. However, national studies, which include homes with larger groups of children, do find that ratios and group size matter in family child care.
Center teachers with a bachelor’s degree in ECE earned an average of $11.91/hour\(^9\), according to the CQ Center Study, compared to $35.00/hour earned by public school preschool teachers\(^10\) (most of whom hold bachelors degrees in ECE). In fact, the lowest paid full-time public school preschool teacher in a program earned an average of $28/hour (the Community Profiles merged data, 2000-2003), more than twice the wages of a Center teacher with comparable education.

Salaries vary with the job titles and related qualifications of teachers in center-based programs. The Salary and Benefits Report found that the median highest wage was $8.62 for assistant teachers, $11.49 for teachers and $13.06 for lead teachers in centers (in 2002 dollars). In Early Head Start programs, lead teachers earned an average hourly rate of $13.68 in 2003-2004, while assistant teachers earned $10.36 per hour.

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, and adjusted for the benefit of providing care for their own children (in 2002 dollars). In comparison, the 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, and data entry keyers, $12.33.

Table 2. Wages by Occupation and Setting

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Centers: median highest wage(^4)</th>
<th>Early Head Start: average wage (^5)</th>
<th>Other Settings: Average wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant Teachers</td>
<td>$8.62</td>
<td>$10.36</td>
<td>$28</td>
</tr>
<tr>
<td>Teachers</td>
<td>$11.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead Teachers</td>
<td>$13.06</td>
<td>$13.68</td>
<td>$7.65</td>
</tr>
<tr>
<td>Public School Prek Teachers(^1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCC providers(^2)</td>
<td></td>
<td></td>
<td>$10.78</td>
</tr>
<tr>
<td>Home health aides(^3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing aides</td>
<td></td>
<td></td>
<td>$11.79</td>
</tr>
<tr>
<td>Couriers</td>
<td></td>
<td></td>
<td>$11.02</td>
</tr>
<tr>
<td>Data entry keyers</td>
<td></td>
<td></td>
<td>$12.33</td>
</tr>
</tbody>
</table>


Finding 6. While 75% or more of full-time staff at centers and Head Start programs receive health benefits through their employers, part-time staff and family child care providers are less likely to be covered by their employer or business revenues.

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.\(^11\) The

\(^9\) All wages are reported in 2002 dollars, unless otherwise specified. 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.

\(^10\) Calculated from Community Profiles Survey data for 2000-2001 program year, as Reported in Center for the Childcare Workforce, 2004. Current Data on the Salaries and Benefits of the U.S. Early Childhood Education Workforce

\(^11\) 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
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).\(^\text{12}\)

Family Child Care providers are largely covered under their spouse’s health insurance, rather than through their family child care business. The FCC CQ report states that while 11% of providers reported that they 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 the providers who have health insurance coverage, 17% pay for their own insurance, 5% are covered by Medicaid, and 72% are covered under their husband/partner’s health insurance.

**Stability, Tenure and Turnover**

One of the developmental tasks of young children is the formation of healthy relationships with caregivers. Research studies have found that children with healthy relationships with their child care providers are more likely to show positive social and emotional adjustment, including more competent interactions with adults and other children (Howes, et al., 1988, 1992; Pianta & Nimetz, 1991). Young children are more likely to form healthy relationships with their providers when these relationships are stable over time (Howes & Hamilton, 1993; NRC IM, 2000; Peisner-Feinberg et al., 2000). Therefore, stability and tenure, and related turnover rates, are important workforce factors in the quality of infant and toddler early education and care.

**Finding 3.** Turnover rates are higher among the early education and care workforce compared to national turnover rates in all educational services occupations. One-quarter to one-third of center teachers and family child care providers have been hired within the previous 12 months.

In the CQ Infant Toddler Study, 25% of infant teachers, and 33% of toddler teachers, had been hired within the previous year (see Table 3). In the CQ Center Study, directors reported that 26% of their teaching staff (across all age groups served) had left in the previous 12 months; nationally, the annual turnover rate for 2003-2004 in educational services was only 9.8% (Nobscot Corporation).\(^\text{13}\) The Community Profiles merged data found a turnover rate of 30% among center and Head Start full-time teachers. Turnover rates are 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%).\(^\text{14}\) Turnover rates are lower among public school preschool teachers (12%; Community Profiles merged data 2000-2003) and Early Head Start Teachers available to full-time teachers, assuming that centers who answered the wage questions, but skipped the health 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.

\(^{12}\) 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”.


\(^{14}\) Calculated from Table 3 of the Salary and Benefits Report.
(12%; 2003-2004 program year), although still higher than the national rate for educational services reported above.

Approximately one-third of Family Child Care providers have been providing care for less than 3 years or more than 10 years. Most (84%) of the providers participating in the FCC Cost and Quality Study reported that they expected to continue to care for children in the family home through the following 12 months. One-fifth of the providers did not know how much longer they would continue to provide family child care, one quarter of the providers expected to stop within the next three years. Another quarter expected to stop within the next nine years, while a similar number expected to continue for 15 or more years.

<table>
<thead>
<tr>
<th>Tenure</th>
<th>Family Child Care Providers</th>
<th>Infant Teaching Staff</th>
<th>Toddler Teaching Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>New hires</td>
<td>26%</td>
<td>25%</td>
<td>33%</td>
</tr>
<tr>
<td>Fewer than 6 years</td>
<td>16%</td>
<td>49%</td>
<td>48%</td>
</tr>
<tr>
<td>6-10 years</td>
<td>28%</td>
<td>16%</td>
<td>12%</td>
</tr>
<tr>
<td>Over 10 years</td>
<td>30%</td>
<td>10%</td>
<td>7%</td>
</tr>
</tbody>
</table>

1 Tenure is defined as the number of years as a licensed provider, for family child care providers. Tenure is defined as the number of years at the center for infant and toddler teaching staff; these staff may have other experience at other centers.

2 *Massachusetts Child Care Resource & Referral Network Data Report 2004.* Data for all FCC providers, not just those serving infants & toddlers.

3 *The Cost and Quality of Full-day year-round Early Care and Education in Massachusetts: Infant and Toddler Classrooms.*

4 1-5 years for centers; 3-5 years for FCC.

CONCLUSION

The Commonwealth is committed to “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)). Such a workforce development system is essential if we are to ensure that all of our children receive the quality of early education and care that has been demonstrated to support healthy development and school readiness.

Currently, the majority of children participating in infant-toddler programs are in centers. While 13% of infant teachers and 17% of toddler teachers hold a bachelors or more in ECE or a related field, 28% of preschool teachers in centers hold a bachelors degree or more, suggesting that centers place their better-educated teachers in preschool classrooms, rather than in infant-toddler classrooms. While ratios and group sizes in Massachusetts are important predictors of quality, Massachusetts current regulations of staffing patterns are not enough to ensure high quality infant-toddler center classrooms – 69% of toddler classrooms and 75% of infant classrooms did not meet accepted standards of quality care in the Massachusetts Cost Quality Study of Infant-Toddler Classrooms. The quality of infant-toddler ECE is of particular concern when we consider that toddlers from low- and moderate-income families are less likely than toddlers from higher-income families to receive the learning opportunities and language

15 The same pattern holds if we look at teachers with an Associates degree or higher in the field – 27% of infant teachers, 29% of toddler teachers and 51% of preschool teachers in centers hold an Associates or higher degree.
exposure that they need (Marshall et al., 2004) – and these are areas where we would reasonably expect that better training and education of teachers would make a difference.

Early Head Start programs provide early education and care, as well as comprehensive services to 1,111 low-income children (compared to 18,759 in centers). Under the federal mandate to increase the proportion of teachers with an associates degree or higher, 39% of teachers in Massachusetts’ Early Head Start classrooms hold an associates or higher degree. However, 27% 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, especially for infants and toddlers. Family child care homes are as likely to meet accepted standards for good quality as are infant and toddler classrooms – 30% of homes compared to 25% of infant classrooms and 31% of toddler 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 Early 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 bachelor’s 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.

However, efforts to raise the bar for teacher and provider qualifications, and to ensure adequate compensation, must not jeopardize the current standards for group size and ratios for infants and toddlers. Current recommended standards for staffing patterns for infant and toddler classrooms and family child care homes are necessary if qualified teachers and providers are to provide the sensitive, responsive care and levels of language and cognitive stimulation that our youngest children need to grow and develop.

This research brief provides a snapshot of the current early education and care workforce serving infants and toddlers, including education levels, staffing patterns, salaries, benefits and turnover rates. Our hope is that this knowledge will prove useful as the Department of Early Education and Care moves forward in its efforts to “develop a comprehensive professional development system that supports the early education and care field (birth through school-age)” – one that provides the existing workforce with opportunities to transition to higher standards, improves retention rates, and attracts new recruits to the field of early education and care.
REFERENCES CITED


Workforce Characteristics of Infant and Toddler Caregivers

Massachusetts Office Child Care Services and the Child Care Resource and Referral Network. 2000. *Massachusetts Child Care Center & School Age Program Salary and Benefits Report.*


APPENDIX A. TABLES

Table A1. Number of Programs and Infants/Toddlers Served

<table>
<thead>
<tr>
<th></th>
<th>Centers</th>
<th>Early Head Start</th>
<th>FCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Programs</td>
<td>2,305 (1)</td>
<td>12 (3)</td>
<td>7,369 (4)</td>
</tr>
<tr>
<td>Number of Children</td>
<td>18,759 (2)</td>
<td>1,111 (3)</td>
<td>14,738 (5)</td>
</tr>
</tbody>
</table>

3 Check Massachusetts Head Start PIR 2003-04 for accuracy.
5 FCC homes may care for a maximum of 3 children under the age of 24 months, if one child is at least 15 months and walking unassisted. However, 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 infants and toddlers at 14,738, or an average of 2 children in each of 7,369 homes.

Table A2. Years of Education in ECE by Job Title

<table>
<thead>
<tr>
<th></th>
<th>Centers¹</th>
<th>Early Head Start²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Teachers</td>
<td>Assistant Teachers</td>
</tr>
<tr>
<td>CDA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>college course(s) in ECE</td>
<td>6.5%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>16%</td>
<td>47%</td>
</tr>
<tr>
<td>AA degree in ECE</td>
<td>5%⁵</td>
<td>14%</td>
</tr>
<tr>
<td>Bachelors degree in ECE</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>Graduate courses or more</td>
<td>2%</td>
<td>6%</td>
</tr>
<tr>
<td>Teachers</td>
<td>27%</td>
<td>7%</td>
</tr>
<tr>
<td>Assistant Teachers</td>
<td>26%⁴</td>
<td>73%</td>
</tr>
<tr>
<td>Home Visitors</td>
<td>32%</td>
<td>7%</td>
</tr>
<tr>
<td>Family Child Care Provider</td>
<td>5%</td>
<td>0</td>
</tr>
</tbody>
</table>

¹ The Cost and Quality of Full-day year-round Early Care and Education in Massachusetts: Infant and Toddler Classrooms
² Head Start Program Information Report for the 2003-2004 Program Early Head Start Program Profile
³ Massachusetts Child Care Resource & Referral Network Data Report 2004. Data for all FCC providers, not just those serving infants & toddlers
⁴ Percent of staff enrolled in a college course in ECE
⁵ An additional 5% of providers have an AA in a non-ECE field. Bachelor’s degrees and graduate degrees for providers are in any field.
APPENDIX B: DETAILED DATA SOURCES

The Massachusetts Cost Quality Studies:


**Description:** observations and interviews conducted in 102 community-based centers serving infants on a full-day, full-year basis and a separate sample 104 community based centers serving toddlers on a full-day, full-year basis. Data collected in 2002 – 2003.

**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:** Random sample of infant and toddler classrooms from across the state proportional to the region’s share of the OCCS-licensed centers. Each home was observed by trained observers and providers were interviewed by trained interviewers. A response rate of 81% toddlers and 74% infant centers.


**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%.


**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.
### Massachusetts Child Care Center & School Age Program Salary and Benefits Report

**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 Department of Early Education and Care [http://www.eec.state.ma.us/](http://www.eec.state.ma.us/)  
**Methods:** Used Center for Childcare Workforce Surveys, conducted by the MA Child Care Resource and Referral Agencies. Statewide 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)

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### 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 Early Education and Care [http://www.eec.state.ma.us/kr_research.aspx](http://www.eec.state.ma.us/kr_research.aspx)  
**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.

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**Description:** Includes “Family Child Care in Massachusetts: A Profile.” Based on interviews completed with all currently active family child care providers.  
**Data:** data on education and training  
**Contact:** Sue Halloran, President, MCCR&R Network, 978-722-2529, or shalloran@childcarecircuit.org  
**Methods:** Interviews completed with population of 7,369 currently active family child care providers, by staff at CCR&R agencies.
APPENDIX C: MINIMUM REQUIREMENTS FOR INFANT AND TODDLER CAREGIVERS

Department of Early Education and Care (EEC) - Center-based Infant-Toddler Programs
http://www.eec.state.ma.us/kr_regulations.aspx

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

Infant-Toddler Teacher
- 21 yrs. of age OR high school diploma or equivalent AND meet both the education and work experience requirements:
  - Education: 3 credits in Child Growth and Development (or approved substitution); OR a Child Development Associate (CDA) credential; OR have graduated since 1989 from an approved 2-year high school ECE program, and have been evaluated and recommended by the program instructor.
  - Work Experience: 9 months supervised work experience or one practicum (minimum 150 hours over 8 weeks), with at least 3 months experience/practicum with infants or toddlers (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.)

Lead Infant-Toddler Teacher:
- 21 yrs of age AND meet both the education and work experience requirements:
  - Education: Meet the education requirements for Infant-Toddler Teacher AND 9 additional credits in Early Childhood Education, with at least 3 credits in Infant-Toddler Care and Education.
  - Work Experience: high school diploma or GED AND 36 months experience, OR CDA or Certificate Program AND 27 months experience; OR Associate degree in ECE or related field AND 18 months experience; OR Bachelors or advanced degree in ECE or related field and 9 months experience. A practicum or student teaching- for credit - substitutes for 9 months of work experience.

Director I:
Meet the Requirements for a Lead Teacher plus:
- 2 credits or 3 CEUs in Day Care Administration (or approved substitution) AND 2 credits or 3 CEUs in any other approved category and 6 months experience as a Lead Teacher

Director II:
Above plus:
- 2 credits or 3 CEUs in Advanced Day Care Administration or other approved administrative topics

Ratios and Group Size Requirements
Infant classrooms are limited to a maximum group size of 7 infants, with a ratio of 1 teacher for 3 infants and 1 additional teacher or assistant for 4-7 infants. Toddler classrooms are limited to a maximum group size of 9 toddlers, with a ratio of 1 teacher for 4 toddlers and 1 additional teacher or assistant for 5-9 toddlers. Infant/Toddler classrooms are limited to a maximum group size of 9 children with no more than 3 infants, with a ratio of 1 teacher for 3 children and 1 additional teacher or assistant for 4-9 children. Toddler/Preschooler classrooms are limited to a maximum group size of 9 children, with a ratio of 1 teacher for 5 children and 1 additional teacher or assistant for 6-9 children.
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.

Department of Early Education and Care - Family Child Care
http://www.eec.state.ma.us/kr_regulations.aspx

Family Child Care Providers:
• 18 years or older
• 1 year experience (as parent or caretaker, or substitution)
• Must complete Department-approved pre-service training or orientation.
• 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

If CPC Funded:
Family child care providers must
• Hold current license from EEC 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

Ratios and Group Size Requirements
• Providers may care for no more than 6 children. The provider may care for up to 3 children younger than 2 years of age if at least one of the 3 children is 15 months of age and can walk unassisted. The provider’s own children are included in this count unless they are over 10, or they are ages 5-10 but present for fewer than 3 consecutive hours while day care is provided except for school holiday, brief illness, snow day or short school vacation.

• Family Child Care Plus Providers may care for up to 8 children, provided that at least 2 children are school-aged. If there is more than one infant in care for more than 3 consecutive hours, an assistant must also be present. The provider may care for up to 3 children under 2 years of age; if there are more than 3 children under the age of 2 years present, an assistant must also be present.

• Large Family Child Care Providers may care for up to 10 children, with the aid of one approved Assistant. When one caregiver is off the premises of the child care home, neither caregiver may care for more than 6 children, and no more than 3 of the six children may be under the age of 2 years. A Large Family Child Care home may care for up to 10 children
under the age of two with no more than 7 infants, if there are three caregivers – a Provider or Certified Large Family Child Care Assistant, plus two additional approved assistants.

**Minimum Training Requirements** (from www.eec.state.ma.us)

- **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** 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** 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.

**Early Head Start**

According to the Head Start Program Performance Standards, 45 CFR 1304.52(f), within one year of being hired as an infant-toddler teacher, EHS teachers must have a Child Development Associate (CDA) credential for Infant and Toddler Caregivers or an equivalent credential or educational degree that addresses comparable competencies. Source: [http://www.acf.hhs.gov/programs/hsb/performance/1304/1304_d3.htm](http://www.acf.hhs.gov/programs/hsb/performance/1304/1304_d3.htm)

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.

Early Head Start staff and Head Start staff working as teachers with infants and toddlers must meet the same requirements as teachers and staff within a center-based Head Start program.


**Ratios and Group Size Requirements**

According to the Head Start Program Performance Standards, 1304.52(g)(4), (4) Grantee and delegate agencies must ensure that each teacher working exclusively with infants and toddlers has responsibility for no more than four infants and toddlers and that no more than eight infants and toddlers are placed in any one group. However, if State, Tribal or local regulations specify staff:child ratios and group sizes more stringent than this requirement, the State, Tribal, or local regulations must apply.

**Minimum Training Requirements**

According to the Head Start Program Performance Standards, 1304.52(f), in addition to a CDA or other approved credential, EHS infant and toddler teachers must have the training and experience necessary to develop consistent, stable, and supportive relationships with very
young children. The training must develop knowledge of infant and toddler development, safety issues in infant and toddler care (e.g., reducing the risk of Sudden Infant Death Syndrome), and methods for communicating effectively with infants and toddlers, their parents, and other staff members.

The Head Start Program Performance Standards, 45 CFR 1304.52(k)(1)-(3), adds that
(1) Grantee and delegate agencies must provide an orientation to all new staff, consultants, and volunteers that includes, at a minimum, the goals and underlying philosophy of Early Head Start and/or Head Start and the ways in which they are implemented by the program.
(2) Grantee and delegate agencies must establish and implement a structured approach to staff training and development, attaching academic credit whenever possible. This system should be designed to help build relationships among staff and to assist staff in acquiring or increasing the knowledge and skills needed to fulfill their job responsibilities, in accordance with the requirements of 45 CFR 1306.23.
(3) At a minimum, this system must include ongoing opportunities for staff to acquire the knowledge and skills necessary to implement the content of the Head Start Program Performance Standards. This program must also include:
(i) Methods for identifying and reporting child abuse and neglect that comply with applicable State and local laws using, so far as possible, a helpful rather than a punitive attitude toward abusing or neglecting parents and other caretakers; and
(ii) Methods for planning for successful child and family transitions to and from the Early Head Start or Head Start program.