Massachusetts Early Care and Education

Health Report

Prepared by Nancy L. Marshall

Work, Families & Children
Wellesley Centers for Women

November 24, 2006

Prepared for The Schott Fellowship in Early Care and Education
and the Bessie Tartt Wilson Foundation
with funding from the Charles H. Hood Foundation and The Barr Foundation
Introduction

The goal of this report is to describe the prevalent health practices and concerns in early care and education programs in Massachusetts. The National Association for the Education of Young Children (NAEYC) has established specific health standards for NAEYC-accredited programs. These standards include specific practices to promote and protect children’s health and control infectious disease, to ensure children’s nutritional well-being and to maintain a healthful environment. NAEYC standards also include guidelines to promote children’s safety, including guidelines for the safety of equipment, materials and indoor and outdoor spaces, as well as guidelines for supervising children and designing learning environments. Using data from several studies of Massachusetts early care and education programs, we report the extent to which programs currently meet these health and safety standards.

Data Sources

This report draws on data from a series of studies known as The Massachusetts Cost and Quality Studies. Detailed information on these studies is available in Appendix A. These studies were conducted between 1999-2003, and include data from random samples of:

- 90 center-based preschool classrooms
- 102 center-based infant classrooms
- 104 center-based toddler classrooms
- 203 family child care homes

For each of these samples, data is available on observed health and safety practices, collected using the ECERS, ITERS or FDCRS observational measures. An overview and detailed description of the health information in these measures is included in Appendix B.
Current Health Practices

The ECERS, ITERS and FDCRS observations provide information on general health and safety practices, health and safety practices during personal care routines (meals/snacks, naps/rests, diapering/toileting) and ratings of indoor space and furnishings. The ECERS and FCDRS also provide ratings of health and safety practices during active physical play or gross-motor activities (e.g., ball play, playing on climbing equipment, running, riding tricycles).

Preschool Classrooms in Full-day, Year-round Centers

In 2005, 10,303 programs provided early education and care for 3-5 year olds. Over half (58%) of Massachusetts’ 3-5 year-olds receiving early education and care were in EEC\(^1\)-licensed centers.\(^2\)

In 1999-2000, the Massachusetts Cost and Quality Study visited 90 community-based centers serving preschoolers on a full-day, full-year basis, randomly selected from the OCCS 1999 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 classroom was observed by trained observers.\(^3\)

General Health and Safety Practices. General health practices include practices to reduce the spread of germs, such as handwashing, washing mouthed toys daily, individual washcloths/towels/combs/toothbrushes for children, wet or soiled clothes changed, clean sand in sandboxes, and no smoking in child care areas. Two-thirds of preschool classrooms met the Good benchmark for general health practices. However, 13% of classrooms only sometimes followed recommended health practices, and 20% of classrooms often did not follow all

---

1 The Department of Early Education and Care (EEC) licenses early care and education programs in Massachusetts. Prior to 2005, The Office of Child Care Services (OCCS) was responsible for licensing of early care and education programs.


recommended health practices. The most consistent area of difficulty was frequent handwashing for staff and children.

General safety practices include removing potential hazards, such as exposed electrical cords or outlets, heavy furniture that children can pull down, medicines or other hazards accessible to children, water hotter than 120 degrees F, unsafe cribs or playpens, open stairwells, and small objects that pose a choking hazard. General safety practices also include adequate pro-active supervision to protect children’s safety and prevent safety problems. Most classrooms (80%) followed recommended safety practices. However, 16% met only minimal standards (e.g., supervision was adequate but not proactive; up to 3 serious safety hazards existed). A few classrooms (4%) did not meet these minimal standards.

**Personal Care Routines.** Preschool programs provide not only developmental activities for children, but also provide snacks or meals, rest time (or naps for younger preschoolers), and toileting. These personal care routines can be carried out in ways that promote children’s health and development, or that, conversely, jeopardize their health and development. The ECERS observation rates classrooms on several aspects of personal care routines.

A classroom is rated as **Below Minimal** in Personal Care Routines if: meals and snacks do not meet USDA nutritional guidelines, children’s food allergies are not accommodated, staff force children to eat, or there is a chaotic atmosphere at meal times; nap/rest times are too early or too late, or children are required to nap for more than 2 ½ hours, nap/rest times are not supervised or are supervised too harshly; toileting/diapering area is not sanitary, or handwashing is often neglected after toileting.

A classroom that meets **Minimal** standards is one in which: well-balanced meals and snacks are provided in an atmosphere that is non-punitive and meets children’s needs; nap times are scheduled appropriately for most children with sufficient, non-punitive supervision; and the toileting schedule meets the individual needs of children, with age-appropriate supervision. To be rated as **Good**, classrooms must: most staff sit with the children at mealtimes; there is a pleasant social atmosphere at mealtimes and children are encouraged to eat independently with child-appropriate eating utensils; individual children’s dietary restrictions are followed; at nap/rest time, staff help children to relax with soft music, cuddly toys or back rubs, the nap space is dimly lit, quiet and arranged to help children rest (cots or mats are placed for privacy, or separated by a solid
barrier); when toileting/diapering, sanitary conditions are easy to maintain and there are pleasant interactions between staff and children.

About half of preschool classrooms met the Good benchmarks for personal care routines. However, 26% of classrooms did not meet the Minimal benchmark on meals and snacks, 21% did not meet the Minimal benchmark on toileting routines, and 12% did not meet the Minimal benchmark on nap/rest routines. The areas of greatest concern were maintaining sanitary conditions, and providing non-punitive supervision and pleasant interactions between staff and children at this times.

**Space and Furnishings.**

The ECERS rates the overall indoor space on crowding, ventilation and lighting, maintenance and repair, as well as accessibility to children and adults with disabilities. The ECERS also rates the furniture and the room arrangement. Almost all classrooms (98%) had child-sized furniture in good repair, as well as adaptive furniture if the classroom included children with disabilities. Similarly, most classrooms (93%) provided sufficient space and adequate lighting, ventilation, temperature control and sound-absorbing materials, as well as being in good repair and reasonably clean and well-maintained. However, only 61% of classrooms met the Good benchmark in this category, with amply space allowing children and adults to move around freely, as well as good ventilation with some natural lighting and accessible space even if the classroom did not currently include a child with disabilities. However, 7% of classrooms did not meet the minimal standards for crowding, ventilation, repair and maintenance. Similarly, most classrooms were arranged to make visual supervision of play easier, with at least two interest centers and sufficient space for multiple activities to go on at once. However, 6% of classrooms did not meet the minimal standards in this area.

**Gross Motor Activities.** Gross motor activities – ball play, playing on climbing equipment, running, riding tricycles – are an important component of young children’s play and contribute to children’s physical development. Almost all centers (97%) provided some space outdoors or indoors that was appropriate and safe for gross motor play. In addition, most centers (83%) provided enough age-appropriate gross motor equipment for their preschool children, and this equipment was safe and in good repair. However; more than half of centers did not provide indoor space for gross motor play when the weather prohibited outdoor play, the gross motor play space was not on the
same level and near the classroom or the space was organized in such a way that gross motor activities interfered with each other (for example, when children could ride tricycles through the ball-play area). In addition, 10% of centers had very little age-appropriate gross motor equipment available and 4% of centers either had no gross motor space available or the space they used was dangerous (e.g., requiring a long walk on a busy street to a park or the playground also doubled as a parking lot).

Supervision of gross motor play is also important to children’s safety and healthy development. Almost two-thirds of centers met the Good benchmark on supervision of gross motor activities, acting to prevent dangerous situations before they occurred and assisting children in their use of equipment (such as helping children learn to pump on a swing). However, in one-third of centers, while supervision was adequate to protect children’s health and safety (e.g., enough staff present to watch the children and positioned around the play area), these centers did not meet the higher standard of proactive behavior and active assistance.

### Infant and Toddler Classrooms in Full-day, Year-round Centers

In 2005, Massachusetts’ infants and toddlers received early education and care in 2,305 centers, 12 Early Head Start programs and as many as 7,369 family child care homes. Over half (54%) of infants and toddlers receiving early education and care were in EEC-licensed centers.4

In 2002-2003, the Massachusetts Cost and Quality Study visited 102 infant classrooms and 104 toddler classrooms in community-based centers serving children on a full-day, full-year basis; these centers were randomly selected from the OCCS 2002 licensing list. Early 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. Each classroom was observed by trained observers.5, 6

---


6 The results are similar for infant and toddler classrooms, so all classrooms are combined for simplicity.
**General Health and Safety Practices.**

General health practices include practices to reduce the spread of germs, such as handwashing, washing mouthed toys daily, individual washcloths/towels/combs for children, and wet or soiled clothes and diapers changed. More than three-quarters of infant and toddler classrooms (77%) failed to meet the Minimal benchmark for general health practices. Staff handwashing was the most consistent concern in this area.

General safety practices include removing potential hazards, such as exposed electrical cords or outlets, heavy furniture that children can pull down, medicines or other hazards accessible to children, water hotter than 120 degrees F, unsafe cribs or playpens, open stairwells, small objects that pose a choking hazard, and babies put to bed on their stomachs instead of on their backs. General safety practices also include adequate pro-active supervision to protect children’s safety and prevent safety problems, as well as the availability of essentials needed to handle emergencies (telephone and emergency phone numbers on site, first aid kit, written emergency materials posted, at least one staff person trained in pediatric first aid). More than half of classrooms (57%) followed recommended safety practices. However, 15% met only minimal standards (e.g., supervision was adequate but not proactive, up to 3 serious safety hazards existed, and/or emergency essentials were not available), and 29% of classrooms did not meet these minimal standards.

**Personal Care Routines.** For infants and toddlers, personal care routines are important to healthy development, including snacks or meals, naps and diapering or toileting. These personal care routines can be carried out in ways that promote children’s health and development, or that, conversely, jeopardize their health and development. The ITERS observation rates classrooms on several aspects of personal care routines.

A classroom is rated as **Inadequate** in these personal care routines if: meals and snacks do not meet USDA nutritional guidelines and are prepared in an unsanitary manner; infants are not held during bottle feeding and children are put to bed with bottles; nap times do not meet the individual needs of children (e.g., schedule does not fit with child’s needs, inappropriate sleeping areas are used for napping); cribs are used for extended play; nap times are not supervised; toileting/diapering area is not sanitary and hand washing is often neglected; staff respond harshly to toileting accidents; diapers are not checked every 2 hours.

A classroom that meets **Minimal** standards is one in which: well-balanced meals and snacks are provided in an atmosphere that is non-punitive and meets the individual
needs of children and guidelines for sanitary food preparation; infants are held when bottle fed; nap is scheduled appropriately for individual children with sufficient supervision; toileting/diapering meets the individual needs of children and sanitary practices are implemented; staff take action to minimize the spread of infectious diseases (cribs placed appropriately, children have own blanket and designated sleeping place).

To be rated as Good, classrooms must: maintain a written record of infant’s feeding, diapering and naps; feed children individually or in small groups and provide a pleasant social atmosphere; post menus for parents; encourage and assist children with eating independently; ease toddlers into a group nap schedule; offer child-sized toilets and self-help around toileting and diapering; provide stimulation during personal care routines (e.g., sings songs).

The majority of infant and toddler classrooms did not meet the Minimal benchmarks for meals/snacks, naps and toileting/diapering. The areas of greatest concern were maintaining sanitary conditions, including staff handwashing before feeding and after diapering or toileting, as well as providing non-punitive supervision and pleasant interactions between staff and children at these times.

Space and Furnishings. The ITERS rates the furniture, furnishings available for comfort and the general room arrangement. About one-third of classrooms (37%) met only the Minimal benchmark on furniture – enough furniture for routine care and play, in good repair, with comfortable and supportive seats for the infants and/or toddlers. These classrooms did not necessarily have furniture that facilitated individual care of infants/toddlers (e.g., high chairs rather than a group feeding table), furniture that promotes self-help for toddlers that are ready, such as steps near the sink for handwashing, or storage for extra toys and supplies – required to meet the Good benchmark in this area. In addition, 14% of classrooms did not meet even the minimal standards for furniture for routine care and play.

Infants and toddlers benefit from the comfort of cozy play areas and soft toys. However, most classrooms (64%) met only the Minimal benchmark in this area, providing a cozy area part of the day but not most of the day, and having only a few soft toys available.
Room arrangement can facilitate care for, and supervision of, infants and toddlers, or be so crowded that children have little play space and staff find it difficult to see all children at all times. In 41% of infant and toddler classrooms, there were problems with the arrangement of furniture to facilitate supervision and children’s play. In an additional 32% of classrooms, while the arrangement did allow open space for play and adequate supervision, there were other constraints (e.g., the staff could not always see all children at a glance, as during diapering one child or during food preparation, or young infants were not protected from more mobile children by the separation of quiet and active play areas, or toys were not easily accessible to the children – placed near non-mobile infants or on low shelves for mobile children).

**Family Child Care Homes**

In 2005, family child care homes had the capacity to care for an estimated 44,214 children – an estimated 29,476 children ages 3-5 years old (19% of all 3-5 year olds in ECE settings), and 14,738 infants and toddlers (43% of all infants and toddlers in ECE settings).\(^7\)

In 2001-2002, the Massachusetts Cost and Quality Study observed 184 family child care homes, randomly selected from the OCCS 2001 licensing list. Each home was observed by trained observers.\(^8\)

**General Health and Safety Practices.** General health practices include practices to reduce the spread of germs, such as keeping caregiving equipment and areas clean, as well as awareness of individual children’s health status, and maintaining emergency care and health information for each child, with written permission from parents for

---


medical care. General safety practices include removing potential hazards, such as exposed electrical cords or outlets, heavy furniture that children can pull down, medicines or cleaning supplies accessible to children, water hotter than 120 degrees F, unsafe cribs or playpens, open stairwells, small objects that pose a choking hazard, unsafe outdoor play equipment and an unfenced yard with easy access to the street from the outside play area. General safety practices also include a telephone in the home and transportation available for emergencies, posted emergency exit plans, the use of car safety restraints for all children, and first aid training within the last two years.

About two-thirds of classrooms (69%) failed to meet the Minimal benchmark for health practices, and almost as many (65%) failed to meet the Minimal benchmark for safety practices. The most consistent concerns were that the providers did not keep the kitchen area and toys disinfected and did not childproof their homes from common hazards.

**Personal Care Routines.** Family child care homes provide basic care for children, including snacks or meals, naps or rest times and diapering or toileting. These personal care routines can be carried out in ways that promote children's health and development, or that, conversely, jeopardize their health and development. The FDCRS observation rates family child care homes on several aspects of personal care routines.

A family child care home that meets Minimal standards has well-balanced meals and snacks; the cooking and eating area is clean, and sanitary food preparation standards are met. The diapering/toileting area meets basic sanitary conditions (e.g. diapering area cleaned after each use; caregiver washes hands after helping child with toileting). A home that meets the Good benchmark goes beyond
these basics: the provider organizes and schedules basic care routines (mealtimes, naps) so that children’s basic needs are met. The space and equipment promotes self-help and healthy development. In addition, pleasant interactions between the provider and children occur during routine activities.

The majority of family child care homes (87%) did not meet the Minimal benchmark on meals and snacks; the primary concern in this area was that providers did not ensure that children washed their hands for meals and did not keep the kitchen area disinfected. Similarly, 91% of family child care homes did not meet the Minimal benchmark on toileting and diapering; the primary concern in this area was that the providers did not wash their hands after diapering or toileting of children, nor did they ensure that children washed their hands after using the bathroom.

While these areas are of concern, most family child care homes (68%) met the Good benchmark on nap and rest times, providing age-appropriate nap/rest times and practices, including individual bedding or sleeping space for each child, quiet space for resting with children placed at least two feet apart, and the provider remaining in the house and alert to handle problems. However, 18% of providers either provided little or no supervision, or did not provide an environment that supported nap/rest for children (too little, too long, too noisy, not clean).

**Space and Furnishings.** The FDCRS rates the furnishings available for routine care and for comfort, as well as the indoor space arrangement. A family child care home that meets Minimal standards is one in which there is enough space and furniture to meet the basic needs of all children, and it is safe and in good repair. The furnishings and space include at least one piece of soft furniture and a carpeted space in the area used for child care. In addition, there is space appropriate for the ages of the children (crawling space for infants, play space for preschoolers); the space is cleared of breakable objects and other “no-no’s” so that children can play with few restrictions.

In contrast, in a family child care home that meets the Good benchmark, furniture is made appropriate for the child’s size (e.g., adult chairs with cushions used while eating). The furnishings are regularly cleaned (tables washed after eating or art activity), and include more soft furniture and soft stuffed toys. The space is well-arranged (not crowded, traffic patterns do not go through a play area), with two or more clearly-defined play areas appropriate to the ages of

![Space & Furnishings Chart](chart.png)
the children. About one-third of family child care homes (32%) did not provide appropriate furnishings for routine care and play, or the furnishings were not in good repair. Another 22% provided some furnishings, and in good repair, but did not meet the Good benchmark; the most common reason for this was not washing tables after eating or after an art activity. Family child care homes were more likely to meet at least the Minimal benchmark on furnishings for relaxation and comfort, with at least one piece of soft furniture (e.g., a soft chair or couch) in the child care area and some carpeted area for children’s use. However, 15% of homes did not have soft furniture or rugs for children to use, other than cribs or cots. Finally, almost half of family child care homes (49%) did not meet the Minimal benchmark on indoor space arrangement, lacking adequate space set aside for use by children that is child-proofed.

Gross Motor Activities. Gross motor activities – ball play, playing on climbing equipment, running, riding tricycles – are an important component of young children’s play and contribute to children’s physical development. A family child care home that meets Minimal standards is one in which there is safe outdoor space available and it is used at least three times a week, except in bad weather. In a family child care home that meets the Good benchmark, the children are also provided with indoor physical activity during bad weather.

One-third of family child care homes (33%) did not provide safe outdoor or indoor space for active physical play, or did not provide safe materials for active physical play, such as tricycles, balls, cushions or rugs for tumbling, or crawling space indoors for infants and toddlers. Another third of homes (36%) provided space for active physical play, but not every day, or for limited time periods. About one-third of homes (32%) provided outdoor space for at least an hour a day, except in bad weather, as well as indoor physical activity during bad weather. These homes also provided materials that promoted gross motor development through a variety of activities, such as crawling, walking, balancing, climbing, swinging or playing ball).

Summary of Major Findings

Health and Safety Practices

► One in five preschool classrooms had inadequate supervision to prevent safety problems or had 3 or more serious safety hazards present, such as exposed electrical cords or outlets, heavy furniture that children can pull down, medicines or other hazards accessible to children, water hotter than 120 degrees F, unsafe cribs or playpens, open stairwells, and small objects that pose a choking hazard.

► More than one in five (29%) of infant and toddler classrooms had inadequate supervision to prevent safety problems or had more than 3 serious safety hazards present, such as exposed electrical cords or outlets, heavy furniture that children can pull down, medicines or other hazards accessible to children, water hotter than 120 degrees F, unsafe cribs or playpens, open stairwells, and small objects that pose a choking hazard.
Almost two-thirds (65%) of family child care homes did not childproof their homes from common hazards, such as exposed electrical cords or outlets, heavy furniture that children can pull down, open stairwells, and small objects that pose a choking hazard.

One in five preschool classrooms did not follow all recommended health practices (e.g., handwashing, washing mouthed toys, individual towels for children). During personal care routines, such as meals/snacks, naps or rest time, and toileting/diapering, as many as one in five preschool classrooms did not meet minimal health standards. The areas of greatest concern were maintaining sanitary conditions, and providing non-punitive supervision and pleasant interactions between staff and children at this times.

More than 75% of infant and toddler classrooms did not follow all recommended health practices – staff handwashing was the most consistent concern. The majority of infant and toddler classrooms did not meet the Minimal benchmarks for health practices during meals/snacks, naps and toileting/diapering. The areas of greatest concern were maintaining sanitary conditions, including staff handwashing before feeding and after diapering or toileting, as well as providing non-punitive supervision and pleasant interactions between staff and children at these times.

More than two-thirds (69%) of family child care homes did not follow all recommended health practices – the most consistent concern was that the providers did not keep the kitchen area and toys disinfected. The majority of family child care homes (87%) did not meet the Minimal benchmark on health practices for meals and snacks; the primary concern in this area was that providers did not ensure that children washed their hands for meals and did not keep the kitchen area disinfected. Similarly, 91% of family child care homes did not meet the Minimal benchmark on toileting and diapering; the primary concern in this area was that the providers did not wash their hands after diapering or toileting of children, nor did they ensure that children washed their hands after using the bathroom. In addition, 18% of providers either provided little or no supervision during naps and rest times, or did not provide an environment that supported nap/rest for children (too little time, too long naps, too noisy, space not clean).

Space and Furnishings

Over one-third (39%) of preschool classrooms did not meet the Good benchmark for space and furnishings (ample space allowing children and adults to move around freely, good ventilation with some natural lighting and accessible space even if the classroom did not currently include a child with disabilities); 7% of classrooms did not meet even the minimal standards for crowding, ventilation, repair and maintenance.
In 41% of infant and toddler classrooms, there were problems with the arrangement of furniture to facilitate supervision and children’s play. In an additional 32% of classrooms, while the arrangement did allow open space for play and adequate supervision, there were other constraints (e.g., the staff could not always see all children at a glance, as during diapering one child or during food preparation, or young infants were not protected from more mobile children by the separation of quiet and active play areas, or toys were not easily accessible to the children – placed near non-mobile infants or on low shelves for mobile children).

Fourteen percent of infant and toddler classrooms did not have enough furniture for routine care and play, in good repair, with comfortable and supportive seats for the infants and/or toddlers. About one-third of classrooms (37%) did not have the furnishings required by the Good benchmark – furniture that facilitated individual care of infants/toddlers (e.g., high chairs rather than a group feeding table), furniture that promotes self-help for toddlers that are ready, such as steps near the sink for handwashing, or storage for extra toys and supplies. Most classrooms (64%) provided a cozy play area for only part of the day and had only a few soft toys available.

About one-third of family child care homes (32%) did not provide appropriate furnishings for routine care and play, or the furnishings were not in good repair. In addition, 15% of homes did not have soft furniture (e.g., a soft chair or couch), other than cribs or cots, or carpeted areas for children to use. Almost half of family child care homes (49%) did not meet the Minimal benchmark on indoor space arrangement, lacking adequate space set aside for use by children that is child-proofed.

Gross Motor Activities

More than half of centers serving preschoolers did not meet the Good benchmark for gross motor activity – they either did not provide indoor space for gross motor play when the weather prohibited outdoor play, the gross motor play space was not on the same level and near the classroom or the space was organized in such a way that gross motor activities interfered with each other (for example, when children could ride tricycles through the ball-play area). In addition, 10% of centers had very little age-appropriate gross motor equipment available and 4% of centers either had no gross motor space available or the space they used was dangerous (e.g., requiring a long walk on a busy street to a park or the playground also doubled as a parking lot).

In one-third of centers serving preschoolers, while supervision of gross motor activity was adequate to protect children’s health and safety (e.g., enough staff present to watch the children and positioned around the play area), the staff did not act to prevent dangerous situations before they occurred or assist children in their use of equipment to develop gross motor competencies (such as helping children learn to pump on a swing).
One-third of family child care homes (33%) did not provide safe outdoor or indoor space for active physical play, or did not provide safe materials for active physical play, such as tricycles, balls, cushions or rugs for tumbling, or crawling space indoors for infants and toddlers. Another third of homes (36%) provided space for active physical play, but not every day, or for limited time periods (less than an hour a day).

Recommendations

► Provide small grants to family child care providers and centers for equipment for active physical play, including materials appropriate for infants and toddlers.

► Provide small grants for family child care providers and centers serving infants and toddlers for furniture for routine care and play, furniture that facilitates individual care of infants/toddlers (e.g., high chairs), furniture that promotes self-help for toddlers that are ready, such as steps near the sink for handwashing, comfortable and supportive seats for the infants and/or toddlers, or storage for extra toys and supplies.

► Provide funding for space improvements to facilitate health and safety, such as increased classroom space or dedicated child care space in family child care homes, improved ventilation, increased natural lighting, sinks accessible to play and personal care areas to facilitate handwashing, accessible space, indoor space for gross motor play, or improved access to and design of outdoor gross motor play space.

► Provide training for centers and family child care homes on adult and child handwashing standards and techniques.

► Provide training for family child care providers on health standards, including keeping kitchen area and toys disinfected.

► Provide training on supervision of children, including room arrangement/outdoor space arrangement to facilitate supervision and reduce risks of injury, as well as supervision to prevent dangerous situations and to support children’s development of gross motor competencies.

► Provide regular safety inspections of centers and family child care homes for common safety hazards, including exposed electrical cords or outlets, heavy furniture that children can pull down, medicines or other hazards accessible to children, water hotter than 120 degrees F, unsafe cribs or playpens, open stairwells, and small objects that pose a choking hazard.
Appendix A: The Massachusetts Cost Quality Studies


**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:** 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 classroom was observed by trained observers and center directors / owners were interviewed by trained interviewers. The response rate was 81% for centers serving toddlers and 74% for centers serving infants.


**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.
Appendix B: ECERS, ITERS and FDCRS Scales

ECERS. The Early Childhood Environment Rating Scale - Revised Edition (ECERS-R; Harms, Clifford, & Cryer 1998) is a revision of the ECERS, which was the first in a series of rating scales developed by Drs. Harms, Clifford and Cryer for use both by practitioners and by researchers. The ECERS has been widely used for a number of years, and has become one of the standards in the field, offering useful benchmarks for practitioners, researchers and policymakers. The ECERS has good predictive validity, with studies showing that ECERS scores are related to children’s development (c.f., Peisner-Feinberg & Burchinal 1997; Whitebook, Howes, & Phillips 1990). The ECERS was used in the original Cost, Quality and Outcomes Study (Helburn 1995), on which this Maine study is modeled. By using the ECERS, the picture we develop of early care and education in Maine is directly comparable to that in other states.

The ECERS-R is a 43-item scale designed to be used in center-based care for children aged two to six years. The ECERS-R is organized into seven scales: Space and Furnishings, Personal Care Routines, Language-Reasoning, Activities, Interaction, Program Structure, and Parents and Staff. Each scale has additional subscales, with multiple items that must be passed to receive a given score. Each subscale is scored on a seven-point scale, with benchmarks established for 1 = “Inadequate,” 3 = “Minimal,” 5 = “Good,” and 7 = “Excellent.” Programs that pass some of the items that are part of the benchmark for a “3,” but not all of them, are scored a “2” on that subscale. Similarly, programs that fall between “Minimal” and “Good” are scored a “4”, and programs that fall between “Good” and “Excellent” are scored a “6”.

The following ECERS scales contained items relevant to the NAEYC Health and Safety standards.

Space and Furnishings. The setting is the context in which early care and education takes place. Inadequate space is crowded, poorly lit and poorly ventilated, in poor repair. Settings are described as having inadequate furnishings when there is not enough basic furniture and equipment (e.g., enough chairs for all the children; soft toys and gross motor equipment, such as climbing equipment or balls, are not available) or furniture is in poor repair, and when the space is arranged in such a way as to make it difficult for children to play – materials aren’t grouped in ways that encourage children to use them, walls between areas make it difficult for staff to supervise children at play, or children do not have access to play areas apart from the main flow of the classroom.

Classrooms that provide this bare minimum – enough space and basic furniture for children and adults, adequate light and ventilation, space and furnishings in good repair and safe, some age-appropriate play equipment available – are rated as meeting Minimal standards. To be rated as Good on Space and Furnishings, a classroom must provide ample indoor and outdoor space with room for the children to move around freely; the space and furnishings must be arranged in a way that facilitates play and minimizes disruptions (for example, in well-defined activity centers – art area, blocks; trike-riding is separated from the ball-play area; quiet areas and active areas do not interfere with each other); and children’s artwork or photos of recent activities must be displayed, with many items at children’s eye level, among other standards.

Classrooms are rated as Excellent on Space and Furnishings only if they meet all of the above standards, plus additional, higher standards, including: light and ventilation that can be controlled (windows that open; blinds that close); special furnishings such as a woodwork bench, sand/water table or art easels; accessible areas with cushions or other cozy play areas; at least five different activity areas to provide a variety of learning experiences; activity areas
that are organized so that materials are nearby and children can access the materials themselves (e.g., open shelves, labeled containers); some quiet activities, for one or two children at a time, are available; projects which reflect individual children’s creativity (not simply copies of adult examples) are displayed; outdoor space has some protection from the elements, convenient features such as close to drinking water, accessible storage of equipment.

**Personal Care Routines.** A classroom is rated as Inadequate in Personal Care Routines if: children are often not greeted on arrival; children’s departure is disorganized or parents are not allowed to bring their children into the classroom; meals and snacks do not meet USDA nutritional guidelines, children’s food allergies are not accommodated, staff force children to eat, or there is a chaotic atmosphere at meal times; nap/rest times are too early or too late, or children are required to nap for more than 2 ½ hours, nap/rest times are not supervised or are supervised too harshly; toileting/diapering area is not sanitary, handwashing is often neglected after toileting; staff do not act to reduce the spread of germs (noses not wiped, diapers not disposed of properly, food preparation and toileting/diapering done near one another); smoking is allowed in child care areas; inadequate supervision to protect children’s safety, several indoor or outdoor hazards that could result in serious injuries.

A classroom that meets Minimal standards is one in which: most children are greeted warmly on arrival and their departure is well-organized; well-balanced meals and snacks are provided in an atmosphere that is non-punitive and meets children’s needs; nap times are scheduled appropriately for most children with sufficient, non-punitive supervision; the toileting schedule meets the individual needs of children, with age-appropriate supervision; and staff take action to minimize the spread of infectious diseases. To be rated as Good, classrooms must: greet each child individually by name; have pleasant departure routines; welcome parents in the classroom and greet them warmly; most staff sit with the children at mealtimes; there is a pleasant social atmosphere at mealtimes and children are encouraged to eat independently with child-appropriate eating utensils; individual children’s dietary restrictions are followed; at nap/rest time, staff help children to relax with soft music, cuddly toys or back rubs, the nap space is dimly lit, quiet and arranged to help children rest (cots or mats are placed for privacy, or separated by a solid barrier); when toileting/diapering, sanitary conditions are easy to maintain and there are pleasant interactions between staff and children; staff model good health practices; children are dressed properly for conditions (dry clothes, warm clothes on cold days, aprons for messy play); staff explain reasons for safety rules to children; staff anticipate safety problems and take action to prevent problems (e.g., remove toys under climbing equipment, lock dangerous areas, wipe up spills to prevent falls).

Classrooms are rated as Excellent on Personal Care Routines only if they meet these standards, plus other, higher standards, including: on arrival, children are helped to become involved in activities, if needed; staff use greeting and departure times as information-sharing time with parents; children help during meal times (e.g. set the table, wipe up spills), children use child-size serving utensils, such as small pitchers, mealtimes are used for conversations, staff encourage children to talk about things of interest to children; nap/rest schedule is flexible to meet individual needs, provisions made for early-risers or non-nappers; child-sized toilets and low sinks available, self-help skills while toileting promoted as children are ready; children taught own health practices (proper handwashing, putting on own coat or art apron); play areas arranged to avoid safety problems, children generally follow safety rules (e.g., no crowding on slides, no climbing on bookcases).

**Interactions.** A classroom is rated as Inadequate on the Interaction scale if: supervision of children is inadequate to keep children safe; most supervision is punitive (for example, yelling, belittling children); children are disciplined severely (spanking, withholding food) or discipline is so lax that there is little order; expectations for behavior are largely inappropriate for the
children’s age and developmental level; staff ignore the children, staff-child interactions are unpleasant; interactions among children are not encouraged, little or no staff guidance in how to get along with other children, few positive interactions among children - teasing, bickering, and fighting are common.

A classroom that meets **Minimal** standards for Interactions is one in which supervision is adequate to protect children’s health and safety; there are some positive interactions between staff and children and staff usually respond to children in a warm, supportive manner; most supervision and discipline is not harsh and expectations for children’s behavior are largely appropriate for the age and developmental level of the children; children are encouraged to interact positively, and staff interrupt negative or hurtful behaviors (name-calling, fighting).

A classroom that receives a **Good** rating is one in which: classroom staff act preventively, to remove unsafe equipment or defuse potentially dangerous situations; most staff-child interactions are positive; supervision is adjusted appropriately for age and abilities (e.g., younger or more impulsive children are supervised more closely); staff give children help and encouragement when needed; staff are aware of the whole group, even when working with one child or a small group; staff use non-punitive discipline measures effectively (giving attention for positive behaviors, redirecting children from unacceptable to acceptable activities); the classroom environment is set up to reduce conflict among children (enough toys, travel paths do not lead through activity areas); staff react consistently to children’s behavior (basic rules followed with all children); staff show warmth and respect for children, respond sympathetically to an upset child; staff model good social skills and help children develop appropriate social behavior (help children talk through conflicts instead of fighting, help children understand the feelings of others).

To receive an **Excellent** rating, classrooms must meet all of the above standards, plus: staff engage the children to elaborate their play (talking about what they’re doing, helping to set up play areas); staff maintain a balance between the child’s need to explore independently and staff input into learning; when problems arise, staff involve the children in solving their conflicts (e.g., help children think of solutions), use activities such as storybooks to help children understand social skills, and seek advice from other professionals about behavior problems; staff seem to enjoy the children and encourage the development of mutual respect between children and adults (for example, staff wait until children finish asking questions before answering, encourage children in a polite way to listen when adults speak); children usually get along with each other, and staff encourage the development of these skills through group activities (e.g., painting a mural together, making soup with many ingredients).

**ITERS**

The Infant/Toddler Environment Rating Scale (ITERS; Harms, Cryer, & Clifford, 1990) has been widely used for a number of years, and has become one of the standards in the field, offering useful benchmarks for practitioners, researchers and policymakers. The ITERS has good predictive validity (Cryer, Tietze, Burchinal, Leal, & Palacois, 1999; Phillipsen, Burchinal, Howes, & Cryer, 1998). In addition, scores have been shown to be predictive of children’s development (Burchinal, Roberts, Nabors, & Bryant, 1996; Peisner-Feinberg et al., 1999).

The ITERS is a 35-item scale designed to be used to assess center-based infant and toddler care. The ITERS is organized into seven scales: Furnishings and Display, Personal Care Routines, Listening and Talking, Learning Activities, Interaction, Program Structure, and Adult Needs. Each scale has additional subscales, with multiple items that must be passed to receive a given score. Each subscale is scored on a seven-point scale, with benchmarks established for 1 = “Inadequate,” 3 = “Minimal,” 5 = “Good,” and 7 = “Excellent.” Programs that pass some of the items that are part of the benchmark for a “3,” but not all of them, are scored a “2” on that
The following ITERS scales contained items relevant to the NAEYC Health and Safety standards.

**Furnishings and Display.** This scale focuses on the setting in which the care takes place. **Inadequate** space is crowded, poorly maintained, lacks softness and display and difficult to supervise. These settings also lack sufficient furnishings for the basic care of children (e.g., high chairs, cribs) or furniture that is in poor repair (e.g., broken, unstable). These classrooms have limited “softness” for children’s play (e.g., no upholstered furniture, carpeting or cushions for play) and offer no display materials (e.g., photos, mobiles, store-bought pictures, drawings). The arrangement of the space makes it difficult for children to play – materials are not grouped in ways that encourage children to use them, walls between areas make it difficult for staff to supervise children at play, or children do not have access to play areas apart from the main flow of the classroom.

Classrooms that provide the bare minimum – enough space and enough safe, well-maintained basic furniture for children, some age-appropriate display, some soft materials (e.g., rug or cushions) and some easy to clean soft toys– are rated as meeting **Minimal** standards.

To be rated as **Good** on Furnishings and Display, a classroom must provide some adult-sized furniture for use during routine care, furniture that accommodates the individualized care of children, low, open-shelving for age appropriate toys, sturdy storage containers to keep toys separated and organized, a special cozy area that is protected from active play, easily accessible routine care areas, a separation of active and quite play areas and many colorful pictures and mobiles which are referenced to by the teachers during interactions with children.

Classrooms are rated as **Excellent** on Furnishings and Display if they meet all of the above standards, plus additional, higher standards, including the presence of: child-sized furnishings that can be used independently by toddlers (applicable to toddler classrooms only), comfortable adult furnishings to assist with person care routines (e.g., bottle feeding an infant), convenient storage of extra toys which can be easily accessed by caregivers, a special cozy area for quiet play plus additional softness in other parts of the classroom (e.g., several soft rugs, soft chairs and cushions). Classrooms must also offer a variety of learning experiences in both routine and play areas (e.g., many toys in play area and mobiles over changing areas); defined interest areas that are organized with like-materials and easily accessible by children (e.g., open shelves, labeled containers); a display that includes photographs of children in the room and their families, scribbles pictures done by toddlers and protection for pictures to prevent ripping (toddler classrooms only).

**Personal Care Routines.** A classroom is rated as **Inadequate** in Personal Care Routines if: children are often not greeted on arrival; parent’s are discouraged from entering the classroom and do not have direct contact with caregivers; meals and snacks do not meet USDA nutritional guidelines and are prepared in an unsanitary manner; infants are not held during bottle feeding and children are put to bed with bottles; nap/rest times does not meet the individual needs of children (e.g., schedule does not fit with child’s needs, inappropriate sleeping areas are used for napping); cribs are used for extended play; nap/rest times are not supervised; toileting/diapering area is not sanitary and handwashing is often neglected; staff respond harshly to toileting accidents; diapers are not checked every 2 hours; spread of germs is not diminished (noses not wiped, diapers not disposed of properly, food preparation and toileting/diapering done near one another); the classroom lacks proper ventilation and maintenance (e.g., equipment poorly maintained, dirty floors, pealing paint); no emergency or health records on kept for children; several indoor or outdoor hazards that could result in serious
injuries exist and the center has no written safety and emergency procedures. A classroom that meets **Minimal** standards is one in which: most children and parents are greeted and parents are allowed to enter care giving area; staff share information on children’s health and safety with parents; well-balanced meals and snacks are provided in an atmosphere that is non-punitive and meets the individual needs of children and guidelines for sanitary food preparation; infants are held when bottle fed; nap is scheduled appropriately for individual children with sufficient supervision; toileting/diapering meets the individual needs of children and sanitary practices are implemented; staff take action to minimize the spread of infectious diseases (cribs placed appropriately, children have own blanket and designated sleeping place); classroom is adequately maintained; no major hazards are present in classroom or outside; health records of children are maintained; and emergency plans are posted and practiced.

To be rated as **Good**, classrooms must: greet each child individually by name; maintain a written record of infant’s feeding, diapering and naps must be maintained; handle separation problems in a sensitive manner; feed children individually or in small groups and provide a pleasant social atmosphere; post menus for parents; encourage and assist children with eating independently; ease toddlers into a group nap schedule; offer child-sized toilets and self-help around toileting and diapering; provide stimulation during personal care routines (e.g., sings songs); model good health practices for children; provide accommodations for sick children; record and consider special health problems of children during planning; administer medication only with written permission from the parent; teach children safety rules as soon as possible; avoid safety problems through a well-planned environment (e.g., a non-mobile child is separated from older children during play); have access to trained substitutes and one staff person that is trained CPR and first aid.

Classrooms are rated as **Excellent** on Personal Care Routines only if they meet these standards, plus other, higher standards, including: on arrival and departure, staff share specific information about the day with parents; (e.g., new skills developed, play activities); the caregiver sits with children during feeding times and provides appropriate stimulation (e.g., labels food, teaches toddler to use spoon); caregivers work with parents to establish healthy eating habits; at nap/rest time, staff help children to relax with soft music, cuddly toys or back rubs; provisions made for early-risers; when toileting/diapering, providers talk and relate to children and encourage toddlers self-help skills; providers inform parents about children’s diapering and toileting; staff use personal grooming is used as a learning opportunity; individual toothbrushes and a sink that can easily access are provided for toddlers; health and safety information is offered to parents; health-related books, pictures and games are used with toddlers; surfaces of the room are easy to maintain and clean; the center has an arrangement with a medical consultant children and all regular caregivers have training in first aid and CPR.

**Interactions.** A classroom is rated as **Inadequate** on the Interaction scale if: discipline is either punitive (for example, yelling, belittling children) or too lax, children have little opportunity to interact with peers, little or no caregiver guidance is offered to facilitate peer interaction, care is impersonal and lacking affection and warm physical contact.

A classroom that meets **Minimal** standards for Interactions is one in which children are allowed to move freely and form their own natural groupings; non-mobile infants are removed taken out of cribs, playpens, and swings and allowed to explore freely; the caregiver address negative social interactions (e.g., biting, biting); some smiling, talking and affection is shown to all children; the caregiver engages in warm physical contact during routines and responds sympathetically when children are upset; most supervision and discipline is not harsh and expectations for children’s behavior are largely appropriate for the age and to prevent children from hurting one another.
A classroom that receives a **Good** rating is one in which peer interaction is usually positive – infants watch and react to others, toddlers play side by side with few conflicts – and caregivers serve as a model for positive social interactions. In addition, there are frequent positive caregiver-child interactions, caregivers and children are relaxed, use a pleasant voice tone and frequently smile; caregivers show physical warmth through frequent holding and patting; caregiver-child interactions are consistent across all caregivers. Finally, the classroom environment is set up to reduce conflict among children (enough toys, travel paths do not lead through activity areas); caregivers expectations are realistic and age-appropriate; alternative methods of discipline are used effectively (giving attention for positive behaviors, redirecting children from unacceptable to acceptable activities); and caregivers react consistently to children’s behavior.

To receive an **Excellent** rating, classrooms must meet all of the above standards, plus: caregiver reinforces positive social interactions (e.g., smiles and talks to babies who notice other children); caregiver points out and talks about positive social interactions; caregivers are given the responsibility for a small number of children; caregivers vary interactions to meet the needs of individual children (e.g. animated around an active child, calm and soothing around a tired child); caregiver are sensitive about children’s feeling and reactions; caregivers give attention to positive behaviors; caregivers acts proactively to avoid problems and explain simple rules to toddlers.

**FDCRS**

The Family Day Care Rating Scale (FDCRS; Harms & Clifford,1989) is a commonly used measure of process quality that provides benchmarks for different levels of quality. Each family child care home was observed by a trained observer, and scored on these benchmarks. The benchmarks are labeled 1 = inadequate care, 3 = minimally adequate care, 5 = good care and 7 = excellent care. The FDCRS consists of six different scales, each of which measures a specific aspect of the family child care home environment.

The following FDCRS scales contained items relevant to the NAEYC Health and Safety standards.

**Space and Furnishings for Care.** The Space and Furnishings scale is a measure of the physical setting. A family child care home that meets Minimal standards is one in which there is enough space and furniture to meet the basic needs of all children, and it is safe and in good repair. The furnishings and space include at least one piece of soft furniture, some of the children’s artwork and a carpeted space in the area used for child care. In addition, there is space appropriate for the ages of the children (crawling space for infants, play space for preschoolers); the space is cleared of breakable objects and other “no-no’s” so that children can play with few restrictions. There is also safe outdoor space available and it is used at least three times a week, except in bad weather.

In contrast, in a family child care home that meets the Good benchmark, furniture is made appropriate for the child’s size (e.g., adult chairs with cushions used while eating). The furnishings are regularly cleaned (tables washed after eating or art activity), and include more soft furniture and soft stuffed toys. The space is well-arranged (not crowded, traffic patterns do not go through a play area), with two or more clearly-defined play areas appropriate to the ages of the children. In addition, the children are provided with indoor physical activity during bad weather. To meet the Excellent benchmark, family child care homes must meet all of the above, plus there must be some child-sized furniture, displays are at children’s eye level and are changed frequently to match their activities and interest. In addition, there are many materials available for children of different age groups, and additional materials are available to add to or change play areas. Finally, the provider uses the space to plan new and challenging
activities each week and also provides opportunities for individual play.

**Basic Care.** The Basic Care subscale is a measure of the extent to which the care environment meets the basic physical needs of the children, including meals, naps, diapering/toileting, health and safety. An environment that meets Minimal standards has regular routines and well-balanced meals and snacks; the cooking and eating area is clean, and sanitary food preparation standards are met. The diapering/toileting area meets basic sanitary conditions (e.g. diapering area cleaned after each use; caregiver washes hands after helping child with toileting). The setting is clean and safe, and the provider has basic safety and emergency materials available. A setting that meets the Good benchmark goes beyond these basics: the provider organizes and schedules basic care routines (mealtimes, naps) so that children’s basic needs are met. The space and equipment promotes self-help and healthy development. In addition, pleasant interactions between the provider and children occur during routine activities. To meet the Excellent benchmark, the provider must encourage age-appropriate self-help skills across a variety of routines and accommodate the needs of individual children. Health information is provided for parents, and the provider models good health habits and teaches safety to children.