Smart Start is North Carolina's partnership between state government and local leaders, service providers, and families to better serve children under 6 years and their families to ensure that all children enter school healthy and prepared to succeed. This study acquired a baseline measure of the quality of child care in the 12 pioneer Smart Start partnerships representing 18 North Carolina counties. In 1994-95, evaluation team members measured the quality of child care centers from Smart Start counties, collecting data through classroom observations, director interviews, and self-assessments of training needs. Additional data will be collected in 1996-97 and compared to baseline data. Findings indicated that 39 percent of the 184 child care centers were licensed at the "AA" level, representing a higher standard of care than the minimal acceptable level of "A." Six percent of centers were accredited through the National Association for the Education of Young Children (NAEYC). Only 14 percent of the sample of over 900 teachers had at least a bachelor's degree. The average turnover rate in Smart Start partnerships was 32 percent, well above the 25 national average for child care teachers. Salaries for lead teachers averaged $5.77 an hour in 1995, with many centers not offering benefits. Fees for child care varied widely across centers and counties, with preschoolers' fees ranging from $138 to $550 per month in the Smart Start partnerships. Only 14 percent of the preschool classes provided high quality care, as assessed through on-site observations, suggesting that the quality of child care needs to be improved in North Carolina. (Author/KB)
Center-based Child Care in the Pioneer Smart Start Partnerships of North Carolina

UNC Smart Start Evaluation Report
May 1996
This report was written by Kelly Maxwell, Donna Bryant, Ellen Peisner-Felmberg, and Virginia Buyse. Data for this report were gathered as part of the Smart Start Evaluation contract from the Department of Human Resources to the University of North Carolina at Chapel Hill. We want to thank all child care directors and providers who participated in this evaluation.

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In North Carolina, over 130,000 children under the age of 6 attended center-based child care in 1995. We know that children who receive high quality child care demonstrate better cognitive and social skills than children who receive lower quality child care, helping them become more healthy and prepared to succeed when they enter school. Yet 18% of our kindergartners in 1995 were not considered by their teachers to be ready to participate successfully in school. This percentage of children not ready for school could be reduced if high quality child care were available to all young children who needed it.

Smart Start (the North Carolina Early Childhood Initiative) was established in 1993 as a partnership between state government and local leaders, service providers, and families to better serve young children and their families, ensuring that all children enter school healthy and prepared to succeed. Smart Start’s innovative approach requires local community partnerships to plan how best to meet their own community’s needs, improve and expand previous programs for children and families, and design and implement new programs. Although each partnership decides how best to meet the needs of children and families, they are all working to improve the quality of early childhood education, including center-based care.

Are we providing high quality child care in North Carolina? What effect is Smart Start having on the quality of care? These questions were addressed in the evaluation of Smart Start by examining child care quality in the 12 pioneer Smart Start partnerships (representing 18 counties — 11 counties plus 1 region composed of 7 counties). In the fall and winter of 1994–95, evaluation team members measured the quality of child care by visiting 184 child care centers from Smart Start counties. At each visit, researchers measured the quality of the preschool classroom, interviewed the director, and obtained demographic information and a self-assessment of training needs from the child care provider(s) in the observed classroom. The information collected during these visits is described in this report and provides baseline evaluation data about the quality of child care services in these counties early in the Smart Start initiative. To determine whether child care quality improves, additional data from child care centers will be collected in 1996–97 and compared to baseline data.

**State Licensing and National Accreditation Standards**

States regulate child care through licensing standards. North Carolina has 2 major licensing levels. An “A” license represents the minimal acceptable standard of care. An “AA” license represents a higher standard of care, including better teacher-child ratios (i.e., more teachers per children), smaller group sizes, greater space per child, and more educational materials. The proportion of AA-licensed centers
is one indicator of child care quality at a very general level. In our sample of 184 centers from the first 12 Smart Start partnerships, only 39% were licensed at the higher AA level.

Whereas all child care centers operating full time must meet state regulations, some centers voluntarily meet standards of quality even higher than AA through an accreditation process of the National Association for the Education of Young Children (NAEYC). This national organization of early childhood providers has set the highest standards of quality for which centers can obtain accreditation. These standards cover many aspects of the physical and learning environment, such as the quality of the interactions between teachers and children, planned learning activities that are appropriate to children's ages and development, and teacher education and training. Obtaining accreditation is a lengthy process that takes at least a year, and the accreditation must be renewed every 3 years. In the North Carolina Smart Start sample at baseline, very few centers met these professional standards of quality. Only 6% of the centers were NAEYC accredited, although another 13% had begun the accreditation process.

These levels of licensing and accreditation are being monitored to see if Smart Start efforts will increase the number and proportion of higher quality centers. For example, between 1993 and 1995, the percentage of AA-licensed child care facilities increased by 25% in the pioneer Smart Start counties and increased by only 17% in the non-Smart Start counties. Future analyses will determine whether this trend continues and whether the increase in higher quality child care centers is associated with Smart Start efforts.
**Classroom Standards**

Requirements for group sizes and teacher-child ratios (i.e., the number of teachers per children in each class) have been established for the A- and AA-licensing standards as well as for the professional NAEYC standards (see Table 1). Children's care is more likely to be developmentally appropriate if there are fewer children in the class (i.e., smaller group sizes) and more teachers per children (i.e., better teacher-child ratios). Table 2 presents the percent of classes in our sample that met the group size and ratio requirements set by each level of standards (met only A-licensing standards, met AA-licensing standards, and met NAEYC standards). For infants, one-, and two-year olds, the standards for A and AA are the same. Only about a third of the classes for infants to 3-year-olds met the professional standards of quality established by NAEYC. Within each age level, some classes did not meet even the lowest state standard, an A licensing level. At the center level, only 13% met NAEYC standards for all of their classrooms (regardless of accreditation status). Forty-four percent met AA-licensing levels for all classrooms, 21% of centers met A-licensing levels for all classes, and 22% of the centers had 1 or more classes that were out of compliance with the A-licensing level. Overall, some classes within centers met the ratio and group size requirements of AA-licensing and NAEYC standards, but fewer centers met these standards for all of their classes.

**Table 1**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Ratio Group Size</th>
<th>AA Group Size</th>
<th>NAEYC Group Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants</td>
<td>1:5 10</td>
<td>1:5 10</td>
<td>1:4 8</td>
</tr>
<tr>
<td>Ones</td>
<td>1:6 12</td>
<td>1:6 12</td>
<td>1:4 6</td>
</tr>
<tr>
<td>Twos</td>
<td>1:10 20</td>
<td>1:10 15</td>
<td>1:3 10</td>
</tr>
<tr>
<td>Threes</td>
<td>1:15 25</td>
<td>1:15 25</td>
<td>1:3 16</td>
</tr>
<tr>
<td>Fours</td>
<td>1:20 25</td>
<td>1:15 25</td>
<td>1:9 18</td>
</tr>
<tr>
<td>Fives</td>
<td>1:25 25</td>
<td>1:15 25</td>
<td>1:9 18</td>
</tr>
</tbody>
</table>

**Table 2**

Percent of Child Care Classes in Smart Start Sample that Met Ratio and Group Size Standards* (N=184)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Out of compliance</th>
<th>Met only the A standards</th>
<th>Met the AA standards</th>
<th>Met NAEYC standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants</td>
<td>17%</td>
<td>52%</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>Ones</td>
<td>11%</td>
<td>62%</td>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>Twos</td>
<td>8%</td>
<td>66%</td>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>Threes</td>
<td>3%</td>
<td>37%</td>
<td>34%</td>
<td></td>
</tr>
<tr>
<td>Fours</td>
<td>3%</td>
<td>33%</td>
<td>47%</td>
<td></td>
</tr>
<tr>
<td>Fives</td>
<td>8%</td>
<td>38%</td>
<td>46%</td>
<td></td>
</tr>
</tbody>
</table>

*Regardless of the licensing level of the center

*Ratio and group size standards are the same for both A- and AA-licensing levels at this age
Teacher Education

A teacher's formal education is the strongest predictor of her teaching style in the classroom. Teachers with more education, especially those with a Bachelor's degree, are generally more sensitive, less harsh, less detached, and interact more appropriately with young children. Clearly, employing well-educated teachers is one of the keys to providing high quality care. In our sample of over 900 teachers, only 14% had a Bachelor's degree or higher. A little over a third had only a high school education. Compared to national data from 1990, North Carolina has far fewer well-educated teachers (see Figure 1). More education would help teachers provide the learning environment necessary for children's development to thrive. The Smart Start evaluation team will collect information on child care teacher education again in the fall of 1996 to determine whether the overall education level of providers has increased since 1994.

Teacher Turnover Rate

Keeping teacher turnover low is another key to high quality care. Children's development is fostered by having warm relationships with consistent caregivers. When caregivers change frequently, they cannot get to know each child and his or her unique learning styles. In the 12 Smart Start pioneer partnerships, the average teacher turnover rate in 1994-95 was 32%. This is well above the 10% turnover typical of public schools and higher than the national child care teacher turnover rate of 25%. For the average center, this means that of the 6 lead teachers employed, 2 quit each year, leaving behind children who must form new relationships with new caregivers.
Wages and Benefits
If teacher turnover is so harmful to children, what can be done to improve it? The National Child Care Staffing Study reported staff wages as one of the most important predictors of turnover. Simply stated, teachers with better pay and benefits stay longer. In the 12 pioneer Smart Start counties, the typical lead teacher earned $5.77 an hour in 1995 (approximately $12,000 a year). This is about the same hourly rate made by hotel housekeepers ($5.85), bartenders ($5.62), and parking lot attendants ($5.47) in North Carolina. Benefits for child care providers were also poor. Many centers did not offer basic benefits that most of us expect with our jobs (see Figure 2). For instance, 33% of the centers did not offer paid sick or personal leave and 48% did not cover any of the costs of health insurance for their employees. The low wages and benefits are undoubtedly a reason that more teachers with degrees are not working in child care and why even the most dedicated teachers leave the profession to take better paying jobs.

Cost of Child Care
Child care, regardless of the quality of care provided, is costly. The median monthly fee for infant care in our sample was $275 per month. For toddlers, it was $260 and for preschoolers, $240. These fees varied widely across centers and counties. For instance, fees for preschoolers ranged from $138 to $550 per month in the pioneer Smart Start sample.

Although child care cost is most often thought of as the cost to parents (i.e., fees), costs can also be looked at in terms of the operating costs for centers to provide child care. While parent fees are usually expensive in relation to family income, they do
not cover all of the costs of providing care. Generally, parent fees cover about 73% of the total operating costs to centers.9 The remaining costs have to be paid by other means (e.g., public funds, donations). Because child care is such a labor-intensive industry, labor costs account for about 70% of the operating costs of centers.10 The operating costs would be higher if child care staff received better wages and benefits. High quality child care is even more expensive for centers to provide, with higher quality care related to fewer children per staff member, better educated staff, and higher staff wages—which means hiring more well-educated staff and paying them higher wages. Therefore, efforts to improve the quality of child care may result in higher operating costs to centers and higher parent fees.

However, increasing both the amount of government child care subsidies to low-income families and the number of families receiving these subsidies should enable more families to use better quality (and more expensive) child care. Every pioneer Smart Start partnership has allocated part of their funds to the government child care subsidy system to provide financial assistance with child care expenses for low-income families. From 1993 to 1994, the pioneer Smart Start counties reduced the number of children on the child care subsidy waiting list by 42%, compared to a 36% increase of children on the waiting list in non-pioneer Smart Start counties during the same period. With Smart Start support, these children and families are receiving the child care they need. The challenge is to ensure that this care is also high quality care.

Child Care Quality

Only 14% of the preschool classes in our sample were providing high quality care. The quality of preschool classrooms was measured through on-site observations in child care centers.
using the Early Childhood Environment Rating Scale). The quality of care was characterized as poor, mediocre, or good, based on how well it met the needs of children, including their needs for health, safety, opportunities for learning, and social and emotional relationships with caregivers and other children. As shown in Figure 3, very few classrooms provided care that was poor (quality ratings from 1 < 3) and the majority of classrooms provided care in the mediocre range (quality ratings from 3 < 5). This suggests that most child care centers were at least minimally meeting children's basic needs for health and safety but were less good at providing appropriate opportunities for learning and for developing warm relationships with others. Only 14% of the classes provided good care (quality ratings of 5 or above), which is much lower than one would hope.

Overall, these findings indicate that for most young children in child care centers in North Carolina, their physical, social, emotional, and intellectual needs are not being met well. By not meeting these basic needs of children in the preschool years, it will be difficult to meet the primary goal of Smart Start which is to ensure that all children enter school healthy and ready to succeed. To determine whether the quality of care has improved over the first 2 years of Smart Start, observations by evaluation team members will be conducted again in child care centers in the fall of 1996.

Child Care Quality and Smart Start Participation
Smart Start was designed to improve the quality of child care by providing teacher training, educational materials, and other supports to centers and child care providers. Are centers participating in these Smart Start quality improvement opportunities? In our sample of child care centers from the original 12 Smart Start partnerships, 95% of the centers were participating at least minimally in Smart Start. Center participation in various Smart
Start activities is described in Figure 4. Not surprisingly, individual centers varied in their participation in Smart Start. Some centers were participating in many activities while others were only participating in one. Centers that were participating more in Smart Start were providing significantly better quality child care than centers less involved in Smart Start. The training, quality improvement grants, and other efforts funded by Smart Start may well have helped improve the quality of care in these centers. However, it is also possible that the differences in quality existed prior to Smart Start, with centers which were already providing higher quality care being more interested in participating in Smart Start. Data collected in future years will help clarify this relationship between Smart Start involvement and higher quality child care.

Quality of Care for Children with Special Needs

Of the 184 child care centers visited by the Smart Start evaluation team, 64 (35%) enrolled at least 1 preschooler with disabilities (children who have been diagnosed as delayed in 1 or more areas of their development). This reflects a growing national trend to include young children with disabilities in regular child care settings. How does the quality of care for children with disabilities compare with the quality of care for typically developing children? To answer this, the Smart Start evaluation team compared the quality of care (as measured by ECERS scores) in child care centers that enrolled at least 1 child with disabilities to the care provided by centers that enrolled only typically developing preschoolers. Programs that enrolled children with disabilities provided better quality care than those that enrolled only typically developing children. Not surprisingly, teachers from classes that enrolled children with disabilities rated themselves as being more knowledgeable and skilled in serving children with disabilities and as needing less training than teachers who did not serve children with disabilities.
These findings may be interpreted in several ways. Parents and service providers may seek out the highest quality child care centers as placements for young children with disabilities. On the other hand, centers that enroll children with disabilities may attract or seek out training resources that lead to better trained staff and overall improvements in program quality for all the children they serve. Many Smart Start partnerships are providing training and assistance to child care providers who care for children with special needs. As additional data are collected in future years, it will be interesting to see whether more children with disabilities will be served in child care—and whether their care will be of high quality.

Conclusions
The quality of child care in North Carolina needs to be improved. Compared to national averages, the teacher turnover rate is high and teacher education is low. Seven percent of the child care classes are out of compliance with even the minimum state regulations. Only 14% of the child care classes are providing good quality care.

Smart Start is designed to improve the quality of child care. We know that Smart Start participation is positively associated with higher quality care. When the Smart Start evaluation team repeats the child care observations in the fall of 1996—2 years after full implementation of Smart Start—we should know whether these many quality improvement efforts are making a difference.
Center-based Child Care

Notes
2 1995 Smart Start Evaluation Kindergarten Teacher Survey.
3 For a more detailed description of the evaluation methods, refer to the January 1995 report, "Overall Summary of Smart Start Evaluation 1994-95 Child Care Data from the Pioneer Counties."
6 Ibid.
10 Ibid.
11 The Early Childhood Environment Rating Scale was developed in 1980 by Thelma Harms and Dick Clifford. It is a well-established global measure of child care quality that has good reliability and validity and has been used widely in child development research. The ECERS includes 37 items covering seven general areas: personal care routines, furnishings and display for children, language-reasoning experiences, fine and gross motor activities, creative activities, social development, and adult needs. Scores can range from 1 to 7, with scores from 1< 3 considered “poor,” scores from 3< 5 considered “mediocre,” and scores of 5 or greater considered “good.”
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