



# INVESTING IN MICHIGAN'S FUTURE:

## MEETING THE EARLY CHILDHOOD CHALLENGE



The Education Policy Center  
at Michigan State University







## EXECUTIVE SUMMARY

The experiences children have before the age of 5 can profoundly affect the rest of their lives. Many Michigan children are growing up in conditions of toxic stress that put them at a huge initial disadvantage when they begin school. The right early childhood care and education programs can help even the neediest children overcome these disadvantages. The state and the nation have a compelling interest in making sure that every child comes to school ready to succeed.

This report presents results from research into the effects of early childhood programs on their participants, particularly low-income and at-risk children. The studies described offer the best evidence on the long-term effects of high quality early childhood programs. Such programs can have long-lasting positive effects on children and their families, whether measured by intellectual performance in childhood, school achievement in adolescence, reduced placements in special education, reduced retentions in grade, improved high school graduation rates, reduced arrest rates, or older age of mothers at the birth of their first child. These evaluations further suggest that the returns on investments in high-quality early childhood education are dramatically larger than the returns on almost any other public investment, with a return of anywhere from four to seventeen dollars for every dollar spent on programs.

Studies of Head Start and state preschool programs report modest short-term effects, including significant improvement in the literacy and social skills of children as well as in the behavior of their parents. The evidence described in this report strongly suggests that existing publicly funded preschool programs would benefit from becoming more like high-quality model preschool programs that have been proven effective if they are to achieve the long-term effectiveness of which they are capable.

Michigan is prevented from reaping potentially large gains from investment in early childhood education because care and education for young children are provided under a patchwork quilt of policies, programs and providers at both the state and federal levels. Resources and responsibility are scattered across a diverse array of competing agencies, with insufficient attention given to the quality of programs, especially for the neediest children.

Turning this patchwork of governance practices and programs into an efficient, effective system is a huge opportunity for Michigan policy-makers—but also a tremendous challenge. Providing high quality early childhood care and education to Michigan’s young children, particularly those living in poverty and other at-risk conditions, is an investment that will pay substantial, tangible dividends down the road by raising skill levels across the state’s workforce while reducing unemployment and welfare dependency, criminal justice costs and teen pregnancy rates. Many states are now moving toward comprehensive systems for early childhood



care and education and have adopted early childhood standards. Michigan is beginning to map out a comprehensive early childhood support system, but has yet to put significant resources behind this effort.

The goal of Michigan's early childhood education policies in the immediate future should be **a steady increase in the number of Michigan children participating in high-quality early childhood education programs**. A strategy to achieve this goal requires action on five different fronts:

- ◆ Michigan must reduce the patchwork of programs and providers, rather than making it more complicated.
- ◆ Policy-makers must "raise the floor" in terms of the quality of care received by Michigan children by increasing standards and expectations for **all** early childhood education programs and providers.
- ◆ State policy-makers should use funds more effectively, shifting funds to higher-quality center-based programs such as the Michigan School Readiness Program and away from low-quality and custodial programs.
- ◆ Policy-makers should target resources toward the neediest children, including those living with toxic stress and those currently involved in low-quality early childhood care.
- ◆ Policy-makers should support efforts to develop and expand model programs for needy children in needy communities.

Decisions about early childhood care and education made by state policy-makers today will have profound and lasting effects on the economic and social well-being of children, their families and the state itself for decades to come.



## **TABLE OF CONTENTS**

|   |           |
|---|-----------|
| <b>I. THE EARLY CHILDHOOD CHALLENGE . . . . .</b>   | <b>1</b>  |
| <b>II. EVIDENCE OF THE VALUE OF HIGH-QUALITY EARLY CHILDHOOD CARE AND EDUCATION . . . . .</b> | <b>5</b>  |
| <b>III. EARLY CHILDHOOD CARE AND EDUCATION IN CONTEXT . . . . .</b>                           | <b>16</b> |
| <b>IV. EARLY CHILDHOOD CARE AND EDUCATION IN MICHIGAN TODAY . . . . .</b>                     | <b>25</b> |
| <b>V. MICHIGAN EARLY CHILDHOOD POLICY OPPORTUNITIES . . . . .</b>                             | <b>34</b> |
| <b>NOTES . . . . .</b>  | <b>37</b> |

**INVESTING IN MICHIGAN'S FUTURE**





## **LIST OF TABLES AND FIGURES**

|                 |   |           |
|-----------------|---|-----------|
| <b>TABLE 1</b>  | <b>CHARACTERISTICS OF THREE LONG-TERM<br/>EARLY CHILDHOOD STUDIES . . . . .</b>                                 | <b>8</b>  |
| <b>TABLE 2</b>  | <b>FINDINGS OF RECENT SHORT-TERM EARLY<br/>CHILDHOOD PROGRAM STUDIES . . . . .</b>                              | <b>12</b> |
| <b>FIGURE 1</b> | <b>NONPARENTAL CARE AND EDUCATION<br/>ARRANGEMENTS FOR U.S. CHILDREN . . . . .</b>                              | <b>16</b> |
| <b>TABLE 3</b>  | <b>U.S. CHILDREN UNDER 6 YEARS OLD,<br/>BY TYPE OF WEEKLY NONPARENTAL<br/>CHILD CARE ARRANGEMENTS . . . . .</b> | <b>17</b> |
| <b>TABLE 4</b>  | <b>FEDERAL EARLY CHILDHOOD PROGRAMS . . . . .</b>   | <b>19</b> |
| <b>FIGURE 2</b> | <b>TOTAL CCDF EXPENDITURES: 2000-2004. . . . .</b>  | <b>20</b> |
| <b>FIGURE 3</b> | <b>U.S. SUBSIDIZED CHILD CARE PROVIDERS,<br/>BY LICENSING AND TYPE. . . . .</b>                                 | <b>21</b> |
| <b>TABLE 5</b>  | <b>2004 MICHIGAN SUBSIDIZED CHILD CARE<br/>PROVIDERS, BY LICENSING AND TYPE . . . . .</b>                       | <b>27</b> |
| <b>FIGURE 4</b> | <b>MICHIGAN SUBSIDIZED PROVIDERS, BY TYPE . . . . .</b>   | <b>27</b> |
| <b>FIGURE 5</b> | <b>2004 CCDF FUNDS IN MICHIGAN, BY TYPE OF<br/>REGULATION . . . . .</b>   | <b>28</b> |
| <b>FIGURE 6</b> | <b>REGULATED CCDF PROVIDERS IN MICHIGAN<br/>VS. U.S.: 2004 . . . . .</b>  | <b>29</b> |

**INVESTING IN MICHIGAN'S FUTURE**





# I

## THE EARLY CHILDHOOD CHALLENGE

Two very different kinds of research into early childhood development now provide convincing evidence that converges on a common—and common sense—conclusion: the experiences children have before the age of five have profound influence upon the rest of their lives.<sup>1</sup>

The first kind of research involves remarkable advances in the field of neuroscience, or brain research. The brain is a complex collection of interconnected cells that transmit information from one cell to another. The brain develops by building basic circuits between cells, which become the basis for more complex circuits, and so on. Thus, a child first learns to discriminate language sounds, then learns to combine these sounds into words, then sentences, and so forth.

Genetics determines the timetable for brain development, but experience determines the actual construction of circuits between brain cells, known as brain architecture. A newborn baby has the capacity to learn any language in the world, but immediately begins to build the circuits that allow her to discriminate the sounds of her home language rather than other languages. Using sophisticated medical imaging techniques, such as positron emission topography and functional magnetic resonance imaging, researchers can actually see this brain architecture at work as the circuits fire during mental activity.

While the early childhood experiences needed for healthy brain development are commonplace in the environments of most children, neuroscience has identified conditions that are dangerous to the developing brain, and from which young children should be protected. Young children cannot handle the toxic stress that arises from persistent, dysfunctional poverty in which they experience physical or emotional abuse or neglect. Toxic stress involves the absence of supportive relationships and harms the development of young children's brains. Simply put, the brains of young children are harmed by neglect, abuse and harsh environments. Neuroscience imaging shows that the brains of young children raised under such conditions are visibly less developed than the brains of young children raised under healthy conditions.

Many Michigan children are growing up in conditions of toxic stress that put them at a huge initial disadvantage when they begin school. The state and the nation have a compelling interest in making sure that every child comes to school ready to succeed.

*The experiences children have before the age of five have profound influence upon the rest of their lives.*

---

<sup>1</sup>The conclusions expressed in the report are the author's own, and do not necessarily reflect the views of Michigan State University. We wish to express our thanks to Chris Reimann and Jeannie Patrick for their help with the editing and production of the report.



The second kind of research involves rigorous, random-assignment studies of the effects of early childhood programs on children's development and subsequent success. Some of these studies focused specifically on model programs—that is, programs designed as experimental models to test the efficacy of particular approaches to child care and development. These model programs were targeted at young children living in at-risk environments and provided children with respite from the toxic stress in their lives, as well as educational experiences that helped grow the circuitry of their brains.

The data produced by these studies provide solid evidence that high quality programs have significant, positive, long-lasting impacts on the participating children, their families and the state as a whole—impacts that can be measured in higher test scores and graduation rates for the program participants, and in return-on-investment rates for policy-makers and taxpayers.

In other words, the economic and social benefits of high quality early childhood care and education are significant. This is important news, because the numbers involved in early childhood care and education are sizeable. Michigan has more than 650,000 children under the age of five, almost 400,000 of whom have some kind of child care arrangement—a number approximately equal to the total populations of Grand Rapids, Lansing and Troy combined. More than 80,000 child care providers across the state receive funding from one or more programs, from babysitting relatives and neighbors to child care centers and preschools staffed by early childhood specialists.

There is also sizeable money involved in early childhood care and education. In fiscal 2003 the State of Michigan awarded nearly \$500 million dollars in state and federal subsidies to child care providers and Michigan families paid hundreds of millions of dollars on their own. In all, the federal government spends more than \$16 billion each year on early childhood programs.

Unfortunately, Michigan is handicapped from reaping the maximum benefits of early childhood care and education by a patchwork of governance practices and programs that reflect a lack of clarity in the purpose and scope of early childhood policy. Some of these practices and programs were established long before the research on brain development and effective programs was available. Many of them have been shaped by their connection to other important policy domains such as welfare or school reform. Inevitably, all of them have been influenced by the ebb and flow of funding, as a succession of policy-makers has struggled to determine spending priorities in good economic times and bad.

Turning this patchwork of governance practices and programs into an efficient, effective system is a huge opportunity for Michigan policy-makers—but also a tremendous challenge. Providing high quality early childhood care and education to Michigan's young children, particularly those living in poverty and other at-risk conditions, is an investment that

*High-quality early childhood education...can be expected to raise skill levels across the state's workforce and to reduce unemployment and welfare dependency, criminal justice costs and teen pregnancy rates.*

## MEETING THE EARLY CHILDHOOD CHALLENGE

will pay substantial, tangible dividends down the road by raising skill levels across the state's workforce while reducing unemployment and welfare dependency, criminal justice costs and teen pregnancy rates.

Improving early childhood care and education in Michigan will require some tough decisions by policy-makers. However sound, an investment is a decision to allocate current money toward a future goal, making less money available to meet immediate wants or needs. More funding for early childhood care and education means higher taxes or less funding for other worthy goals. The number of children and families involved and the cost of bringing the quality of care and education up to the levels shown by the research to have significant lasting effects make universal access to high quality programs in Michigan a goal unlikely to be achieved in the near future, no matter how attractive the future payoffs might be.

Then, too, there is the inertia of well-established programs and practices, all of which have stood the political test of time, but not all of which are supported by the data on early childhood program effectiveness. Improving the outcomes for young children individually and the state as a whole may mean reconsidering the value of continuing these programs and practices.

This situation is complicated further by the fact that early childhood issues are both a state and federal concern, meaning the state must coordinate its spending and policies with Washington. Finally, all early childhood care and education takes place within a culture that traditionally reserves to parents the primary responsibilities and choices in the care and well-being of their children, while recognizing that taxpayers determine the level of financial and institutional support they are willing to provide.

The challenge for policy-makers, then, is to make tough decisions about how much the state should invest in the future success of its youngest citizens and itself. For this reason, it is important for policy-makers to understand the evidence that supports these claims about early childhood care and education. The National Research Council and Institute of Medicine have prepared an excellent report on the research from neuroscience, *From Neurons to Neighborhoods: the Science of Early Childhood Development*,<sup>1</sup> so that evidence will not be reviewed here. This report presents results from the second strand of research, that on the effects of early childhood programs on their participants, particularly low-income and at-risk children.

This report highlights research on the potential benefits of improving state policies concerning early childhood care and education. The health and well-being of Michigan's children require policy-makers to be thoughtful stewards in many other policy areas as well, such as health care, nutrition, environmental quality and product safety.



## TERMINOLOGY USED IN THE REPORT

In the presentation and discussion that follow, we use the term *early childhood* to refer to children from birth through the beginning of kindergarten, typically age 5. Infants are children from birth to 1 year old; toddlers are children 2 or 3 years old; preschoolers are children 3 and 4 years old, as well as those 5 year olds who have not yet started kindergarten. This paper defines *early childhood care and education* as those activities that involve spending time with children of these ages. *Child care* refers to any non-parental care arrangement; *early childhood education* adds school readiness and other child development activities to supervised care.

*Short-term* early childhood studies look at program effects as far as first grade. *Long-term* early childhood studies look at program effects beyond the elementary school years, even into adulthood.

This report uses the term *poverty* to mean income below the federal poverty level of \$18,850 for a family of four and *low-income* to mean income below \$37,700 for a family of four. These are the guidelines used by the U.S. Department of Health and Human Services and the Michigan Community Health Department. It was recently estimated that the basic budget for a family of four (defined as the cost of meeting basic needs for food and shelter) in the largest metropolitan areas of Michigan was about \$35,900.<sup>2</sup>



## II

### EVIDENCE OF THE VALUE OF HIGH-QUALITY EARLY CHILDHOOD CARE AND EDUCATION

Although schooling traditionally begins at 5 or 6 years of age because most children begin to learn to read at this age, a great deal of learning takes place before traditional schooling begins – learning that is even more fundamental. The abilities to listen and speak precede the abilities to read and write. Working vocabulary in speech and comprehension determines how good a reader a child becomes. The components of everyday problem-solving include the ability to categorize and rank, and to recognize and understand spatial, temporal and causal relationships. Being able to regulate one’s own actions and resolve conflicts with other people are essential to living in a complex society. Such abilities, which can and ought to develop in early childhood, are important not only in themselves, but as doors to all the rest of learning. These are the curriculum goals of early childhood. Children exposed to them develop in ways that prepare them for school; those who are not do not and face challenges for the rest of their lives.

Research on the effects of model preschool programs for young children living in poverty confirms the basic findings of brain research. Results from long-term studies of three experimental preschool programs—the Carolina Abecedarian Study, the High/Scope Perry Preschool Study and the Chicago Child-Parent Center Study—indicate that these high quality “model” programs have had strong, lasting effects on the children who participated in them.

These experimental or model programs may have been particularly effective in part because of the extreme poverty of their participants. Nevertheless, the evidence from these programs strongly suggests that existing publicly funded preschool programs would benefit from becoming more like the model preschool programs if they are to achieve the long-term effectiveness of which they are capable.

The results of short-term studies of the publicly funded preschool programs described below show that these programs all have modest effects on participants. In other words, these programs were found to contribute in meaningful ways to the development of the children who participated in them.

Much of the research on early childhood is limited in two important ways. First, because of the intense nature of the data collection and analysis, many studies look at relatively small programs with limited numbers of participants over short periods of time. Second, because these programs

*Research on the effects of model preschool programs for young children living in poverty confirms the basic findings of brain research.*



are intended to help children in great need, providers are reluctant to randomize participation in the program – essentially, to deny some children the potential benefit of participation by randomly assigning them to a non-program control group. These two characteristics of most studies limit the ability of researchers to make generalizations about the cause and extent of the benefits (or adverse effects) of program participation.

The studies we review in this report do not share these limitations. Most involved random assignment of children to program or no-program groups, a research design that prevents selection bias and confers considerable confidence in the findings. The findings of the studies reported here that did not employ random assignment are consistent with the findings of the studies that did.

### LONG-TERM EARLY CHILDHOOD PROGRAM STUDIES

The long-term follow-up studies of three early childhood programs—the Carolina Abecedarian Project study, the High/Scope Perry Preschool study and the Chicago Child-Parent Centers study—stand out for their duration and methodological quality. These studies, summarized in Table 1, offer the best evidence of the long-term effects of high quality preschool programs.

Craig Ramey and his colleagues at the University of North Carolina at Chapel Hill began the **Carolina Abecedarian Study** in 1972.<sup>3</sup> Researchers randomly assigned 57 infants to a special program group and 54 infants to a typical child care group participating in the child care arrangements in homes and centers that were prevalent in the 1970s. The special program was a full-day, full-year day care program for children that lasted the five years from birth to elementary school. Some of the study participants also received follow-up support from kindergarten to grade 3. The program’s goal was to enhance children’s cognitive and personal characteristics so they would achieve greater school success. It offered infants and toddlers good physical care, optimal adult-child interaction, and a variety of playthings and opportunities to explore them. It offered preschoolers a developmentally appropriate preschool learning environment and provided training to parents in how to enact the activity-based curriculum at home.

The Abecedarian study was the first to find benefits to participants of preschool programs in intellectual performance and academic achievement *throughout* their schooling. Mean IQs of children in the program group, which started out the same as those of the control group, were significantly higher during early childhood and remained higher through age 21. Mean achievement scores at age 15—ten years after program participation—were 94 versus 88 in reading and 94 versus 87 in mathematics. By age 15, members of the program group were less likely to have been retained in grade or to have received special services. At age 21, children who had participated in the early childhood program were one-third more likely to have graduated from high school or to have received a GED certificate and

*At age 21, children who had participated in the early childhood program were one-third more likely to have graduated from high school or to have received a GED certificate and more than twice as likely to have attended a 4-year college.*



**TABLE 1**  
**Characteristics of Three Long-Term Early Childhood Studies**

| Characteristic                            | Carolina Abecedarian         | High/Scope Perry     | Chicago Child-Parent Centers |
|---|------------------------------|----------------------|------------------------------|
| <i>Design</i>                             |                              |                      |                              |
| Beginning year                            | 1972                         | 1962                 | 1985                         |
| Type of setting                           | College town                 | College town         | Major city                   |
| Sample size                               | 111                          | 123                  | 1,539                        |
| Assignment to groups                      | Random                       | Random               | Existing classes             |
| Program purpose                           | Research                     | Research             | Service                      |
| Program entry and exit age                | 0.4 – 5                      | 3–4                  | 3–4                          |
| Program hours a day, days a week          | 8, 5                         | 2½, 5                | 2½, 5                        |
| Program weeks a year, years               | 50, 5                        | 35, 2                | 35, 2                        |
| Parent program                            | —                            | Weekly home visits   | Family and health services   |
| School-age services                       | Yes                          | No                   | Yes                          |
| Control group experience                  | Some child care arrangements | No preschool program | No preschool program         |
| <i>Common Outcomes</i>                    |                              |                      |                              |
| Intellectual performance tests            | Ages 3-21                    | Ages 4-7             | --                           |
| School achievement tests                  | Age 15                       | Ages 7-27            | Ages 14-15                   |
| Placed in special education               | 25% vs. 48%                  | 65% vs. 60%          | 14% vs. 25%                  |
| Retained in grade                         | 31% vs. 55%                  | 35% vs. 40%          | 23% vs. 38%                  |
| High school graduates                     | 67% vs. 51%                  | 65% vs. 45%          | 50% vs. 39%                  |
| —Males                                    |                              | 50% vs. 54%          | 43% vs. 29%                  |
| —Females                                  |                              | 84% vs. 32%          | 57% vs. 48%                  |
| Arrested by 21                            | 45% vs. 41%                  | 15% vs. 25%          | 17% vs. 25%                  |
| Age at birth of first child               | 19.1 vs. 17.7                | 20.0 vs. 21.0        | —                            |
| <i>Cost-benefit analysis</i> <sup>a</sup> |                              |                      |                              |
| Program cost                              | \$34,476                     | \$15,166             | \$6,956                      |
| Program cost per year                     | \$13,362                     | \$8,540              | \$4,637                      |
| Public return, total                      | —                            | \$195,621            | \$26,637                     |
| Public return, per dollar invested        | —                            | \$12.90              | \$3.83                       |
| Societal return, total                    | \$130,300                    | \$258,888            | \$49,364                     |
| Societal return, per dollar invested      | \$3.78                       | \$17.07              | \$7.10                       |

<sup>a</sup> All dollar entries are per participant in constant 2000 dollars discounted at 3 percent annually.





## COMPARING THE LONG-TERM STUDIES

The Abecedarian, High/Scope and Chicago studies differed in time and place. The High/Scope program operated in the 1960s when there were few if any other services offered in the community that the no-program group children might receive. The Abecedarian program operated in the 1970s and the Chicago program operated in the 1980s, when families made a variety of child care arrangements. Thus, the High/Scope study compares program experience to home experience while the Abecedarian and Chicago studies compare experience in an intensive program to typical child care experience. The Abecedarian and High/Scope studies were intentional studies from the beginning, involving random assignment of samples of 100-plus children, while the Chicago study evaluated an existing program and involved a sample of 1,500-plus children in preexisting classes with no scientific intervention in the enrollment process.

*One of the key common factors in the quality of these programs was the level of teacher qualifications.*

All three of these studies found that high quality early childhood programs can have long-lasting positive effects on children, whether measured by intellectual performance in childhood, school achievement in adolescence, reduced placements in special education, reduced retentions in grade, improved high school graduation rate, reduced arrest rates, or older age of mothers at the birth of their first child. One of the key common factors in the quality of these programs was the level of teacher qualifications.

Finally, it should be noted that the studies of the High/Scope Perry, Abecedarian and Chicago Child-Parent Centers programs identified larger short-term effects than have recent short-term studies of other publicly funded programs described below. For example, children were found to have gained 4 points on the Peabody Picture Vocabulary Test (version III) during their Head Start year in the FACES study and in the five-state preschool study. On the other hand, children in the High/Scope Perry Preschool program gained 8 points on this test in their first year—twice as much as one year of Head Start or state preschool programs—and a total of 15 points in two years, nearly four times as much as one year of Head Start or state preschool programs.<sup>9</sup>

These would be worthwhile outcomes for any program. But all three longitudinal studies also found economic returns that were at least several times as great as the initial program investment. For every dollar spent on the program, the Perry program returned \$17, the Chicago program returned \$7 per dollar invested and the Abecedarian program returned almost \$4. Although it was not calculated for the Abecedarian program, public return (to taxpayers) constituted about two-thirds of the Perry program return and about half of the Chicago program return. The Perry program generated the highest return even though its cost fell midway between the other two programs. According to leading economists, including Nobel Laureate James Heckman, this evidence of large public returns on investment in high-quality early childhood programs is stronger than the evidence on returns for most other public investments.

## MEETING THE EARLY CHILDHOOD CHALLENGE

### RECENT SHORT-TERM EARLY CHILDHOOD PROGRAM STUDIES

Several recent studies have looked at the short-term effects of Head Start and other federally funded early childhood programs. Table 2 summarizes the design and findings of these studies. Two of them looked at typical Head Start programs and two looked at enhanced Head Start programs. There were two evaluations of the Even Start program, a five-state preschool study, and 13 state preschool evaluations. Two studies looked specifically at the issue of quality at child care centers.

Most of these studies randomly assigned children to program or no-program groups. While the Comprehensive Child Development Program evaluation found no effects, the others found modest positive effects on children's literacy and social skills and parental behavior. The consensus finding of the short-term studies is that typical publicly funded early childhood programs produced significant benefits for the literacy and social skills of children as well as for the behavior of their parents.

The **Head Start Impact Study**, now under way, involves a nationally representative sample of Head Start programs and the random assignment of children to Head Start or a control group. This study has so far provided results for entering 3-year-olds and entering 4-year-olds after one year in Head Start and will follow them through the end of kindergarten and first grade.<sup>10</sup> It has found evidence of small to moderate Head Start effects on children's literacy skills (pre-reading, pre-writing, parent-reported literacy skills, 3-year-olds' vocabulary), reduced problem behaviors of 3-year-olds, increased access to health care, greater incidence of parents reading to their children, and reduced use of physical discipline of 3-year-olds.

The **Head Start Family and Child Experiences Survey (FACES)** is a study of a representative national sample of Head Start programs in the U.S.<sup>11</sup> The first cohort of 3,200 children entered Head Start in fall 1997; the second cohort of 2,800 children entered Head Start in fall 2000. While in Head Start, children improved on important aspects of school readiness, narrowing the gap between them and the general population, though they still lagged behind. Relative to national norms, children made significant gains during their Head Start year, particularly in vocabulary and early writing skills. Children in Head Start grew in social skills and displayed less hyperactive behavior, especially if they started out more shy, aggressive or hyperactive. The study found that Head Start classrooms were of good quality. Most programs used a specific integrated curriculum. Use of these curricula and higher teacher salaries were predictive of positive child outcomes. Teachers' educational credentials were linked to greater gains in early writing skills. In addition, provision of preschool services for a longer period each day was tied to greater cognitive gains by children. Based on follow-up of the 1997 cohort, Head Start graduates showed further progress toward national averages during kindergarten, with substantial gains in vocabulary, early mathematics, and early writing skills. Most Head Start graduates could identify most or all of the letters

*The consensus finding of the short-term studies is that typical publicly funded early childhood programs produced significant benefits for children's literacy and social skills.*



**TABLE 2**  
**Findings of Recent Short-Term Early Childhood Program Studies**

| <b>Study</b>  | <b>Design</b>   | <b>Findings</b>   |
|---|---|---|
| Head Start Impact Study                                       | Nationally representative sample of about 5,000 children randomly assigned to Head Start or no Head Start and followed 1 year to date                           | Modest effects on children's literacy skills, reduced problem behavior, parent reading to children  |
| Head Start Family and Child Experiences Survey                | 2 cohorts of 3,200 and 2,800 Head Start children followed through kindergarten  | Modest gains in children's literacy and social skills in Head Start and kindergarten years  |
| Head Start Comprehensive Child Development Program Evaluation | Sample of 4,410 children randomly assigned to program or not; each family had a case manager  | No effects on child or parent outcomes  |
| Early Head Start Evaluation                                   | Sample of about 3,000 children randomly assigned to Early Head Start as infants and toddlers or not   | Modest effects on children's cognitive, language, and socioemotional development through age 2; effects on parents' behavior and child development knowledge                          |
| Even Start Evaluations  | 2 studies of children randomly assigned to Even Start or not  | One-year improvement in children's readiness skills; gains in adult literacy, GED certification, family support of children   |
| Five-State Preschool Study                                    | Sample of 5,071 children divided between those who did and did not make the age cutoff for program entry  | Improvements in children's vocabulary, print awareness skills, and early mathematics skills   |
| State Preschool Evaluations                                   | 13 studies of state preschool programs  | Modest effects on children's development, school performance, school attendance, grade retention  |
| NICHD Early Child Care Study                                  | Sample of 1,364 infants in 1991 with 1,000 being followed up through age 15.  | Higher quality child care was associated with higher math, reading, and memory test scores through grade 3.   |
| Cost, Quality and Child Outcomes in Child Care Centers Study  | Random sample of 100 child care centers in 4 states, non-profit and for-profit centers in four U.S. cities in the mid-1990s; 733 children followed up at age 7. | Quality rated high in 24 percent of centers, medium in 65 percent, and low in 11 percent. Quality had a modest effect on children's cognitive and socioemotional development at age 7 |

## MEETING THE EARLY CHILDHOOD CHALLENGE

of the alphabet by the end of kindergarten, and more than half could recognize beginning sounds of words.

An evaluation of some 3,000 infants and toddlers and their low-income families in the **Early Head Start** program, the federal program that began in 1995, found program effects through age 2.<sup>12</sup> When compared to a randomly assigned control group, Early Head Start children did better in modestly but statistically significant ways on measures of cognitive, language, and social-emotional development, and their parents scored significantly better than control-group parents on measures of parenting behavior and knowledge of infant-toddler development.

The **Head Start Comprehensive Child Development Program Evaluation** randomly assigned 4,410 children and families living in poverty at 21 sites either to this program or no program and followed them for five years.<sup>13</sup> The program's comprehensive services centered on assigning a case manager to each family to help them meet their needs, but only 58 percent of the program group actually met with a case manager, as did 18 percent of the control group due to other programs. The study found no statistically significant, positive group differences on either child or parent outcomes, suggesting that families do not really profit from case management associated with early childhood programs.

Two **evaluations of the Even Start Family Literacy program** randomly assigned children and families to Even Start or not.<sup>14</sup> Somewhat greater percentages of the Even Start group than the control group received various services, with 95 percent versus 60 percent participating in early childhood education, for example. Consequently, both groups experienced gains, with the Even Start group experiencing some greater gains, in adult literacy, adult GED attainment (22 percent vs. 6 percent in one of the studies), cognitive stimulation and emotional support by the family, and children's vocabulary. Even Start children improved their basic school readiness skills (e.g., recognition of colors, shapes, and sizes), but their non-Even Start peers caught up with them a year later. Lack of compliance with group assignment may have led to underestimation of program effects.

Researchers Steven Barnett, Cynthia Lamy and Kwanghee Jung led a **study of the effects of five state-funded preschool programs** on the academic skills of entering kindergartners.<sup>15</sup> It involved 5,071 children from Michigan, New Jersey, Oklahoma, South Carolina, and West Virginia. Children who made the age cutoff for program entry were compared to those who missed the age cutoff using a sophisticated research design (regression discontinuity). The programs were found to have statistically significant, meaningful effects on children's vocabulary, print awareness skills, and early mathematics skills. Nearly all the teachers working in the study programs had a four-year college degree with early childhood specialization.



In 2001, Walter S. Gilliam and Edward F. Zigler reported that 13 of the 33 state preschool programs had received evaluations as of 1998.<sup>16</sup> They summarize these evaluations as finding modest support for positive program effects on children's developmental performance, school performance and attendance, and reduced percentages of children held back a grade.

The **NICHD Early Child Care Study** is a longitudinal study initiated by the National Institute of Child Health and Human Development (NICHD) in 1989 to look at the relationship between children's child care experiences and their developmental outcomes.<sup>17</sup> The sample began with 1,364 infants in 1991 and is continuing to follow up on 1,000 of them through age 15. The study team has involved researchers at several dozen universities. The study found that higher quality child care was associated with higher test scores on mathematics and reading achievement and with improved memory through third grade.

Several studies of typical child care programs in the U.S. bear out the idea that high-quality programs contribute to children's development while low-quality programs do not. The **Cost, Quality and Child Outcomes in Child Care Centers Study** was a longitudinal study of how children's experience in center-based care and school related to their socio-emotional and cognitive outcomes concurrently and at age 7.<sup>18</sup> The study focused on a random sample of 100 non-profit and for-profit centers in four states in the mid-1990s. Observers found that 65 percent of centers posted a medium score on the Early Childhood Environment Rating Scale,<sup>19</sup> 24 percent scored high, and 11 percent scored low. A follow-up study examined 733 children from these settings from ages 4 to 8 as a function of their child care center experience, after controlling for their background characteristics. The findings indicate that center quality had a modest long-term effect on children's cognitive and socioemotional development.

We conclude this discussion of the evidence from the research by noting that long-term studies in a related field have employed random assignment of study participants to high-quality programs, long-term follow-up, and cost-benefit analysis to examine the effectiveness of a different type of program—**prenatal and infancy home visitation by nurses**.<sup>20</sup> David Olds and his colleagues studied 400 children, 89 percent of them White, in semi-rural Elmira, New York.<sup>21</sup> They found 79 percent fewer verified reports of child abuse or neglect, 31 percent fewer subsequent births among participating mothers, a longer interval to the birth of the next child, fewer months receiving welfare, fewer behavior problems due to alcohol and drug abuse, and 69 percent fewer arrests of the mothers. Cost-benefit analysis of those high-risk families revealed that the program cost \$7,208 per family (in 2000 dollars) and led to benefits of \$29,262 per family, four times as much.<sup>22</sup> A similar study in urban Memphis, Tennessee, involved 1,139 pregnancies and 743 children; 92 percent were African-American and 98 percent of the mothers were unmarried.<sup>23</sup> It found that the nurse-visited mothers provided better care for their children and had fewer subsequent pregnancies, and their children were hospitalized for fewer days with injuries indicative of child abuse and neglect.



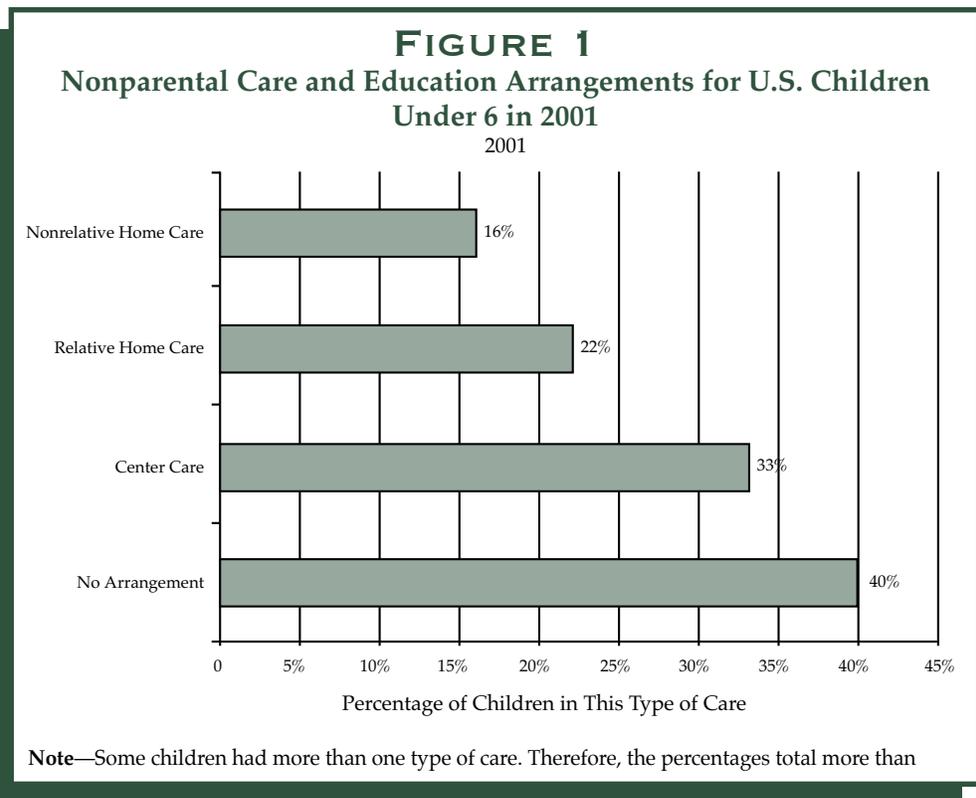
# III

## EARLY CHILDHOOD CARE AND EDUCATION IN CONTEXT

*There are big challenges and big opportunities for Michigan policy-makers to influence the long-term health of the state and its youngest citizens.*

Neuroscience shows that early childhood experiences fundamentally affect the brain's development. The best and latest research on early childhood programs shows that high quality programs have long-lasting positive effects that more than offset their costs. This research also shows that the kinds and degrees of benefits kids get are related to a program's quality. What implications do these findings have for the early childhood programs and policies currently operating in Michigan?

In order to answer this question, we first need to make clear what early childhood care and education in Michigan looks like, beginning with an understanding of the patchwork of state and federal programs involved. This chapter provides a big picture description of the programs. Policy-makers may be surprised by the numbers of children affected, as well as by the number of programs and providers and the amount of funding involved. These numbers represent both big challenges and big opportunities for Michigan policy-makers to influence the long-term health of the state and its youngest citizens.



## MEETING THE EARLY CHILDHOOD CHALLENGE



**TABLE 3**  
U.S. children under 6 years old, by type of weekly nonparental child care arrangements and age: 2001

| Age         | Number of Children (in Thousands) | Some Weekly Nonparental Care Arrangement | Type of Weekly Nonparental Care and Education Arrangement: |             |          | No Weekly Nonparental Care Arrangement |
|-------------|-----------------------------------|--|--|-------------|----------|--|
|             |                                   |  | Center <sup>1</sup>  | Nonrelative | Relative |  |
| Total       | 20,252                            | 60                                       | 33   | 16          | 22       | 40                                     |
| 5-year-olds | 896 <sup>2</sup>                  | 82                                       | 73   | 13          | 20       | 18                                     |
| 4-year-olds | 3,861                             | 79                                       | 65   | 13          | 21       | 21                                     |
| 3-year-olds | 3,795                             | 65                                       | 43   | 14          | 22       | 35                                     |
| 2-year-olds | 3,931                             | 59                                       | 25   | 18          | 23       | 41                                     |
| 1-year-olds | 3,902                             | 53                                       | 16   | 20          | 22       | 47                                     |
| Less than 1 | 3,868                             | 40                                       | 8  | 14          | 21       | 60                                     |

Source: Mulligan et al., 2005.

Note—Some children had more than one type of care. Therefore, the percentages total more than 100%.

<sup>1</sup>Day care centers, Head Start programs, preschools, prekindergartens, and other early childhood programs.

<sup>2</sup>The population is defined as children under 6 years old who have not yet entered kindergarten, only about one-fourth of 5-year-olds.

The National Household Education Survey, taken periodically by the National Center for Educational Statistics (NCES), presents a national picture of early childhood care and education.<sup>25</sup> Figure 1 and Table 3 present the key findings of the 2001 Early Childhood Program Participation Survey conducted by the NCES.

According to the NCES Survey, in 2001 the U.S. had 20.2 million children under 6 years old who had not yet entered kindergarten.

- 60 percent of these children had *some type of nonparental care and education arrangement* at least weekly; the participation rate increased from 40 percent for infants to 79 percent for preschoolers, due to the increase in the center participation rate.
- 33 percent received *care and education in a center*, a proportion that grew steadily from 8 percent for infants to 65 percent for 4-year-olds.
- 16 percent received *care and education from a non-relative in a home*.
- 22 percent received *care and education from a relative in a home*.<sup>26</sup>

For 62 percent of children under age 6, *care and education remained all in the family*, with either parental (40 percent) or relative care and education (22 percent). The percentage of young children having some non-parental care and education arrangement at least weekly increased steadily with household income, from 53 percent for those with income of \$10,000 or less to 72 percent for those with income of more than \$75,000. It similarly increased with the mother's level of education, from 43 percent of children of mothers with less than high school to 74 percent of children of mothers with a graduate or professional degree. It was highest for non-Hispanic Blacks (73 percent), followed by non-Hispanic Whites (60 percent) and Hispanics (48 percent). It was well over twice as high for children of

*For 62 percent of children under age 6, care and education remained all in the family, with either parental (40 percent) or relative care and education (22 percent).*



employed mothers (80 percent) as for children of mothers not in the labor force (31 percent).

The type of early childhood care and education arrangements that parents make varies by these same demographic factors. As household income goes up, use of center and non-relative care goes up, while the use of relative care goes down. Comparing households with incomes of \$10,000 or less to households with incomes of more than \$75,000, center care rises from 24 percent to 48 percent, non-relative care rises from 9 percent to 21 percent, and relative care decreases from 30 percent to 15 percent. While 45 percent of families with incomes under \$50,000 have no weekly non-parental care arrangement, this is the case for only 32 percent of families with incomes over \$50,000.

Early childhood care and education takes place in various types of centers and private residences. Of the 22 percent of young children receiving care and education from *relatives* in homes, 44 percent are served in their own homes and 66 percent are served in other homes. (Here and below, percentages total more than 100 percent because some children fall into both categories.) Of the 16 percent of young children receiving care and education from *non-relatives* in homes, 21 percent are served in their own homes and 81 percent are served in other homes. Of the 33 percent of young children receiving care and education in centers, 35 percent are served in centers dedicated to this use, 27 percent are in public or private K-12 schools, 26 percent are in places of worship, 5 percent are in private homes that serve as centers, and 9 percent are in other places, such as libraries, universities and community centers.

The 60 percent of young children with non-parental care and education arrangements spent an average of 30.5 hours per week in them. Family out-of-pocket expenses for these arrangements averaged \$68.95 a week or \$3.02 an hour. Expenses were higher for families with younger children, families with higher incomes, employed mothers, and mothers with higher levels of education. Young children of mothers working full-time spent twice as much time in these arrangements, 38.1 hours per week, as did young children of mothers not in the labor force, who spent 18.1 hours per week.

#### THE ROLE OF THE FEDERAL GOVERNMENT IN EARLY CHILDHOOD CARE AND EDUCATION

The patchwork of programs that constitutes early childhood care and education in Michigan originates in Washington, D.C. The federal government has funded early childhood programs since 1965. Today, as shown in Table 4, it provides funding for no fewer than eleven programs divided across two Cabinet-level departments. The U.S. Department of Health and Human Services oversees five early childhood programs: Head Start, the Child Care Development Fund, Early Head Start, Temporary Assistance to Needy Families, and the Social Services Block Grant. Together these five programs represent 91 percent of the federal funding

*The patchwork of programs that constitutes early childhood care and education in Michigan originates in Washington, D.C. The federal government provides funding for no fewer than 11 programs.*

## MEETING THE EARLY CHILDHOOD CHALLENGE



**TABLE 4**  
**Federal Early Childhood Programs**

| Agency                          | Name of Program   | Description   | Population Served               | FY2005 Appropriation |
|---------------------------------|---|---|---------------------------------|----------------------|
| Health and Human Services (HHS) | Head Start  | Grants to agencies for preschools   | Children 3-5 and their families | \$6.8 B              |
|                                 | Child Care Development Fund                               | Grants to states for child care   | Children 0-5                    | \$4.8 B              |
|                                 | Temporary Assistance for Needy Families <sup>1</sup>      | Grants to states used for child care  | Children 0-5                    | \$2.7 B              |
|                                 | Early Head Start  | Prenatal and early childhood care   | Children 0-3; pregnant women    | \$677 M              |
|                                 | Social Services Block Grant (SSBG) <sup>2</sup>           | Grants to states used for child care  | Children 0-5                    | \$153 M              |
| Department of Education         | Grants for Early Intervention for Infants and Toddlers    | Grants to states for early intervention for infants and toddlers with disabilities and developmental delays | Children 0-2                    | \$440.8 M            |
|                                 | Special Education Preschool Grants                        | Grants for states to provide early childhood education programs to children with disabilities               | Children 3-5                    | \$384.6 M            |
|                                 | Even Start  | Grants for family literacy programs   | Children 0-5                    | \$225 M              |
|                                 | Title I Preschools  | Grants to school districts with high poverty enrollment; districts decide preschool or other usage.         | Children 3-5                    | \$150 M <sup>3</sup> |
|                                 | Early Reading First                                       | Grants to schools and preschools to enhance existing programs with research-based early literacy incentives | Children 3-5                    | \$104 M              |
|                                 | Early Childhood Educator Professional Development Program | Competitive grants for teacher training in high poverty communities   | Early childhood teachers        | \$14.7 M             |

Source: Good Start, Grow Smart, 2004. Available online at [www.whitehouse.gov](http://www.whitehouse.gov).

<sup>1</sup> As reported \$4 billion of TANF funds were spent by states on child care in FY2000. For FY2005, TANF funds include \$2.7 billion for Child Care Entitlement Funds.

<sup>2</sup> As reported, 43 states spent \$165 million, 9 percent of the \$1.77 billion SSBG expenditures in FY2000. This 9 percent was used to estimate the number for FY2005, when \$1.7 billion was allocated to states.

<sup>3</sup> This is an estimate of 2-3 percent of total Title I funding that is spent on preschoolers by local education agencies. The estimate is 3 percent of the total Title I appropriation for FY 2005, which was \$5.5 billion ([www.ed.gov](http://www.ed.gov)).

for early childhood. The U.S. Department of Education funds six early childhood programs of its own through Title I preschools, Early Reading First, Even Start, Special Education Preschool Grants, Grants for Special Education for Infants and Toddlers, and the Early Childhood Educator Professional Development Program.

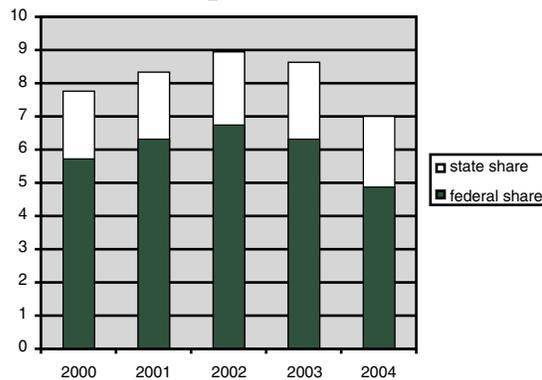
*Head Start*

Head Start is the largest of the current federally funded early childhood programs. It gives local agencies—primarily private and public non-profit organizations, including churches and non-profit hospitals, community action agencies, and public and private school districts—grants to fund and run comprehensive child development programs that serve children from 3 to 5 years old. Most Head Start programs are center-based; they are generally required to operate at least 3½ hours a day, 4 days a week, 32 weeks a year. Head Start services include early childhood education, parent involvement, and meals, as well as medical, dental, and mental health referrals. The program requires parental involvement in the form of parent representatives on the advisory committee, two home visits per year, and two parent-teacher conferences. Program eligibility depends on family income so that 90 percent of all recipients must be below the federal poverty level. Of the children in these programs, 31 percent are black, 31 percent are Hispanic, 27 percent are non-Hispanic White, and 11 percent are Indian, Asian, Multi-racial, or other. Head Start requires that 10 percent of the children in programs be children with disabilities, but the national percentage in FY2004 was 12.7 percent.<sup>27</sup>

*The Child Care Development Fund*

The second largest federal funding stream for early childhood programs is the Child Care Development Fund (CCDF; formerly called the Child Care Development Block Grant Program). The CCDF gives states funding for child care subsidies for families with low income who are working or looking for work. Each year, approximately 800,000 providers receive

**FIGURE 2**  
Total CCDF Expenditures: 2000-2004



Source: U.S. Department of Health and Human Services Bureau (2006). Data taken from CCDF Expenditure Data Tables for FY1999-2004.

## MEETING THE EARLY CHILDHOOD CHALLENGE

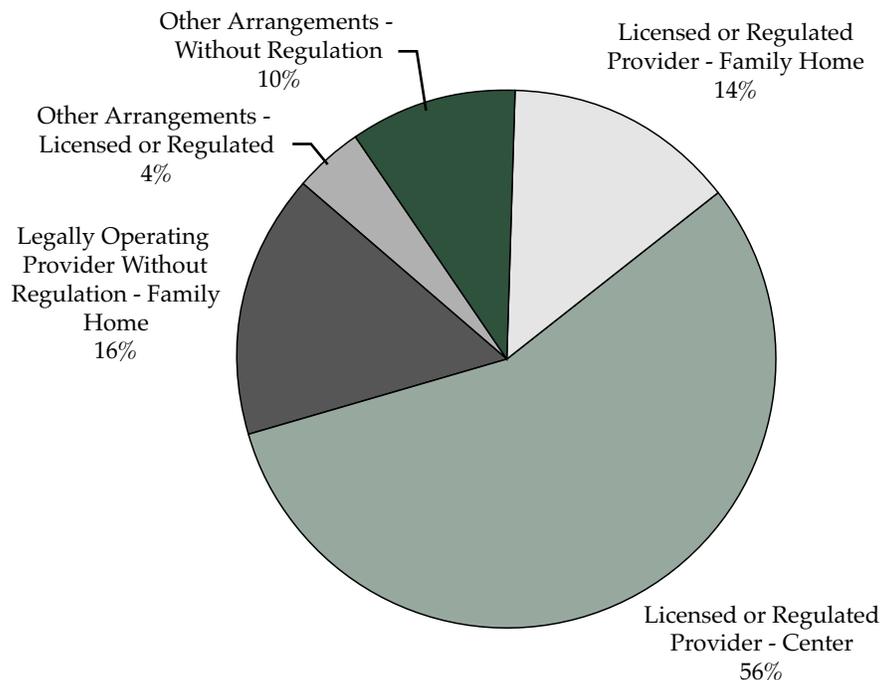
CCDF support. In any given month, some 1.8 million children nationwide receive care through CCDF. While these funds can go to any children under age 13, about two-thirds of these funds go to children under 5.<sup>28</sup> Of CCDF funds, 70 percent must be given for child care assistance to families receiving Temporary Assistance for Needy Families (TANF) benefits. As indicated by Figure 2, federal spending on the CCDF has fluctuated in recent years while the 50-state share has remained fairly steady at around \$2 billion per year.

The CCDF offers three types of funding: mandatory, discretionary and matching.<sup>29</sup> States must spend *mandatory* funding on TANF recipients.<sup>30</sup> States may spend *discretionary* funding as they see fit to help low-income families. States get *matching* funding if they match these federal dollars with state dollars. In addition, there are several earmarks within the law for non-direct service expenditures on programs ranging from professional development and training for providers to informational campaigns aimed at eligible families.

States are given broad regulatory discretion under CCDF. In particular, there is wide variation in how states regulate the settings and providers of care—the Department of Health and Human Services reports data in no fewer than eleven different categories of setting and provider combinations, as can be seen in Figure 3. Seventy-four percent of all

*...there is wide variation in how states regulate the settings and providers of care.*

**FIGURE 3**  
2004 U.S. Subsidized Child Care Providers, by Licensing and Type



Source: U.S. Department of Health and Human Services, Child Care Bureau (2006). Data taken from CCDF Data Tables for FY2004. Percentages have not changed by more than 1 percent in any one category between 2000-2004.



children benefiting from CCDF funding nationally are served by licensed or regulated providers in child care centers or family home day care, although there is variation by age of the children.

*The federal government provides the bulk of funding for early childhood programs, but states play a pivotal role in the implementation and oversight of these programs.*

### EARLY CHILDHOOD IN THE INDIVIDUALS WITH DISABILITIES EDUCATION ACT

The Individuals with Disabilities Education Act (IDEA) is the federal special education law. It provides regulatory guidance for states and school districts to offer special education and other services to eligible children.<sup>31</sup> States are responsible for implementation and enforcement of this federal mandate. In FY 2005, the U.S. Department of Education provided more than \$800 million to fund special education programs for approximately 800,000 infants, toddlers and preschoolers.

### CURRENT FEDERAL INITIATIVES

The federal government's current early childhood education agenda is called *Good Start, Grow Smart*. It aims to align preschool programs with K-12 schools, increase and standardize evaluation of early childhood programs, and increase information on school readiness for parents and early childhood teachers and caregivers.<sup>32</sup> The initiative also includes new accountability measures for Head Start and the other federally funded preschool initiatives. The major impact of this initiative has not been to change the fundamental funding streams for early childhood care and education, but rather to introduce several new programs such as Early Reading First and to require more stringent evaluation and testing of existing federally funded programs.

### THE ROLE OF STATE GOVERNMENT IN EARLY CHILDHOOD EDUCATION

While the federal government provides the bulk of the funding for early childhood programs, states play a pivotal role in the implementation and oversight of these programs. States can also be a major source of additional funding for early childhood programs.

State policies and support for early childhood programs vary widely. For example, 38 states fund and run preschool programs, 4 states only supplement federal Head Start efforts, and 8 states have no prekindergarten programs at all.<sup>33</sup> Thirty-eight states together spent more than \$2.84 billion on preschools in FY2005; the other 12 states spent nothing at all. Per-child spending in Midwestern states ranged from \$2,980 in Illinois to \$6,325 in Ohio. Twenty states appropriate supplemental Head Start funds, either to serve more children or to support a range of things that the federal money does not sufficiently cover, such as administration and coordination of training. In four states this is the *only* state investment in preschool.

## MEETING THE EARLY CHILDHOOD CHALLENGE

Some states target preschool-age children heavily, while others have a more comprehensive approach to support early childhood care and education. Many government preschool programs limit enrollment to preschoolers who live in poverty or are otherwise at risk of school failure, but several states, including Georgia, Oklahoma, and Florida, have begun to offer preschool programs to all 4-year-olds whose families choose to enroll them.

The preschool commitments of all 50 states are evaluated annually by the National Institute for Early Education Research (NIEER), which reports that in 2004-2005 more than 800,000 children were served in the United States by state preschool programs. This represents 17 percent of all 4-year-olds and 3 percent of all 3-year-olds nationwide. Oklahoma and Georgia have the greatest access to preschool, enrolling 69 percent and 55 percent of children in their state-funded programs, respectively.<sup>34</sup> About one in five Michigan 4-year-olds participate in the Michigan School Readiness Program, roughly 25,000 children.

NIEER ranks state programs in three ways: access, resources and quality. The *access* ranking is based on the percentage of the state's 3- and 4-year-olds enrolled. The *resources* ranking is based on spending per child enrolled. The *quality* ranking depends on state policies on ten factors, including comprehensive early learning standards, teacher and assistant teacher qualifications, teacher in-service training, class size and child/staff ratios limits, and required site visits by state monitors. In the 2004-2005 rankings, only Arkansas met all ten benchmarks, and only five other states met nine of the ten. Of the 38 states with programs, 21 of them met five or fewer of the quality benchmarks. Michigan met four of NIEER's ten quality benchmarks in 2004-2005.

Currently, there are 22 states whose programs have a quality rating of 6 or higher on the NIEER 10-point scale, 16 states with scores between 1 and 5, and 12 states with no scores due to lack of program. It is worth noting that the NIEER ratings and rankings are not scaled or weighted, so that serving a meal at a preschool, for example, is counted and valued the same as having a well-qualified and trained teacher, even though evidence suggests that the value of teacher quality is very high.

The 2004-2005 NIEER report ranks Michigan 14<sup>th</sup> among the states for access and 18<sup>th</sup> in resources. Michigan's access, resources and quality rankings for its Michigan School Readiness Program are above average among state preschool programs.

Support for early childhood programs varies not just by state but also over time. Over the past three years, 13 of the 38 states with programs have decreased the number of 3-year-olds served, and 10 have decreased the number of 4-year-olds served. But during this same period, 12 states have increased access for 3-year-olds and 26 states have increased their enrollment of 4-year-olds.

*About one in five Michigan 4-year-olds participate in the Michigan School Readiness Program, roughly 25,000 children.*



*Many states are moving toward comprehensive systems for early childhood care and education and have adopted early childhood standards.*

Controlling for inflation, 11 states spent less on preschool programs in 2004-05 than they spent in 2001-02; nine spent more, and the remaining 18 states with programs spent the same amount. In constant dollars, overall spending per child decreased nationally by 7.3 percent from 2001-02 to 2004-05. Per-child state spending on the Michigan School Readiness Program remained constant at \$3,300 from 2000 to 2006, a 13 percent decrease in real dollars.

The governance of state preschool and early childhood education programs also varies across the states. Oversight and regulation are the responsibility of the state Department of Education in 28 states, a separate state department such as Family Services in eight states, and a joint agency or quasi-agency in six states.<sup>35</sup> Likewise, program-level implementors vary across and within states. Five states allow only public schools to run state-funded preschools, but most allow any private non-profit, private for-profit or community agency or public school to run state preschools as long as they meet the program standards on such factors as teacher training and class size.

#### SUMMARY

Over the past 40 years the federal government has established 11 programs that provide most of the public funding for early childhood care and education across the country, largely by providing Head Start and Child Care Development Funds to the states. The states, in turn, may or may not supplement federal funds with additional Head Start funds. Four out of five states provide separate early childhood education programs, funded at widely disparate levels, that generally meet about half of the ten benchmarks of quality established by the National Institute for Early Education Research. Both access to and resources for these state programs fluctuate year to year. Many states are moving toward comprehensive systems for early childhood care and education and have adopted early childhood standards.

This patchwork of national policies and programs is duplicated during implementation at the state level. It is therefore not surprising that Michigan lacks a coherent vision of what early childhood education should be in order to maximize benefits both to the children who participate in it and to the taxpayers who support it.



# IV

## EARLY CHILDHOOD CARE AND EDUCATION IN MICHIGAN TODAY

This chapter lays out how Michigan’s families use and pay for various care and education settings for young children. It summarizes current federal and state efforts to provide early childhood care and education to some of these children.

Approximately 650,000 children under the age of five reside in Michigan.<sup>36</sup> The state’s poverty rate is 20 percent among young children.<sup>37</sup> Forty-four percent of children under five are enrolled in the federal Women, Infants and Children (WIC) food program; about 30 percent are enrolled in Medicaid.<sup>38</sup> These numbers have remained steady over the last several years and do not reflect the larger number of children who qualify but are not enrolled in these programs.<sup>39</sup> Poverty and other factors contribute to the toxic stress that neuroscience researchers have shown to interfere with normal brain development.

Two additional risk factors for young children—especially related to their future academic and economic success—are their parents’ level of education and their language background. These factors are also highly correlated with poverty. Education predicts income: 88 percent of children of high school dropouts, 52 percent of children of high school graduates, and 21 percent of children whose parents have some college live in low-income families.<sup>40</sup>

According to the U.S. Census Bureau’s American Community Survey, approximately 60 percent of Michigan’s children under age 6 have either their sole parent or both parents working either full- or part-time.<sup>41</sup> This means about 400,000 children statewide not yet in kindergarten need some sort of care. Parental employment generates child care demand not only during the typical work week, but also at other times due to evening and night work. In Michigan, four major programs help eligible families with child care needs: Head Start and the Child Care Development Funds at the federal level, and the Michigan School Readiness Program and Project Great Start at the state level.

### CHILD CARE IN MICHIGAN

Child care spending from family sources comprises the largest share of spending on early childhood programs in Michigan and across the nation. Barnett and Massé estimate that households are responsible for 60 percent of all expenditures on early childhood care and education while the federal

*Poverty and other factors contribute to the toxic stress that neuroscience researchers have shown to interfere with normal brain development.*



*Child care spending from family sources comprises the largest share of spending on early childhood programs in the state and across the nation.*

government provides 28 percent and states provide the remaining 12 percent.<sup>42</sup>

Child care subsidies paid for by CCDF, TANF and state matching funds were given to 62,000 families to provide services to about 120,000 children in FY2003.<sup>43</sup> Subsidies are given for child care if one of three conditions is met: the parent is receiving or applying for public assistance and needs child care to work, go to school or look for work; needs care because of social health reasons (such as participating in prevention programs for abuse and neglect); or has a qualifying low income for a sliding fee scale.<sup>44</sup> To receive these subsidies, families must use an eligible child care provider—a licensed center, family or group home, or day care aide or relative. These three types of funded child care in Michigan vary according to how they are licensed, what they require for staff qualifications, and where the care actually takes place.

Child care centers are the most regulated and have the most quality assurance provisions of these settings. These centers include public and private preschools as well as child care centers serving children of all ages up to age 5. Centers must be licensed by the Department of Human Services every two years. Licensure requirements include program director qualifications, staffing plans, program plans, equipment logs, food service plans, child use of indoor and outdoor space, fire safety report, established policies (enrollment, discipline, fees, etc.), and emergency and evacuation plans. New regulations require directors to have 60 semester hours of training, including 18 in early childhood education or child development, and caregivers to have 12 hours of training a year.<sup>45</sup> Centers receive on-site inspections by licensing consultants.

Family Child Care and Group Child Care take place in the provider's home. Family Child Care is licensed care for as many as six children; while Group Child Care involves care for seven to twelve children and requires an assistant caregiver. Licensing involves a verification of the caregiver's health and immunization, cardiopulmonary resuscitation (CPR) training, home safety inspections, and attendance at an orientation session. Caregivers are required to provide accurate and timely records to the Department of Human Services. Primary caregivers must have ten hours of training a year, and assistants are required to have five hours of training a year.<sup>46</sup> Family Child Care licenses are for three years and Group Child Care licenses are for two years.

Informal care for young children is called Relative Care and Day Care Aide Care. In order to receive payments from the Department of Human Services for qualifying families and children, each of these providers must register with the Department, not have a criminal background, and meet home licensing requirements. Relative Care is defined as care in a nonparental relative's home (grandparents, step-grandparents, aunts, uncles, or other relatives) by adults over age 18. Relative Care can be for up to six children (two if both are under the age of 12 months), including one's own children.

## MEETING THE EARLY CHILDHOOD CHALLENGE

A Day Care Aide is a provider who takes care of a child in the child's home. Day Care Aides must have no criminal background, must not have a revoked or suspended child care license, and must register with the Department of Human Services. They are not required to meet home licensing requirements. A Day Care Aide may take care of no more than 6 children in the child's home, including the Aide's own children. Approximately 28 percent of children under 5 are cared for by a relative, and more than 36,000 relatives, friends or neighbors are child care providers receiving government subsidies.<sup>47</sup> The average income for full-time year-round providers was \$19,500 in Michigan (as compared to \$17,610 throughout the U. S.), which does not include preschool teachers and assistant teachers.<sup>48</sup>

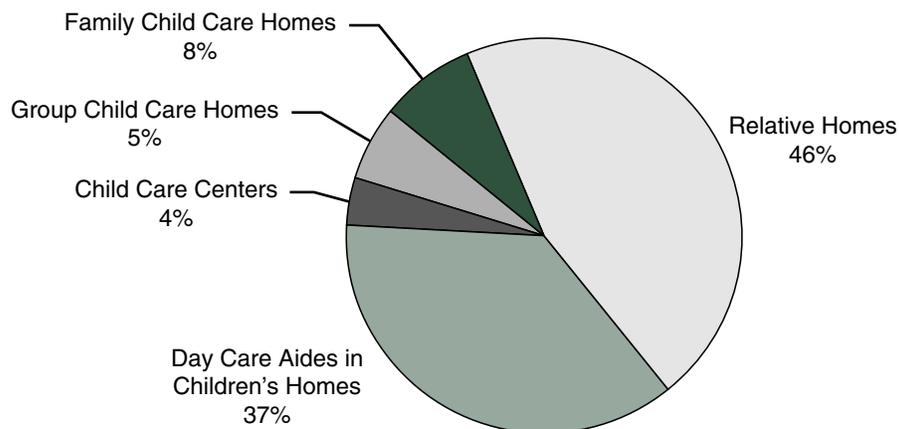
In Michigan in FY2003, the largest group of providers receiving subsidies were Relatives, followed by Day Care Aides (friends and neighbors

**TABLE 5**  
2004 Michigan Subsidized Child Care Providers,  
by Licensing and Type

| Child Care Type                    | Total Subsidies<br>(in millions) | Number of Providers<br>Receiving Subsidies |
|------------------------------------|----------------------------------|--|
| Relative homes                     | \$189                            | 20,499                                     |
| Day care aides in children's homes | \$122                            | 16,283                                     |
| Child care centers                 | \$ 78                            | 1,840                                      |
| Group child care homes             | \$ 45                            | 2,077                                      |
| Family child care homes            | \$ 43                            | 3,427                                      |

Source: Sorenson, Patricia and Richard Lower (2004). Budget Watch: Beginning at Birth. Michigan's Children. Lansing, Michigan.

**FIGURE 4**  
Michigan Subsidized Providers, by Type





providing care in the child's home), together accounting for over 80 percent of all subsidized care providers in Michigan.<sup>49</sup> Table 5 and Figure 4 show the amount and the number of providers receiving subsidies by type.

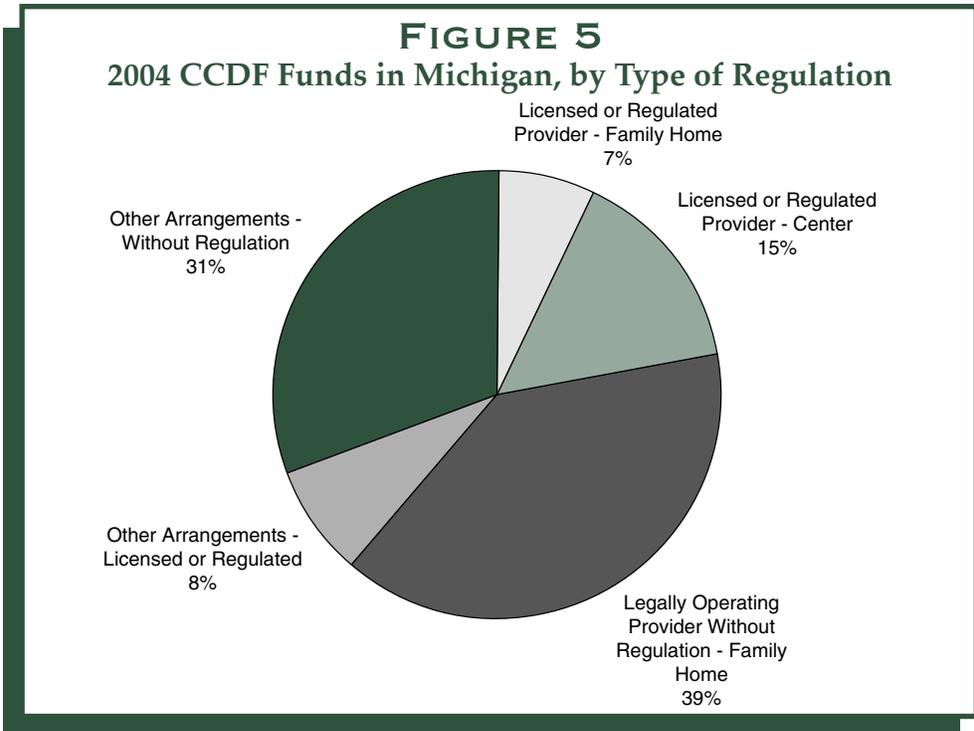
*Child Care Development Fund(CCDF) in Michigan*

Michigan's federal CCDF funds have doubled over the past decade to \$227 million in 2004.<sup>50</sup> Two challenges for Michigan have been utilizing all of the federal matching grants available through the CCDF and using the balance carried forward before its two-year expiration. Between FY1997 and FY2001, for example, Michigan was eligible for \$169 million in CCDF matching funds from the federal government, but only provided enough state matching funds to get \$79 million, 46 percent of the federal matching money available.<sup>51</sup>

In comparison to national averages, Michigan's use of CCDF monies has three remarkable features. First of all, Michigan spends a larger percentage of its CCDF funds on school-age children than any other state. While the US average is 36 percent, in Michigan 45 percent of the children served by the CCDF are over the age of 6.<sup>52</sup>

Second, Michigan ranks fourth in the number of providers receiving CCDF funds, with more than 80,600 providers in FY2004.<sup>53</sup> Only California (99,700), Illinois (91,100) and New York (86,000)—three states with significantly larger populations—have more providers receiving subsidies each year. Much of this difference is due to the third remarkable feature of Michigan's use of CCDF funds: the large number and percentage of relative care providers receiving CCDF funding in Michigan.

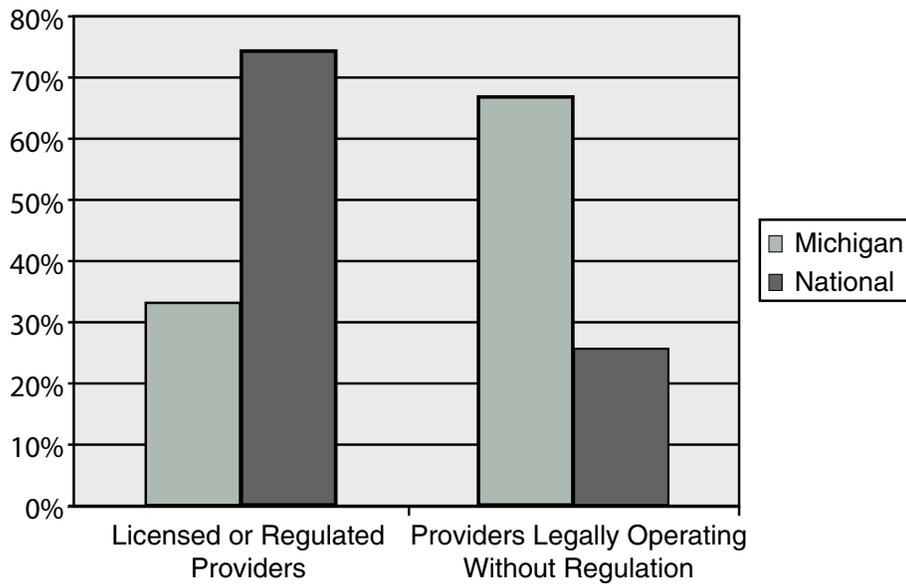
*More than 70 percent of CCDF providers nationwide are in regulated settings. In Michigan it is just the opposite, with nearly 70 percent operating without regulation.*



## MEETING THE EARLY CHILDHOOD CHALLENGE

While 2.6 percent of all children receiving CCDF nationally live in Michigan, more than 10 percent of all providers receiving CCDF funding are in Michigan. This is in part because Michigan allows relatives to be licensed providers and thus has them in larger numbers than many other states. These caregivers are required to obtain licensing, but operate in unregulated settings. Nationally, 74 percent of CCDF funds go to regulated

**FIGURE 6**  
**Regulated CCDF Providers in Michigan vs. US: 2004**



centers and family day care, as indicated in Figure 3. By contrast, Figure 5 shows that in Michigan 70 percent of CCDF funds pay for the care of children in their own home or in a family home by a relative or non-relative—three times the national rate.

Another way of understanding this is to look at the number of providers in regulated versus unregulated settings. Figure 6 shows that more than 70 percent of CCDF providers nationwide are in regulated settings. In Michigan it is just the opposite, with 70 percent operating *without regulation*.

## EARLY CHILDHOOD EDUCATION IN MICHIGAN

Michigan has two major programs for at-risk children under age 5: the federal Head Start Program and the Michigan School Readiness Program (MSRP).



*Head Start in Michigan*

Michigan has 37 grantee agencies that provide Head Start programs in all 83 counties.<sup>54</sup> In 2004, these agencies served 39,800 children, about half of whom were 4-year-olds. More than 90 percent of Michigan's Head Start programs are in center-based settings in public or private schools and centers.

Federal funding for Head Start in Michigan has grown steadily over the years and is now approaching a quarter billion dollars per year.<sup>55</sup> From 2000–2004, Head Start spending in Michigan increased by 16 percent, and spending per child increased by 11 percent in constant dollars. Unlike some states, Michigan does not provide a state supplement to the federal Head Start appropriation.

The National Head Start Association (NHSA) reports that, nationally, Head Start and Early Head Start served approximately 50 percent of all children eligible for those services.<sup>56</sup> We estimate that Michigan Head Start agencies served 63 percent of the state's 3- to 5-year-olds living in poverty in 2003. This estimate is based on 2003 estimates of Michigan's poverty population. We assume that 10 percent of the children served were above the poverty line, as is allowed.<sup>57</sup>

*Michigan School Readiness Program*

Since 1985 Michigan has funded a state preschool program for 4-year-old children at risk of school failure, now called the Michigan School Readiness Program (MSRP).<sup>58</sup> MSRP operates in 467 school districts and 65 community agencies.<sup>59</sup> To be eligible, children must have at least two of the 25 risk factors identified by the Michigan State Board of Education in 1988. These include low family income; single, teenage or unemployed parents; diagnosed developmental problems; chronic illness of a parent or sibling; and living in a non- or limited English speaking household. An estimated 81,000 4-year-old children in Michigan have at least two of these factors. Head Start served about 20,000 4-year-olds at risk of school failure, and preschool special education served an additional 9,000. Together the three programs provided educational opportunities for about two-thirds of the state's eligible 4-year-olds.<sup>60</sup>

Most MSRP programs are half-day, generally running 2½ hours a day, 4 days a week. The required teacher/child ratio is one adult for every eight children, and the maximum class size is 18 children. Most MSRP programs are run by school districts and public school academies (charter schools). Other MSRP programs are funded through competitive grants from the Michigan Department of Education (MDE) for programs to be run by private schools, community agencies, Head Start centers, child care centers or family child care providers that comply with the State Board of Education's standards of quality for prekindergarten and have active and continuous parent involvement.

All MSRP programs are required to have an early childhood specialist

*In 2005-2006,  
the Michigan  
School  
Readiness  
Program  
served about  
one-third of  
those eligible.*

## MEETING THE EARLY CHILDHOOD CHALLENGE

who has a graduate degree in either child development or early childhood education plus “experience in planning, developing, implementing and evaluating curriculum for a variety of child populations and experience in the supervision and evaluation of personnel.”<sup>61</sup> An early childhood specialist for a home-based program must have a graduate degree with background in early childhood education, child development, family life education, or adult education and must have received interdisciplinary training in work with young children and adult family members.

Public school teachers working in early childhood programs are required to have a valid Michigan teaching certificate and an early childhood endorsement based on a bachelor’s degree in early childhood education. Teachers in child development programs that subcontract with school districts or secure competitive grants must have a valid Michigan teaching certificate and either an early childhood endorsement, a Child Development Associate credential, or a bachelor’s degree in child development with specialization in preschool teaching. Associate teachers must have an associate’s degree in early childhood education or child development, a Child Development Associate credential, or the equivalent (120 clock hours of training). In addition, the program requires parental involvement, including two home visits per year and two parent-teacher conferences.<sup>62</sup>

Funding for MSRP comes primarily from the School Aid Act through the MDE. Since FY2000, the state budget has provided \$84.85 million for MSRP—about \$3,300 per child per year—\$72.6 million through state school aid to school districts and \$12.25 million from the state general fund through competitive grants to community agencies. Inflation has cost the program about 10 percent in the value of these appropriations over this time. During this same period, Head Start funding per child in Michigan, including state matching support, increased from \$6,916 to \$8,264. By way of comparison, Michigan public school funding was \$9,428 in FY2002.<sup>63</sup> Providing MSRP to all of Michigan’s eligible 4-year-olds at the current level of funding per child would cost the state about \$250 million, roughly one-fourth the amount that Michigan spends on students in one grade at the K-12 school system.

The MSRP has been studied for its effects on the academic success of students once they get to school. The evaluation looked at 338 children who had participated in the Michigan School Readiness Program and 258 nonparticipating comparison children who were like the program children in age and socioeconomic status.<sup>64</sup> The evaluation sites were in and around Detroit, Grand Rapids, Grayling, Kalamazoo, Muskegon and Port Huron.

The study found that 30 percent more MSRP graduates met standards on the literacy and mathematics assessments on the 4th grade MEAP than did those in the non-MSRP comparison group. Study results indicated that 38 percent fewer children in the program needed to repeat a grade level (14 percent vs. 22 percent). Extrapolated across the entire MSRP population, these data suggest that more than 2,000 MSRP students avoided repeating a grade—a potential savings to the state School Aid Fund of more than \$13 million each year.

*Providing MSRP to all of Michigan’s eligible 4-year-olds at the current level of funding per child would cost the state about \$250 million.*

*Study data suggest that more than 2,000 Michigan School Readiness Program students avoided repeating a grade—a potential savings to the state School Aid Fund of more than \$13 million each year.*



The MSRP evaluation study also found that elementary school teachers from kindergarten through fourth grade rated the children who had attended MSRP significantly more academically ready for school than their no-program classmates—more interested in school; more likely to take initiative, have good attendance, and retain learning; and stronger in reading, mathematics, thinking, problem solving and working with others. When these children entered kindergarten, observers rated the preschool program graduates significantly better than their no-program classmates in language and literacy, music and movement, initiative, and social relations. As compared to parents of no-program children, parents of children who had attended the MSRP preschool program became significantly more involved in their children’s school activities and talked more with their children’s elementary school teachers.

*Project Great Start*

In response to the growing recognition of the importance of early childhood care and education, Michigan has recently embarked on a new early childhood initiative. Project Great Start was first championed by Governor Jennifer Granholm in her 2004 State of the State Address.<sup>65</sup> This initiative has a dual purpose: to strengthen Michigan’s early childhood efforts and to build an early learning system for all of Michigan’s children. Growing out of a federally funded Early Childhood Comprehensive System Project, its initial purpose is to complete a blueprint for a comprehensive early childhood system for Michigan communities, including:

- ◆ A vision for children from birth to age 5 and their families
- ◆ The mission and purpose of an early care and education system
- ◆ Results and indicators of progress
- ◆ Policies, program, services and supports that make up the system

Project Great Start embodies an evolving set of programs, initiatives and collaborations towards this end. It includes funding for Great Parents, Great Start program grants supported by dollars from the School Aid Fund. These grants are given to intermediate school districts for collaborative community efforts to develop parent involvement and education programs. These grants build on a previous program, All Students Achieve Program—Parent Involvement and Education (ASAP-PIE) that was funded for only two years (FY2001 and FY 2002, with some projects carried over beyond that). With bipartisan support, ASAP-PIE was funded at \$45 million per year, which went to 23 of the state’s 57 intermediate school districts to support home visit programming and other programs that supported families with young children, increased school readiness, and decreased the need for special education in K-12 schooling. While Great Parents, Great Start is similar in intention and nature, its initial funding was less than 10 percent of that for the earlier program, at \$3.3 million per year from FY2004 through FY 2006.

Current legislative language allows districts to divert funds from MSRP formula allotments to support ASAP-PIE programming, including services

## MEETING THE EARLY CHILDHOOD CHALLENGE

to all families with children age 5 and younger in the intermediate school district or district that chooses to participate and does all of the following: home visits by parent educators, group meetings of participating families, periodic developmental screening of children (development, health, hearing and vision), community resource network for referrals to agencies as appropriate, and connection with quality preschool programs.<sup>66</sup> It must be a collaborative community effort including at least an intermediate school district or school district, community collaborative, local health and welfare agencies, and private non-profit early childhood program agencies.

### *Early Childhood Investment Corporation*

In 2005, on the advice of the Early Childhood Comprehensive System Project and Children's Cabinet (members of the Granholm cabinet with special responsibility for children), Governor Granholm formed the Early Childhood Investment Corporation. It is a non-profit public corporation aimed at leveraging public and private funds to best coordinate state and local efforts in early childhood care and education in Michigan. It is governed by an executive committee appointed by the Governor that is charged with helping local communities develop comprehensive early childhood systems. The board combines the executive committee with representatives of all participating intermediate school districts. The corporation recently awarded its first set of Great Start grants for FY2005-2006—\$820,000 for seven collaborative grants and \$420,000 for seven capacity-building grants.

In addition to these Great Start grants, the Early Childhood Investment Corporation completed reviews and is overseeing awards for several quality initiatives funded through the Child Care Development Fund quality programs and services set-aside. States are required to use a minimum of 4 percent of their total annual CCDF funding for these efforts. This effort involves a set of grants and training opportunities that aim to support child care providers, preschool teachers, centers, and parents. For FY2006, funding totaled around \$12.7 million.

## SUMMARY

Michigan provides early childhood care and education to many but not all of its eligible children. Child care in Michigan is unusual in the large amount of subsidized child care provided by relatives. More than 95 percent of the early childhood education in the state comes through the federal Head Start program; the major state preschool program is funded largely by the School Aid Fund, but at levels much lower than per-student K-12 school funding or Head Start. The state is beginning to map out a comprehensive early childhood support system, but has yet to put significant resources behind this effort.



# V

## MICHIGAN EARLY CHILDHOOD POLICY OPPORTUNITIES

*The goal of Michigan's early childhood education policies should be a steady increase in the number of Michigan children participating in high-quality early childhood education programs.*

As the research reviewed in this report has shown, high-quality early childhood education can make a critically important contribution to the academic and social development of children, and to their long-term success as adults. The potential gains from high-quality early childhood education are especially large for the neediest children, and for children living in conditions of toxic stress. Long-term evaluations suggest that the returns on investments in high-quality early childhood education are dramatically larger than the returns on almost any other public investment, with a return of anywhere from four to seventeen dollars for every dollar spent on programs.

These evaluations also show that **early childhood program quality matters**, especially for the neediest children. Two of the studies focused on model programs, in which relatively small numbers of children were provided high-quality early childhood education at a relatively high cost. In practice, most programs fall short of the quality standards achieved in these model programs, although the Chicago Child-Parent Centers show that large-scale programs can be effective when well-implemented. Because of their costs, however, providing places in model programs for all Michigan children—or even for the neediest Michigan children—is unlikely to happen in the near future.

Scarce financial resources are not the only obstacles that Michigan faces as it seeks to ensure that all children have access to opportunities for high-quality early childhood education. Our state is also prevented from reaping potentially large gains from investment in early childhood education because, in Michigan, care and education for young children are provided under a patchwork quilt of policies, programs and providers. Resources and responsibility are scattered across a diverse array of competing agencies, with insufficient attention given to the quality of programs, especially for the neediest children.

The goal of Michigan's early childhood education policies in the immediate future should be **a steady increase in the number of Michigan children participating in high-quality early childhood education programs**. A strategy to achieve this goal requires action on five different fronts.

First, Michigan must reduce the patchwork of programs and providers, rather than adding to it. Today's fragmented system needs a coherent plan and a responsible body to provide unified oversight and allow strategic planning and better allocation of resources. No new stand-alone initiatives

## MEETING THE EARLY CHILDHOOD CHALLENGE

should be created; instead, any new early childhood program should fit coherently into this unified system. The Early Childhood Investment Corporation is the leading candidate for this oversight function, because the ECIC represents many of Michigan’s important stakeholders in the field who have the expertise and commitment needed.

Second, Michigan must “raise the floor” in terms of the quality of care received by Michigan children by increasing standards and expectations for **all** early childhood education programs and providers. Given the unusually large numbers of providers in Michigan who are relatives, these higher expectations should apply equally to all providers receiving state or federal funds—including parents who take care of other people’s children. Requiring more of these providers means both higher initial qualifications—the lack of a criminal record is a necessary but insufficient qualification for the care of young children—and on-going requirements for more education and training focused on child development rather than just safety. At the same time, Michigan should work hard to give parents and providers more information about high-quality early childhood care and education child development. Better informed parents should lead to increased the demand for high-quality care, while better trained providers should be able to supply it. Attracting more qualified people into the early childhood field by raising salaries for early childhood positions over time will also serve to raise the floor of care available to Michigan’s children.

Third, state policy-makers should use funds more effectively. This means shifting funds to higher-quality center-based programs such as the Michigan School Readiness Program and away from low-quality and custodial programs. While Michigan and the federal government already allocate considerable resources to existing early childhood programs, the return-on-investment research provides powerful arguments for investing new funds in high-quality programs and expanding access to them. Designing funding policies where “the money follows the child” will produce net increases in average quality over time, as parents choose higher-quality alternatives for their children.

Fourth, policy-makers should target resources toward the neediest children, including those living with toxic stress and those currently involved in low-quality early childhood care. The research clearly demonstrates that this type of targeting will provide the largest return for both the state and the individual children involved.

Finally, the long-term effectiveness of model programs such as the Abcedarian and High/Scope Perry projects suggests that policy-makers should support policy initiatives aimed at developing and expanding model programs for needy children in needy communities. The benefits to those children alone are worth the effort, but such initiatives can help early childhood providers across Michigan to identify and replicate the key features of high-quality early childhood education programs.

The goal and strategies outlined above acknowledge and are intended to

*Michigan must “raise the floor” in terms of the quality of care received by Michigan children by increasing standards and expectations for all early childhood education programs and providers.*



*The overarching goal should be to develop a comprehensive system that focuses on child development from birth to 5, and that supports efforts by children, households and communities to achieve this goal.*

work within their own patchwork of political, financial and bureaucratic realities. Politically, long-term investments—even those with potentially large returns – are inherently difficult for legislators and other policy-makers to make without some immediate advantages as well, such as jobs for constituents or subsidies to local churches and local non-governmental organizations. In addition, policy-makers cannot be expected to pull the rug out from under current programs and initiatives, each of which has its politically powerful champions. Nor can the state usurp parental authority or decision-making in who takes care of children. The proposed strategy relies on the creation of opportunities for parents voluntarily to move their children into situations that are better for them developmentally. Many parents will take advantage of these new opportunities—though some may not. Any strategy must include a wide range of providers, including faith-based, public and home-care providers.

Financially, the reality is that Michigan is not now in a position to provide large new infusions of funds for early childhood programs. Therefore, policies should focus on the allocation of incremental increases in funding, and on shifting funds over time into higher-quality alternatives.

Even when the political and financial challenges are resolved, policy-makers face the bureaucratic realities that those with responsibility for different parts of the current “system” have very different orientations and goals, whether they be support for working mothers, ensuring child safety and welfare, or improving school readiness. The overarching goal should be to develop a comprehensive system that focuses on child development from birth to 5, and that supports efforts by children, households and communities to advance this goal.

Michigan has long been a leading state in many ways. Now it has the opportunity to be a leading state in the development of a comprehensive early childhood system that provides high-quality early childhood education to its young children, particularly those who need it most. In assuming this position of leadership, it will be serving all its citizens well – not only young children and their families, but all of us who want Michigan to be the best place in the nation to raise our children.



### NOTES

- <sup>1</sup> National Research Council and Institute of Medicine (2000). *From neurons to neighborhoods: The science of early childhood development*. Committee on Integrating the Science of Early Childhood Development, J. P. Shonkoff & D. A. Phillips (Eds.). Commission on Behavioral and Social Sciences and Education. Washington, DC: National Academy Press.
- <sup>2</sup> H. Boushey, C. Brocht, B. Gundersen, & J. Bernstein (2001). *Hardships in America: The real story of working families*. Washington, DC: Economic Policy Institute.
- <sup>3</sup> F. A. Campbell, C. T. Ramey, E. P. Pungello, J. Sparling, & S. Miller-Johnson (2002). Early childhood education: Young adult outcomes from the Abecedarian project. *Applied Developmental Science*, 6, 42-57.
- <sup>4</sup> S. H. Clarke & F. A. Campbell (1998). Can intervention early prevent crime later? The Abecedarian Project compared with other programs. *Early Childhood Research Quarterly*, 13, 319-343.
- <sup>5</sup> L. N. Massé & W. S. Barnett (2002). A benefit-cost analysis of the Abecedarian early childhood intervention. In Levin, H. & McEwan P. (Eds.), *Cost effectiveness analysis in education: Methods, findings and potential. 2002 Yearbook of the American Education Finance Association*. Available online at [nieer.org/resources/research/AbecedarianStudy.pdf](http://nieer.org/resources/research/AbecedarianStudy.pdf).
- <sup>6</sup> L. J. Schweinhart, J. Montie, Z. Xiang, W. S. Barnett, C. R. Belfield, & M. Nores (2005). *Lifetime effects: The High/Scope Perry Preschool Study through age 40*. Ypsilanti, MI: High/Scope Press.
- <sup>7</sup> A. J. Reynolds, J. A. Temple, D. L. Robertson, & E. A. Mann (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest: A 15-year follow-up of low-income children in public schools. *Journal of the American Medical Association*, 285, 2339-2346.
- <sup>8</sup> A. J. Reynolds, J. A. Temple, D. L. Robertson, & E. A. Mann (2002). Age 21 cost-benefit analysis of the Title I Chicago child-parent centers. *Educational Evaluation and Policy Analysis*, 4, 267 - 303. Available online at [www.ssc.wisc.edu/irp/pubs/dp124502.pdf](http://www.ssc.wisc.edu/irp/pubs/dp124502.pdf).
- <sup>9</sup> It might be argued that the Perry program participants gained more because they started lower than the Head Start FACES participants. The initial Perry mean was 66.4, while the initial FACES mean was 85.3. Further, the bottom quartile in the FACES study had an initial mean of 67.0 and gained 8.4 points in a year, comparable to the first year of Perry. However, in the Head Start Impact Study, the effect size of the difference between the Head Start and no Head Start groups for the PPVT-III scores of 3-year-olds after one year of Head Start was only 0.12 – less than 2 points, and the difference for 4-year-olds was even less.
- <sup>10</sup> U.S. Administration for Children and Families (2005). *Head Start Impact Study: first year findings*. Washington, DC: Author. Retrieved online July 1, 2005, at [www.acf.hhs.gov/programs/opre/hs/impact\\_study/reports/first\\_yr\\_finds/first\\_yr\\_finds.pdf](http://www.acf.hhs.gov/programs/opre/hs/impact_study/reports/first_yr_finds/first_yr_finds.pdf). The small to moderate effect sizes ranged from .10 to .32 of the standard deviation of the measure in question.
- <sup>11</sup> N. Zill, G. Resnick, K. Kim, K. O'Donnell, A. Sorongon, R. H. McKey, S. Pai-Samant, C. Clark, R. O'Brien, & M. A. D'Elia (May 2003). *Head Start FACES (2000): A whole child perspective on program performance - Fourth progress report*. Prepared for the Administration for Children and Families, U.S. Department

of Health and Human Services (DHHS) under contract HHS-105-96-1912, Head Start Quality Research Consortium's Performance Measures Center. Available online at [www.acf.hhs.gov/programs/core/ongoing\\_research/faces/faces00\\_4thprogress/faces00\\_4thprogress.pdf](http://www.acf.hhs.gov/programs/core/ongoing_research/faces/faces00_4thprogress/faces00_4thprogress.pdf).

- <sup>12</sup> J. M. Love, E. E. Kisker, C. M. Ross, P. Z. Schochet, J. Brooks-Gunn, D. Paulsell, K. Boller, J. Constantine, C. Vogel, A. S. Fuligni, & C. Brady-Smith (2002). *Building their futures: How early Head Start programs are enhancing the lives of infants and toddlers in low-income families: Vol. 1 Final technical report*. Washington, DC: U.S. Department of Health & Human Services. Available online at [www.acf.dhhs.gov/programs/core/ongoing\\_research/ehs/impacts\\_vol1/impacts\\_vol1.pdf](http://www.acf.dhhs.gov/programs/core/ongoing_research/ehs/impacts_vol1/impacts_vol1.pdf).
- <sup>13</sup> B. D. Goodson, J. L. Layzer, R. G. St. Pierre, L. S. Bernstein, & M. Lopez (2000). Effectiveness of a comprehensive, five-year family support program for low-income families: Findings from the Comprehensive Child Development Program. *Early Childhood Research Quarterly*, 15, 5-39.
- <sup>14</sup> Planning and Evaluation Service. (1998). *Even Start: Evidence from the past and a look to the future*. Washington, DC: U.S. Department of Education. Available: [www.ed.gov/pubs/EvenStart/](http://www.ed.gov/pubs/EvenStart/), ED 427 890.
- <sup>15</sup> W. S. Barnett, C. Lamy, & K. Jung (2005). *The effects of state prekindergarten programs on young children's school readiness in five states*. New Brunswick, NJ: National Institute for Early Education Research, Rutgers University. Available online at [nieer.org/docs/index.php?DocID=129](http://nieer.org/docs/index.php?DocID=129).
- <sup>16</sup> W. S. Gilliam & E. F. Zigler (2001). A critical meta-analysis of all evaluations of state-funded preschool from 1977 to 1998: Implications for policy, service delivery, and program implementation. *Early Childhood Research Quarterly*, 15, 441-473.
- <sup>17</sup> NICHD Early Child Care Research Network. (2005). Early child care and children's development in the primary grades: Follow-up results from the NICHD Study of Early Child Care, *American Educational Research Journal*, 42 (3). Information available online at [secc.rti.org/](http://secc.rti.org/).
- <sup>18</sup> Cost, Quality & Child Outcomes Study Team (1995). *Cost, Quality, and Child Outcomes in Child Care Center*, Public Report, second edition. Denver: Economics Department, University of Colorado at Denver. E. S. Peisner-Feinberg, M. R. Burchinal, R. M. Clifford, M. L. Culkin, C. Howes, S. L. Kagan, & N. Yazejian (2001). The relationship of preschool child-care quality to children's cognitive and social developmental trajectories through second grade. *Child Development*, 72, 1534-1553. Information available online at [www.fpg.unc.edu/NCEDL/PAGES/cq.cfm](http://www.fpg.unc.edu/NCEDL/PAGES/cq.cfm).
- <sup>19</sup> T. Harms & R. M Clifford (1980). *The early childhood environment rating scale*. New York: Teachers College Press.
- <sup>20</sup> D. L. Olds, C. R. Henderson, Jr., C. Phelps, H. Kitzman, & C. Hanks (1993). Effects of prenatal and infancy nurse home visitation on government spending. *Medical Care*, 31, 155-174.
- <sup>21</sup> D. L. Olds, J. Eckenrode, C. R. Henderson, Jr., H. Kitzman, J. Powers, R. Cole, K. Sidora, P. Morris, L. M. Pettit, & D. Luckey (1997). Long term effects of home visitation on maternal life course and child abuse and neglect: 15-year follow-up of a randomized trial. *The Journal of the American Medical Association*, 278, 637-643. D. L. Olds, C. R. Henderson, Jr., R. Cole, J. Eckenrode, H. Kitzman, D. Luckey, L. M. Pettit, K. Sidora, P. Morris, & J.

## MEETING THE EARLY CHILDHOOD CHALLENGE

- Powers (1998). Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized trial. *The Journal of the American Medical Association*, 280, 1238-1244.
- <sup>22</sup> L. A. Karoly, P. W. Greenwood, S. S. Everingham, J. Houbé, M. R. Kilburn, C. P. Rydell, M. Sanders, & J. Chiesa (1998). *Investing in our children: What we know and don't know about the costs and benefits of early childhood interventions*. Santa Monica, CA: Rand.
- <sup>23</sup> D. L. Olds, H. Kitzman, R. Cole, J. Robinson, K. Sidora, D. W. Luckey, C. R. Henderson, C. Hanks, J. Bondy, & J. Holmberg (2004). Effects of nurse home-visiting on maternal life course and child development: Age 6 follow-up results of a randomized trial. *Pediatrics*, 114, 1550-1559.
- <sup>24</sup> Board on Children, Youth, and Families, Commission on Behavioral and Social Sciences and Education, National Research Council and Institute of Medicine. (1999). *Revisiting Home Visiting: Summary of a Workshop*. N. G. Margie & D. A. Phillips, Eds. Washington, DC: National Academy Press. Available online at [darwin.nap.edu/books/NI000203/html/4.html](http://darwin.nap.edu/books/NI000203/html/4.html). J. I. Layzer, B. D. Goodson, L. Bernstein, & C. Price, (2001). *National evaluation of family support programs. Final Report Volume A: The meta-analysis*. Cambridge, MA: Abt Associates. Available online at [www.abtassociates.com/reports/NEFSP-VolA.pdf](http://www.abtassociates.com/reports/NEFSP-VolA.pdf).
- <sup>25</sup> G. Mulligan, D. Brimhall, J. West & C. Chapman (2005). *Child care and early education arrangements of infants, toddlers, and preschoolers: 2001*. (NCES 2006-039). Washington, DC: National Center for Education Statistics, U.S. Department of Education. Available online at [nces.ed.gov/pubs2006/2006039.pdf](http://nces.ed.gov/pubs2006/2006039.pdf).
- <sup>26</sup> J. Overturf Johnson (2005). *Who's minding the kids? Child care arrangements: Winter 2002*. Current Population Reports, p. 70-101. Washington, DC: U.S. Census Bureau. Available online at: [www.census.gov/prod/2005pubs/p70-101.pdf](http://www.census.gov/prod/2005pubs/p70-101.pdf).
- <sup>27</sup> Overturf Johnson (2005).
- <sup>28</sup> W. S. Barnett & L. N. Masse (2002). Funding Issues for early childhood care and education programs. In D. Cryer and R. Clifford (Eds.), *Early childhood education and care in the USA*. Baltimore: Paul H. Brookes Publishing Co.
- <sup>29</sup> Child Care Source: U.S. Department of Health and Human Services Bureau (2006). *FY 2002 CCDF State Expenditures*
- <sup>30</sup> U.S. Department of Health and Human Services (2005). Child Care and Development Block Grant Act of 1990 (42 USC 9801 et seq.), as amended by the Personal Responsibility and Work Opportunity Act of 1996 (Public Law 104-193) and the Balanced Budget Act of 1997 (Public Law PL 105-33).
- <sup>31</sup> Michigan Department of Education (2005). *Facts about Special Education in Michigan-April 2005*. Available online at [www.michigan.gov/documents/05-01FactSheet\\_123888\\_7.pdf](http://www.michigan.gov/documents/05-01FactSheet_123888_7.pdf)
- <sup>32</sup> White House (2004). *Good Start, Grow Smart: The Bush Administration's Early Childhood Initiative*. Executive Summary available at [www.whitehouse.gov/infocus/earlychildhood/earlychildhood.html](http://www.whitehouse.gov/infocus/earlychildhood/earlychildhood.html).
- <sup>33</sup> W. S. Barnett, J. T. Hustedt, K. B. Robin, & K. L. Schulman (2005). *The state of preschool: 2005 state preschool yearbook*. New Brunswick, NJ: National Institute for Early Education Research, Rutgers University.
- <sup>34</sup> Ibid



- <sup>35</sup> National Association for the Education of Young Children (NAEYC) 2006. Quick Facts About State Prekindergarten. Available online at [www.naeyc.org/ece](http://www.naeyc.org/ece).
- <sup>36</sup> Michigan Department of Community Health, 2003; available online at [www.mdch.state.mi.us](http://www.mdch.state.mi.us).
- <sup>37</sup> Annie E. Casey Foundation (2006). Kids Count 2005. State-Level Data Online. Profile by State: Michigan.
- <sup>38</sup> Michigan Department of Community Health. Michigan WIC Program Data. Table: Total Births, WIC, Medicaid Infant Enrollment for Michigan by Year. Available online at [www.mdch.state.mi.us/wicenroll/st\\_probx.asp](http://www.mdch.state.mi.us/wicenroll/st_probx.asp)
- <sup>39</sup> Ibid
- <sup>40</sup> National Center for Children in Poverty (2005). State Profiles: Michigan. Demographics. Calculated using data from the Current Population Survey of the U.S. Census Bureau. Available online at [www.nccp.org](http://www.nccp.org)
- <sup>41</sup> U.S. Census Bureau. *The American Community Survey 2003*. Children Characteristics and Economic Characteristics for Michigan and for U.S., downloaded via [factfinder.census.gov](http://factfinder.census.gov) February 2006.
- <sup>42</sup> W. S. Barnett & L. N. Masse (2002). Funding Issues for early childhood care and education programs. In D. Cryer and R. Clifford (Eds.), *Early childhood education and care in the USA*. Baltimore: Paul H. Brookes Publishing Co.
- <sup>43</sup> P. Sorenson and R. Lower (2004). Budget Watch: Beginning at Birth. Michigan's Children. Lansing, Michigan.
- <sup>44</sup> Ibid.
- <sup>45</sup> Michigan Department of Consumer and Industry Services Director's Office (2006). *Child day care licensing - child care centers*. Available online at [www.state.mi.us/orr/emi/admincode.asp?AdminCode=Single&Admin\\_Num=40005101&Dpt=HS&RngHigh=](http://www.state.mi.us/orr/emi/admincode.asp?AdminCode=Single&Admin_Num=40005101&Dpt=HS&RngHigh=). New center regulations are available online at <http://www.state.mi.us/orr/emi/rules.asp?type=Number&id=40005101>
- <sup>46</sup> Michigan Department of Human Services Director's Office (2006). *Licensing rules for family and group child care homes*.
- <sup>47</sup> Ibid.
- <sup>48</sup> Michigan 4C Association (2005). 2005 Child Care in Michigan. Available online at [www.naccrra.org/docs/data/MI.pdf](http://www.naccrra.org/docs/data/MI.pdf).
- <sup>49</sup> P. Sorenson and R. Lower (2004).
- <sup>50</sup> U.S. Department of Health and Human Services, Child Care Bureau (2006). Data taken from CCDF Expenditure Data Tables for 2004.
- <sup>51</sup> P. Sorenson and R. Lower (2004).
- <sup>52</sup> U.S. Department of Health and Human Services, Child Care Bureau (2006). Data taken from CCDF Data Tables for FY2004.
- <sup>53</sup> Ibid.
- <sup>54</sup> National Center for Children in Poverty (2005). State Profiles: Michigan. Policies: Head Start. Available online at [www.nccp.org](http://www.nccp.org)
- <sup>55</sup> Administration for Children and Families, U.S. Department of Health and Human Services, 2005.
- <sup>56</sup> Head Start Association (2005). Issue Brief: Head Start Basics. Available online at [www.nhsa.org](http://www.nhsa.org).



**INVESTING IN MICHIGAN'S FUTURE**





The Education Policy Center  
at Michigan State University

**THE EDUCATION POLICY CENTER AT MICHIGAN STATE UNIVERSITY**

COLLEGE OF EDUCATION, 201 ERICKSON HALL, EAST LANSING, MICHIGAN 48824-1034

PHONE: (517) 355-4494 • FAX: (517) 432-6202

[WWW.EPC.MSU.EDU](http://WWW.EPC.MSU.EDU)