Evaluation Report III:  
State Maternal & Child Health Early Childhood Comprehensive Systems Grant Program  

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A BRIEF HISTORY OF ECCS

INTRODUCTION

The Indiana State Maternal & Child Health Early Childhood Comprehensive System (ECCS) was conceived as an initiative to engage state agencies, community partners and families of young children to develop a coordinated, comprehensive, community-based system of services for children from birth through age five. The ECCS system is designed to eliminate duplicated efforts in servicing young children and their families, while ensuring that services are applied universally across the state. The initiative is intended to support ease of access to needed services, increase the utilization of appropriate services, and ensure that a holistic system of care supports young children and their families.

INITIATIVE PROGRESS

The ECCS initiative officially began on July 1, 2003 with a grant provided by the Health Resources and Services Administration, Maternal and Child Health Bureau. As part of the project, The Indiana State Department of Health convened a core group of partners including representatives from several state and local agencies, as well as individuals representing service organizations and families. The core partners meet quarterly and are charged with educating their organizations on the guiding principles of the ECCS initiative, as well as establishing protocols to support communication across agencies and initiatives. As part of their mission, the committee, as well as the subcommittees, developed a strategic plan for achieving the goal of
coordinated services. The strategic plan outlines seven primary objectives to realize coordinated and comprehensive services for young children. The objectives set forth in the plan include:

- All children in Indiana will have a medical home.

- All children will be covered by a source of payment, either public or private, for medical and developmental services that are identified by the medical home.

- The medical home will facilitate developmental, behavioral and mental health screening with appropriate treatment referrals to community resources.

- An information clearinghouse will be established that includes information about resources and supports for families of young children and providers of early childhood services at both the state and local level.

- Quality resources and supports are integrated to create a coordinated and accessible early childcare system.

- Parents have the necessary information, support and knowledge about child development and are able to recognize their child’s progress.

- Families have timely access to resources and supports to address their child’s health, safety and developmental needs.

The committee developed several goals for each objective in order to achieve a better and more coordinated system of care for children. Further details regarding these goals and objectives, as well as information on the accomplishments to date of the ECCS committee can be found in the strategic plan at [www.sunnystart.in.gov](http://www.sunnystart.in.gov).
EVALUATION

The strategic plan, as well as requirements set forth by the Health Resources and Services Administration, Maternal and Child Health Bureau, requires an evaluation of this initiative. Since June of 2006, the Indiana State Department of Health has worked with the Center for Health Policy at Indiana University Purdue University Indianapolis to develop and execute an evaluation plan. Due to the time period in which this project will be completed, the central foci of the evaluation will be benchmarking and assessing the implementation of the ECCS project as well as providing data regarding early outcomes to the extent possible.

The parameters set forth by the ECCS committee for the evaluation were fairly broad in nature. Specifically, the strategic plan required that the evaluation:

- Monitor the discrete activities of the strategic plan
- Determine whether or not Indiana families are better off as a result of the implementation of the ECCS
- Evaluate how well Indiana implemented the strategic plan

As mentioned previously, the time frame of this study limits conclusions regarding the effect of the ECCS plan on Indiana families; however, the results of the evaluation will provide a benchmark for comparison as the initiative progresses as well as early indicators of potential longer term outcomes.

This report is the third evaluation report investigating the implementation of ECCS initiatives. Data and other information for this study comes from a variety of sources, including the Indiana State Department of Health, the Indiana Family and Social Services Administration,
Department of Child Services, the United States Census Bureau, as well as several other government entities and private organizations. This report, using the objectives set forth in the ECCS strategic plan, focuses on three key areas of impact: Access and Utilization of Health Care, Source of Payment for Health Care, and Resources, Support and Development.

Within this report, the most recent, appropriate data is used. This means that some data will be from 2006, some from 2007. Some data will be for calendar years and some will be for fiscal years. In particular, the Medicaid data we report is for only the first half of State Fiscal Year 2007. The reason we report only the first half of SFY 2007 for Medicaid data is because this is only time period for which children’s age is available. Additional caveats concerning data are presented were appropriate in the report.

I. ACCESS AND UTILIZATION OF HEALTH CARE

One of the overarching components of this initiative is to ensure that children have access to health care services. In order to facilitate this, the ECCS program has embraced the concept of a medical home, a model that seeks to provide continuity of care through the increased utilization of primary care. Prior research has shown evidence that the comprehensiveness and coordination that a medical home offers can provide better health outcomes, and result in reduced disparities in the utilization of health services [1]. Data regarding the proportion of children with a medical home is not currently available. As this data becomes available it will be incorporated into the report.

While this initiative seeks to improve the health and well-being of all Indiana children, getting services to children from low-income households is of paramount concern. Due to
limited ability to pay for services, children in low income families are at greater risk of receiving sporadic or piecemeal health services, often resulting in inadequate care.

Prior to state fiscal year (SFY) 2007, the data provided to us by Medicaid did not include age. Beginning in SFY 2007 age was included. This allows us to look directly at the number of children aged 5 and younger, rather than having to estimate the number of children aged 5 and younger by using Medicaid eligibility categories.

To evaluate utilization of services, Indiana Medicaid claims data are used to determine the number of children who visited a medical professional. Specifically we calculated the number of children aged 5 and under who visited a medical professional [2]. This number provides a baseline measure for patterns of health care utilization among Indiana children receiving Medicaid coverage. While Medicaid claims data is not a complete list of services rendered to all families, it does provide a substantial amount of treatment episode data for a large proportion of Indiana children, particularly the most vulnerable and least likely to obtain regular services.

Our data showed that a total of 244,352 children under 6 years of age were enrolled in Medicaid during the first half of State Fiscal year 2007. Of these children, it is estimated that 170,109 are covered under a managed care program. An analysis of claims data reveals that, during the same time period, a total of 236,250 (96.7%) of these children visited a medical professional. Due to the nature of Medicaid claims data, an accurate delineation of type of medical services that a child receives is unavailable. Nevertheless, this indicates that over 9 out of 10 children enrolled in Medicaid received some form of medical services. This is an increase from the previous reports estimate of only 3 out of 5 children for SFY 2006.
The number of children receiving dental care provides an additional measure of access to medical care. Because the first recommended dental visit is at age one, only those children between 1 and 5 years of age enrolled in Medicaid during the first half of SFY 2007 are considered. There are a total of 199,618 such children. Medicaid claims data show that 35,556 (17.8%) of such children visited a dentist during the first half of SFY 2007. Thus nearly 1 in 5 of these children visited a dentist, a low rate given that it is recommended that children over 1 visit a dentist once every 6 months.

As mentioned previously, the goal of providing continuity of care, through the use of a medical home, is to improve the health and well-being of young children in Indiana. Along with evaluating medical visits, one way to measure trends in the well-being of children is to investigate immunization rates of young children. According to the Indiana State Department of Health, data for the 2004-2005 child care immunization assessment indicates that of those
children enrolled in a licensed child care center, 77% of children aged 15-23 months and 83% of children aged 2-5 received complete vaccines [3]. Additionally, 95% of children enrolled in kindergarten, first grade and sixth grade in Indiana schools reporting were also fully vaccinated [4]. As an additional measure of immunization, the Centers for Disease Control and Prevention conducts an annual telephone survey regarding immunization of a sample of each state’s population. This data shows that 78.5% of Indiana children aged 19-35 months were immunized in 2004\(^1\) compared to a national rate of 82.4% [5].

The infant mortality rate ( < 1 year of age) for the state of Indiana was 8.14 deaths per 1,000 in 2004. The infant mortality rate for the US was 6.85 deaths per 1,000. The mortality rate for children aged 1-4 years of age was 0.37 per 1,000, compared to a rate of 0.30 per 1,000

\(^1\) Immunization in this case refers to children who received the 4:3:1:3 combined series which includes 4 or more doses of diphtheria and tetanus toxoids and pertussis vaccine, diphtheria and tetanus toxoids, or diphtheria and tetanus toxoids and acellular pertussis vaccine; 3 or more doses of any poliovirus vaccine; 1 or more doses of a measles containing vaccine; and 3 or more doses of Haemophilus influenzae type b vaccine
for the US. The injury mortality rate in 2004 for children aged birth to 5 was 0.24 per 1,000, compared to a National rate of 0.16 per 1,000. Injury deaths include unintentional injuries, violence related injuries (homicide, legal intervention, and suicide), as well as injuries in which the intent was undetermined [18,19].

Access to health care is of particular importance to children with special health care needs. To measure the successful implementation of providing these means, the evaluation reviewed the number of children enrolled in the Indiana State Department of Health Children’s Special Health Care Services (CSHCS) program. Data for calendar year 2006, the most recent period for which data could be obtained for publication of this report, indicate that 3,423 children aged 5 and younger participated in this program. This equates to 0.6% of the population aged 5 and younger and also represents a decrease of 28% when compared to the enrollment during 2003 when 4,758 children within this age group were enrolled [6].
Another program that supports access for children with special health care needs is the Individuals with Disabilities Education Act. This program aims to provide needed services to children with disabilities. Data from this program show that during 2005, a total of 29,646 children aged five and under were served by this act, representing an increase of 53% since 1998. Of these children, 19,228 were between the ages of 3 and 5. The remaining 10,418 children were aged two and under and provided services through the Early Intervention Program for Infants and Toddlers with Disabilities, coordinated by First Steps, an increase of 88% [7, 8].

Another component of high quality, continuous care is to identify children with developmental, behavioral, and mental health needs. The development of a medical home for young children may increase the likelihood that care providers will recognize symptoms when they occur, through the use of screening tools, and allow physicians to provide comprehensive and coordinated early intervention services. Prior research indicates that facilitating this type of coordination improves the quality of life in young children identified as needing developmental, behavioral, and mental health services, children who may not have received treatment prior to ECCS [9].

To monitor this component of care, we used Medicaid claims data to review the number of children enrolled in Medicaid assessed for social-emotional development through the Early & Periodic Screening, Diagnosis & Treatment (EPSDT) program in SFY 2006. Medicaid enrollment data reveals that of the 244,352 children enrolled in Medicaid, at least 157,933 (64.6%) received EPSDT services. This number is not a precise measure of services rendered, as many types of services fall under the umbrella of EPSDT services and some EPSDT services may be billed to other service categories. Of the 170,109 children covered by a managed care program, approximately 75.0% received EPSDT services while only 40.9% of those under a fee
for service plan received EPSDT services. This finding suggest that managed care plans, and the medical home they provide, result in more preventative and screening care. Another measure of EPSDT services is the participant ratio from the Annual EPSDT Participation Report. The most recent available report with data for Indiana is from 2004 and shows that roughly 66% of eligible children age birth through 5 received at least one EPSDT screening [21].

II. SOURCE OF PAYMENT FOR HEALTH CARE

One of the greatest barriers to accessing healthcare services is the ability to pay. Research has shown that disparities in the use of primary care exist between insured children and uninsured children [10]. It has also been demonstrated that children with no health coverage are significantly less likely to have a regular source of care and to see a specific physician. Furthermore, uninsured children are more likely to be inadequately vaccinated and having fewer annual physician visits [10]. By seeking to cover all children with a source of health insurance, the ECCS initiative seeks to eliminate this disparity.

<table>
<thead>
<tr>
<th>Insurance Status by Poverty Level:</th>
<th>Children 5 and Under in Indiana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insured</td>
<td>% Insured</td>
</tr>
<tr>
<td>Above 200% of the FPG</td>
<td>258,474</td>
</tr>
<tr>
<td>Below 200% of the FPG</td>
<td>243,420</td>
</tr>
<tr>
<td>Total</td>
<td>501,894</td>
</tr>
</tbody>
</table>

To monitor the success of this objective, data from the United States Census Bureau’s Current Population Survey - Annual Social and Economic Supplement was used to estimate the number of uninsured children below the 200% poverty guideline, as well as the total number of uninsured children age five or younger. As of March 2006, there were a total of 531,067
children aged five or younger in the State of Indiana, of whom 29,173 (5.5%) were not covered by any type of health insurance. Furthermore, 264,206 (49.8%) children lived in a household below the 200% FPG and of these children, 20,786 (7.9%) lacked any form of health coverage [11]. Only 1 in 20 children aged five and under are not covered by any form of health coverage. Only 3 in 100 children above 200% of the FPG lack insurance; however, nearly 1 in 10 children below 200% of the FPG are without any form of health coverage.

The above figures provide an estimate of the number of children eligible for Medicaid, a program which provides health care insurance at little or no cost to Indiana families. Medicaid enrollment data for the first 2 quarters of SFY 2007 indicate that 244,352 children under the age of six were covered by Medicaid during the first two quarters of SFY 2007. Estimates from the March 2006 Current Population Survey (CPS) are that 64.4% (170,200) of children below 200% of the FPG are covered by Medicaid and that an additional 19,336 children above 200% of the FPG are also covered by Medicaid. Clearly there are a substantial number of children eligible for Medicaid who are not enrolled. As the ECCS initiative continues, the ability to follow the availability and consequent enrollment in Medicaid can provide baseline measurements for covering all children with a source of payment for medical and developmental services. By comparing the data provided by this evaluation, future work can investigate changes in the number and percentages of children enrolled in programs for low-income families and gauge the longer-term effectiveness of this initiative.

### III. RESOURCES, SUPPORT AND DEVELOPMENT

To create a coordinated and accessible childhood system, quality resources and supports must be fully integrated. By assessing quality standards and focusing on local resources and
supports, this part of the evaluation examines the effectiveness of the ECCS initiative with regards to child care resources, available supports, and educational development opportunities.

As licensed child care facilities in the State of Indiana are required to meet certain minimum standards in order to maintain licensure, the quality of these facilities can be more easily ensured. To assess the quality of child care in Indiana, this evaluation investigated the number of licensed facilities as well as overall licensed capacity. Using data from the Bureau of Child Care (BCC), as of February 19, 2007, there are 3,609 licensed child care facilities in the state with a total licensed capacity of 107,309. This licensed capacity could serve up to 20.2% of all Indiana children 5 and younger. 86.5% of these facilities are licensed to care for infants and toddlers from the age of zero to 2, providing an estimated statewide capacity of up to 44,621 infants and toddlers [20]. The March 2006 CPS estimate for the number of children aged birth through 2 in Indiana is 253,559. Approximately 17.6% of children between ages birth through 2 could be served by a licensed child care facility. Additional Children could be cared for in ministry based child care facilities, which are not subject to licensing. While not subject to licensing, ministry based care must meet minimum requirements regarding sanitation and fire and life safety. This affords ministry and faith based organizations less governmental oversight. Information regarding the capacity of unlicensed, registered childcare ministries was not available at the time this report was compiled.

Data from the BCC is also used to determine the number and percent of children enrolled in the Child Care Development Fund (CCDF) who are enrolled in licensed child care centers or homes. The CCDF is a federal fund providing needy families with assistance in obtaining child care so they can work or attend training or education. The Data indicate that as of September 30, 2006, 55,844 children were served by the CCDF, 70.2% (39,202) of whom were enrolled in a
licensed child care setting, while the remainder received services from a ministry or faith-based day care setting [12].

Regarding parents, prior research has indicated that children whose parents are more involved in their care are more likely to have better outcomes than those whose parents are less involved [14]. Despite the positive outcomes that are likely to materialize as a result of parental contribution, parents are often unwilling or unable, due to stress and/or fear, to get involved because of a lack of information with regard to their child’s care [15]. One of the ECCS’s objectives is to provide parents with information and knowledge about their child’s development to help them overcome the stresses and fears they may feel and encourage them to become more involved. This is an important step in improving the well-being of Indiana children as parents have the potential to recognize symptoms of delayed progression earlier than a physician.
Teen pregnancy presents a problem in that young mothers often lack resources needed to provide for their child. The birth rate for mothers ages 10 to 14 was 0.5 per 1,000 females in 2005, down from 1.1 per 1,000 in 1995. The birth rate for white mothers ages 10 to 14 was 0.4 per 1,000 while that for black mothers of the same age was 1.2 per 1,000. The birth rate for mother ages 15 to 19 was 43.2 per 1,000 females in 2005, down from 57.2 per 1,000 in 1995. The birth rate for white mothers ages 15 to 19 was 39.8 per 1,000 while that for black mothers of the same age was 77.3 per 1,000.

In order for parents to timely and effectively address their child’s health, safety and developmental needs, families must have access to resources that enable them to fulfill their children’s basic needs. One way to achieve this is through the Special Supplemental Nutrition Program for Women, Infants and Children (WIC). According to the United States Department of Health and Human Services, WIC provides nutrition education and support to low-income pregnant and postpartum women, infants, and children up to 5 years old.
Agriculture, the Indiana WIC program served an average of 137,374 individuals each month during Federal Fiscal Year 2006 [16]. Using information provided by the Indiana State Department of Health, we estimate this to equate to approximately 39,000 infants and 62,000 children [17].

An additional measurement of child behavioral and mental health is the number of children expelled from early care or early educational settings due to behavioral problems. Out of a total of 75,500 Kindergarten students, there were 328 in school suspensions, 613 out of school suspensions, and 1 expulsion during the 2005-2006 school year. Fifty-four of the in school suspensions and 138 of the out of school suspensions were of special education students. There were a total of 10,463 Pre-Kindergarten students during the 2005-2006 school year. There was 1 in school suspension of a Pre-Kindergarten student and 5 out of school suspensions of Pre-Kindergarten students.
As an additional measure of childhood well-being, we investigated the number of children who have been reported as abused or neglected. Using data provided by the Indiana Department of Child Services, during the twelve month period ending March 2006, 2,880 unique children aged five and under were abused and/or neglected and consequently declared a Child In Need of Services (CHINS) or removed from their placement. Thus approximately one half a percent of children under five in Indiana were reported as being abused or neglected.

In order to provide families of young children a single source of available resources offered throughout the state and their community, the ECCS initiative aims to establish an information clearinghouse. This clearinghouse, known as the Early Childhood Meeting Place (ECMP, http://earlychildhoodmeetingplace.indiana.edu) has been developed by the Indiana Institute on Disability and Community at Indiana University (IDC). The ECMP offers a vast array of resources including 112 community resources, 42 child care and early education resources, 233 health and safety resources and 234 parenting and family resources. To evaluate the success of the clearinghouse, the usage of this site was monitored. Using information from the IDC, we provide the number of hits, as well as the number of unique visitors to the website. During state fiscal year 2007, there have been 18,696\(^2\) visits to the ECMP site representing approximately 6,598 unique visitors. The average number of visits per month was 1,700 during SFY 2007; however, the number of visits increased from just 1,696 in May, 2007 to 7,095 during June of 2007. Whether this increase is an anomaly or a new trend will have to be determined when more recent data becomes available. The graph in appendix D depicts the number of hits and visitors for each month during this time period.

\(^2\) The data excludes September 2007 for which data was unavailable.
Another component of resources, support, and development, is the availability of information and knowledge about child development and the ability to recognize progress. The availability of development opportunities offered throughout the state with regard to infant and toddler developmental, behavioral, and mental health was assessed using the Early Childhood Meeting Place (ECMP) website’s events calendar. During fiscal year 2007, a total of 1,297 unique events in Indiana were listed on the ECMP website. The distribution of these events by county is shown in the appendices of this report.³

The measurements above provide a gauge of the accessibility of child development information, and will be useful for comparison to future data.

**CONCLUSION**

The ECCS initiative seeks to improve the health and well-being of children in Indiana by ensuring continuity of care as well as enhancing parental involvement. The core partners, acting as the steering committee, have acted quickly to implement the necessary changes to achieve the objectives set forth in the ECCS initiative.

Several key concerns are highlighted in this report. The first is low usage of dental care by children aged 1 through 5. Children in this age group should be visiting the dentist twice a year; however, our estimate is that only 17.8% of children aged 1 through 5 who are receiving Medicaid visited a dentist. A second key concern is the decrease in the number of children enrolled in the Indiana State Department of Health Children’s Special Health Care Services (CSHCS) program. The number of enrolled children has dropped by 28% since 2003. The report also finds evidence that suggests that managed care programs, and the medical home they

³ Please note that the maps only show the number of events listed on the ECMP Website. There are certainly other relevant events, but since there is no central clearing house, this report is unable to account for other events.
provide, may lead to a higher rate of preventative and screening care. Of the 170,109 children covered by a managed care program, approximately 75.0% received EPSDT services while only 40.9% of those under a fee for service plan received EPSDT services.

This evaluation has provided the ECCS committee with the available information and data necessary to determine the success of this initiative as it progresses. This project provides a basis for comparison in future evaluation to determine changes that may occur and whether or not Indiana families are better off as a result of these changes.

While the ability to attribute changes in outcomes to the ECCS initiative is limited by both the extraordinary breadth of system changes and by gaps in the availability of data, this evaluation will provide valuable insight into the progress of the initiative and a baseline for future comparisons.
APPENDIX A

Total Number of Events Listed on ECMP Website, by County (SFY 2007)

Number of Events

- 0
- 1 - 20
- 21 - 60
- > 60

[Map showing the number of events listed for each county.]
APPENDIX B

Professional Development Events Listed on ECMP Website, by County (SFY 2007)

Number of Events

- 0
- 1 - 20
- 21 - 60
- > 60

[Map showing the distribution of professional development events by county]
APPENDIX C

Parent & Family Resource Events Listed on ECMP Website, by County (SFY 2007)

Number of Events

- 0
- 1 - 20
- 21 - 60
- > 60
WORKS CITED


