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MANDEL SCHOOL OF APPLIED SOCIAL SCIENCES

**CENTER ON  
URBAN POVERTY  
— AND —  
COMMUNITY  
DEVELOPMENT**

**Cuyahoga County  
2009 Child Well-Being  
& Tracking Update**

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**Submitted by  
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## Executive Summary

This report provides an update on two ongoing aspects of the evaluation of Invest in Children (IIC), Cuyahoga County's early childhood initiative, in regard to the services provided to the early childhood population (prenatal to six years of age). These aspects both relate to the system-level functioning of the programs of IIC. They are: (1) the monitoring of early childhood social and health indicators in Cuyahoga County, and (2) the study of child tracking to assess the scope and reach of the programs of IIC. These studies have been underway since 2000 and seek to document the context for young children in the County as well as IIC's efforts in delivering services to this population.

The studies make extensive use of publicly available data and administrative data maintained by public and private entities involved in IIC efforts. The study of social and health indicators draws on data from the U.S. Census, Ohio Department of Health, Cuyahoga County Department of Children and Family Services, Cuyahoga Employment & Family Services, as well as Starting Point and Help Me Grow. Data are presented as counts and rates as appropriate for the years available. This study of population indicators uses two methods of describing trends: point-in-time estimates and analysis of birth cohorts. Examination of these trends considers the possible role of the initiation of IIC in July 1999 in any changes occurring thereafter. The study of the scope and reach of IIC services draws on the matching of child-level participant data records on IIC services, such as home visiting and Medicaid, as well as other public benefits (e.g., Food Stamps, cash assistance). The analysis looks at the experiences of successive cohorts of children in connecting to and using available services.

### **Findings on early childhood social and health indicators:**

Many of the child indicators continue to show positive trends but some are mixed or their interpretation continues to be unclear. With respect to early care and education, after initial increases, families continue to avail themselves of the increased supply of regulated child care and use child care subsidies at a constant rate. Children's access to medical care has improved and the receipt of prenatal care by pregnant women had also improved for a number of years. Rates of child maltreatment, which rose during the first four years of IIC, showed a significant drop in the 2003 to 2006 period. However, newly developed related indicators (children the subject of an abuse/neglect report; cases referred to ongoing services), suggest that the level of risk for these children remains steady. The persistence of high rates of low birth weight births, supports IIC strategies in the arena of prenatal services. Specific highlighted trends include:

### **Context for Children**

- **Child population:** The population of children under age six has continued to decline along with the total population, comprising 7.5% of the total county population in 2008. Births to teen and first-time mothers had fallen steadily up until an increase in 2006, mirroring a national trend.
- **Child poverty:** The poverty rate estimate for young children in the County was 25% in 2008, not statistically different for rates since 2000. At the same time the monthly rate of children who were on cash welfare fell from almost 40% in 1992 to 7.0% in 2008. Taken together, these indicators suggest that though families have declining reliance on cash welfare many continue to live in poverty.

- Child deaths: Neither the death rate for children under 6 years of age or the infant death rate for children under one have shown statistically significant changes since the start of IIC.

### **Areas of Focus for IIC**

- Pregnancy and births: The percentage of women with adequate prenatal care remained at approximately 77%-80% from 1999 through 2005. Changes in the verification procedure for prenatal care beginning with 2006 births resulted in a dramatic drop in this indicator to 54-57%. Over this period the low birth weight rate has risen significantly to 10.6% in 2007.
- Child maltreatment: The percent of children under 6 with a substantiated/indicated abuse or neglect investigation has continued to drop dramatically since 2002 to 1.0% in 2007, a statistically significant change from the past. However, examination of other indicators such as the proportion of children who were the subject of a child abuse/neglect investigation and children transferred to ongoing services at the Department of Children and Family Services have remained steady since 1996 (an indication of the level of risk exhibited by the family). These suggest that the overall risk for children has not changed appreciably. It is important to note the strong correlation between indicators of child maltreatment and measures of poverty and economic hardship. This relationship suggests that efforts to reduce maltreatment should be understood in their broader socio-economic context.
- Health insurance: A large improvement occurred in health insurance coverage for young children between 1998 and 2001, with the estimated percent of uninsured children under age six falling markedly from 10.5% to 2.1%. By 2004 however, the percent uninsured rose slightly to 4.4%, but the change was not statistically significant (latest data available). The percent uninsured held steady at 4.2% in 2008.
- Child care and pre-school enrollment: Enrollment of children under age three in regulated child care increased by 35% since the inception of IIC. In 2004, 60% of three and four year-olds were enrolled in preschool, including Head Start, which compares favorably to a national enrollment rate of 54.5% in 2003.
- Early identification of special needs: Since the start of IIC, children with developmental delays and/or disabilities are being identified and assessed at earlier ages. In 1997, 443 children were identified in their first year of life and this number has more than doubled by 2007. Also, the percentage of children born in a given year receiving early intervention services by three years of age has increased from 5.0% in 1997 to 11.5% in 2005 (the last birth cohort for which data were available up through their 3<sup>rd</sup> year).

### **Findings on scope and reach include:**

The scale of IIC programs has continued to grow and the services have achieved considerable scope. Programmatic elements of IIC now reach the vast majority of newborns and their families in the county. As intended, the reach continues to be both broad yet focused. IIC continues to solidify a system that combines breadth and depth in its efforts to meet the needs of young children and their families in Cuyahoga County. Data for this analysis are available through December 2007.

- In its first 8.5 years (1999-2007), IIC reached over 177,000 Cuyahoga County children prenatal to 6 years of age. The number of children served annually has grown to approximately 65,000 across all programs.

- Over 75% of children born between July 1999 and December 2007 have received one or more IIC services. Among older children age-eligible for services (born July 1993-June 1999) 40% have received one or more IIC services before age six.
- Infants are being served earlier in life over time. For the most recent birth cohort on which complete data are available, more than three-fourths had contact with at least one IIC service before 6 months of age.
- There is greater evidence of IIC families engaging multiple IIC services over time. Nearly all children under six and infants under 1 year old who are touched by IIC rely upon services from more than one of the components, and the extent of cross-program usage within IIC has increased over the first 8 years. Of particular note is the steady increase of cross program use among recipients of the newborn home visit (from 38% to 61%). As a key gateway program for first-time and young parents, this trend shows enhanced linkages to other services.
- IIC families also rely on a number of other public services but these rates have fluctuated over time. In some cases there has been a decline in receipt since 2000 - cash assistance Ohio Works First (OWF) (from 35% to 24%) and child care vouchers (from 20% to 15%). Food Stamp participation by IIC families dropped from 46% in 2000 to 41% in 2001 but has steadily increased to 53% in 2007. The overlap with other public systems is greatest for families using ongoing home visiting, family child care, and Healthy Start/Medicaid.
- In regard to having involvement with the Department of Children and Family Services, the proportion of children having involvement in the six months following an IIC service has remained at approximately 11% from 2000-2007. These rates have declined since 2002 for children served through early intervention.
- The programs of IIC have reached considerable geographic spread throughout the County. Overall, 57% of the children reached by IIC were residents of the City of Cleveland and 43% were residents of the County outside the City. In the programs of IIC targeted to at-risk families, two-thirds to three-fourths of the families served resided within the City of Cleveland. Other programs serve larger numbers of families outside the City (up to 58%), reflecting greater geographic dispersion in the families they target.

## **SECTION 1**

### **Introduction**

This report provides an update on two aspects of the ongoing evaluation of Invest in Children (IIC) in regard to the services provided to the early childhood population (age birth to six years of age) in Cuyahoga County. These aspects both relate to the system-level functioning of the programs of IIC. They are: (1) the monitoring of early childhood social and health indicators in Cuyahoga County, and (2) the study of child tracking that assesses the scope and reach of the programs of IIC. This report provides an update on the relevant aspects of these two studies making use of all new data that have become available since the end of the reporting period in the last update (December 2008).<sup>1</sup>

#### Child indicators study

Invest in Children, Cuyahoga County's early childhood initiative, is a noteworthy example of what has emerged as a national trend toward community mobilization on behalf of young children. Promoting innovative practices to nurture young children and the reform of systems serving children, these initiatives recognize that political will is needed to bring successful approaches to scale and to reach everyone in need. As a sign of this scope and magnitude, IIC stakeholders expect that it eventually will contribute to the well being of all children under 6 in the County. More tangibly, they anticipate that the universal and interactive effects of all of IIC programs, collaborative arrangements and public awareness activities will move the trends for young children in a more positive direction. The purpose of this portion of the research is to chart those trends using key indicators that are available over time for the population as a whole.

#### Child tracking study

IIC Data Center is home to a set of core research data files that provide the basis for the child tracking study. The Data Center receives, processes, and links a wide array of datasets related to the evaluation, including public data and IIC program data. These data make possible the study of cross-program usage and the tracking of cohorts of children born in the County to examine their experiences over time. Such analyses permit a better understanding of how IIC programs reach the intended target populations and to what extent they serve the same populations. The tracking study follows all children born in Cuyahoga County beginning in 1992 and continuing to the present.

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<sup>1</sup> Coulton, C., Fischer, R., Hardy, P., & Lalich, N. (2008). *Cuyahoga County 2008 Child Well-Being & Tracking Update*. Cleveland, OH: Mandel School of Applied Social Sciences, Case Western Reserve University. November.

## **SECTION 2: Early Childhood Social and Health Indicators in Cuyahoga County - 2008 Update**

### **Introduction**

Invest in Children (IIC) is concerned with the health and development of all children in their first years of life—birth until they reach their sixth birthday—in Cuyahoga County. This is a crucial period in human development, but because children have not yet entered school, public policy and programs have heretofore not systematically and universally addressed this stage. IIC is promoting a sustained civic interest in this life stage and the establishment of services, supports, and opportunities that families need in their early years of childrearing. IIC's investments in policy development, system improvements, and new programs are expected to reduce the inequities in child development within the County and assure that all children begin their lives on a solid foundation on which to build their future success. Achieving such ambitious aims for the entire population, though, requires programming at an unprecedented scale and a sustained focus on markers of progress.

This report is a further update of Chapter 2 that appeared in the 5-year evaluation report. The chapter provides a statistical portrait of the early childhood population in Cuyahoga County.<sup>2</sup> The program leaders and funders have called for ongoing tracking of social and health indicators to inform them and the community at large about the status of the young child population, both before IIC's inception and as it has moved to scale. Social and health indicators are population-based statistics that are gathered over a long period so that a trend can be observed. It is anticipated that selected indicators of early childhood well-being will begin to move in a more positive direction as a result of the many programs, services, and policy changes enabled by IIC. Some additional indicators are being tracked because they provide information on the size and characteristics of the early childhood population that are pertinent to understanding the scope and context for IIC.

Included in this chapter are early childhood indicators in the following broad areas:

- Early childhood population
- Birth information
- Economic status of families
- Child abuse and neglect reports
- Health insurance coverage
- Child deaths
- Participation in child care and preschool
- Early identification of children with disabilities

Social and health indicators have both strengths and limitations as tools for research and evaluation. Their major strength is that they are available historically, because they have been gathered either by administrative agencies or as part of repeated surveys. As such, indicators can be used to compare the status of a population before an initiative began with subsequent trends. Moreover, indicators lend themselves to statistical estimates that can be applied to an entire population, such as children under six in Cuyahoga County, the target group of IIC. The limitations

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<sup>2</sup> Coulton, C., Polousky, E., Lalich, N., & Shin, I. (2005). Early childhood social and health indicators in Cuyahoga County. Ch. 2 in Cuyahoga County Early Childhood Initiative Evaluation: Phase II Final Report. Phase II Final: Cleveland, OH: Center on Urban Poverty & Social Change, Case Western Reserve University. June.

of statistical indicators for evaluating the effects of a single initiative are also significant. Demographic and economic forces beyond the control of the program often have strong effects on trends, making it difficult to isolate the impact of specific policies or programs on the indicators. Moreover, some program objectives may not be well measured by indicators, because the relevant data have not been collected by administrative agencies, or the time trend may not be long enough. Thus, although indicators can reveal important information about the social and health status of the early childhood population and the degree to which IIC has achieved some of its goals, these trends alone cannot support causal attribution.

## Methodology

### Describing Trends:

This study of population indicators uses two methods of describing trends: *point-in-time estimates* and analysis of *birth cohorts*. **Figure 2.1** illustrates these two perspectives. *Point-in-time estimates* are a common approach in which the indicators are calculated for each calendar year. In other words, statistical estimates are made by counting the number of children with an event that occurred in the year divided by the population under six at a point in time. As shown in Figure 2.1, all members of the early childhood population (i.e., under six) were not fully exposed to all IIC programs until the year 2005. Prior to 2005, point-in-time estimates include the experience of some children who were born before IIC was implemented. Especially for relatively rare events, rates are bound to vary somewhat from year to year. In order to detect significant changes between years, confidence intervals can be placed around a rate to determine whether the change is statistically significant.<sup>3</sup>

A *birth cohort* approach calculates indicators by grouping all children born in a particular time period.<sup>4</sup> One of the major features of IIC is that it is universal and begins at birth or in the prenatal period, so it is children born after July 1999 who are first fully exposed to the universal newborn home visit and to all of the other components of IIC. Since infants born in the first half of 1999 were not eligible for all IIC programs, the 1999 birth cohort was labeled “partial IIC”. Birth cohorts from 2000 forward are labeled “full IIC” to indicate that all children born in that year could have benefited from all IIC programs. Earlier birth cohorts could benefit at a later age from components of IIC that were not restricted to newborns, such as health care and expanded child care and the systems and policy changes that occurred. Data organized by birth cohorts can be used to determine whether outcomes for infants born after IIC was implemented are improved.

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<sup>3</sup> In this report, when a rate is said to be significantly different, this means that its 95% confidence interval (except where noted) did not include the rate in the previous year or years. Confidence intervals were determined by  $(1000/n) (d \pm (1.96 * \text{square root of } d))$  where  $d$  = number of events,  $n$  = denominator of the rate.

<sup>4</sup> Birth cohorts include a small proportion of children who were born outside the County and later migrated in, and this proportion rises as the cohort ages. Moreover, a small portion of children who are born in the County migrate out before age six. Thus, not all members of the birth cohort have the same exposure to the intervention. Unfortunately, the administrative records used in this study do not allow for the determination of migration status, but the net effects are presumed to be small.

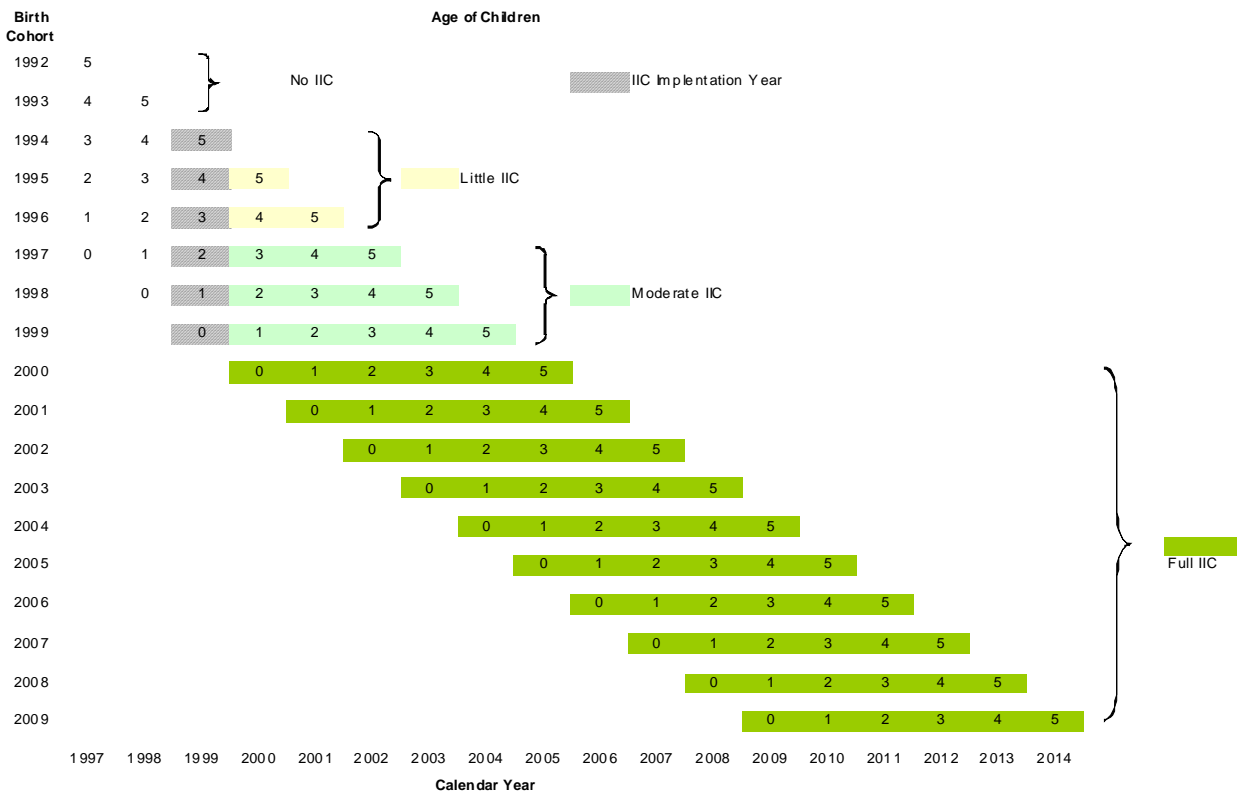


Figure 2.1 Birth Cohorts in IIC

Statistical Comparisons:

While trends are useful for monitoring the progress of IIC, they are difficult to interpret. Trends are influenced by factors as varied as demographics, the economy, and public policy, and it is difficult to disentangle these causes. The ideal way to identify program impact net of other influences is through use of a control group, but this was not thought to be feasible in a program where universality and going to scale were key aims. Moreover, part of the theory of the effort was that there should be multiple entry points for all families and children into the programs and this would have made it difficult to establish control groups. Statistical comparisons over time are examined in this report in an effort to determine whether there has been positive change since IIC began. It is important to note, though, that without a control group there can be no certainty as to the cause of this change because other factors may have changed simultaneously. Future reports will use statistical modeling to take into account other factors such as demographic and economic shifts in order to get closer to an estimate of net effects of IIC on trends in outcomes where this approach seems reasonable.

## Population Trends

IIC focuses on all Cuyahoga County children in their earliest years from birth to age 6 (roughly, the age at which most of them have entered kindergarten). This phase of life is vitally important in forming the basis for future development. **Table 2.1** presents population estimates for this age group.

**Table 2.1 Population Estimates of Children Under 6, Cuyahoga County, 1990 - 2008**

Year	<1	1	2	3	4	5	Total Under 6	% Population Under 6	Total population
1990 <sup>1</sup>	21,647	20,525	19,857	19,365	19,319	19,094	119,807	8.5%	1411586
1991 <sup>1</sup>	21,262	20,263	19,693	19,249	19,274	19,091	118,832	8.4%	1409825
1992 <sup>1</sup>	20,877	20,001	19,529	19,132	19,230	19,087	117,856	8.4%	1408064
1993 <sup>1</sup>	20,493	19,740	19,365	19,016	19,185	19,084	116,883	8.3%	1406304
1994 <sup>1</sup>	20,108	19,478	19,201	18,900	19,140	19,080	115,907	8.3%	1404543
1995 <sup>1</sup>	19,723	19,216	19,037	18,784	19,096	19,077	114,933	8.2%	1402782
1996 <sup>1</sup>	19,338	18,954	18,872	18,667	19,051	19,074	113,956	8.1%	1401021
1997 <sup>1</sup>	18,953	18,692	18,708	18,551	19,006	19,070	112,980	8.1%	1399260
1998 <sup>1</sup>	18,569	18,431	18,544	18,435	18,961	19,067	112,007	8.0%	1397500
1999 <sup>1</sup>	18,184	18,169	18,380	18,318	18,917	19,063	111,031	8.0%	1395739
2000 <sup>2</sup>	17,799	17,907	18,216	18,202	18,872	19,060	110,056	7.9%	1393978
2001 <sup>3</sup>	18,866	17,458	17,746	18,011	18,049	18,722	108,852	7.9%	1382829 <sup>4</sup>
2002 <sup>3</sup>	18,146	18,528	17,286	17,530	17,852	17,891	107,233	7.8%	1372303 <sup>4</sup>
2003 <sup>3</sup>	17,327	17,792	18,357	17,074	17,378	17,697	105,625	7.8%	1361330 <sup>4</sup>
2004 <sup>3</sup>	16,993	16,988	17,622	18,141	16,917	17,221	103,882	7.7%	1349047 <sup>4</sup>
2005 <sup>3</sup>	16,786	16,653	16,814	17,404	17,980	16,755	102,392	7.7%	1335317 <sup>4</sup>
2006 <sup>3</sup>	16,546	16,455	16,488	16,606	17,251	17,827	101,173	7.7%	1314241 <sup>4</sup>
2007 <sup>3</sup>	16,369	16,222	16,296	16,287	16,458	17,102	98,734	7.6%	1295958 <sup>4</sup>
2008 <sup>3</sup>	16,234	16,051	16,066	16,100	16,142	16,313	96,906	7.5%	1283925 <sup>5</sup>

Note: past total population numbers may not match current figures on the US Census website, as they can change retro-actively.

<sup>1</sup>Population Estimates for Counties by Age and Sex: Annual Time Series July 1, 1990 to July 1, 1999, Population Estimates Program, US Census Bureau.

<sup>2</sup>Source: Census 2000 Summary File (SF1) 100-Percent data, US Census Bureau

<sup>3</sup>Source: Population by age estimates based on estimation model by Northern Ohio Data and Information Service, Cleveland State University

<sup>4</sup>Source: American Community Survey 2000 to 2007, Detailed Tables, US Census Bureau.

<sup>5</sup>Source: 2008 Population Estimates Program, US Census Bureau.

Data prepared by Center on Urban Poverty and Community Development, Case Western Reserve University.

The number of children under six declined by approximately 19.1% between 1990 and 2008. The percent decline exceeds the overall population decline of 9.0% in the County for the same period.

## Birth Trends and Characteristics

### CHANGES IN THE 2006 BIRTH DATA

IN 2006 OHIO IMPLEMENTED THE 2003 REVISION OF THE US STANDARD CERTIFICATE OF BIRTH, FOR MORE INFORMATION SEE [HTTP://WWW.CDC.GOV/NCHS/VITAL\\_CERTS\\_REV.HTM](http://www.cdc.gov/nchs/vital_certs_rev.htm). SEVERAL ITEMS IN TABLE 2.2 ARE AFFECTED BY THIS CHANGE FROM THE EARLIER 1989 REVISION, INCLUDING MOTHERS WITHOUT A HIGH SCHOOL DIPLOMA, ADEQUATE PRENATAL CARE, PRENATAL CARE IN THE FIRST TRIMESTER, PERCENT WITHOUT PRENATAL CARE, AND PERCENT HEALTHY BIRTHS.

**EDUCATION:** CATEGORIES FOR MOTHER'S EDUCATION WERE REVISED IN 2006. PRIOR TO 2006, MOTHER'S EDUCATION WAS CATEGORIZED ACCORDING TO THE NUMBER OF YEARS OF SCHOOL ATTENDED. A HIGH SCHOOL DIPLOMA WAS INFERRED IF THE MOTHER HAD 12 OR MORE YEARS OF EDUCATION. STARTING IN 2006, REVISED CATEGORIES PERMIT ACTUAL IDENTIFICATION OF MOTHERS WITH AND WITHOUT A HIGH SCHOOL DIPLOMA.

**PRENATAL CARE:** BEGINNING WITH DATA YEAR 2006, SUBSTANTIVE CHANGES IN BOTH QUESTION WORDING AND THE SOURCES FOR THE PRENATAL CARE INFORMATION BASED ON THE 2003 REVISION OF THE BIRTH CERTIFICATE HAVE RESULTED IN DATA THAT ARE NOT COMPARABLE WITH THE PREVIOUS 1989 REVISION THAT WAS IN USE THROUGH 2005. THE WORDING OF THE PRENATAL CARE ITEM WAS MODIFIED TO "DATE OF FIRST PRENATAL VISIT" FROM "MONTH PRENATAL CARE BEGAN." IN ADDITION, THE 2003 REVISION PROCESS RESULTED IN RECOMMENDATIONS THAT THE PRENATAL CARE INFORMATION BE GATHERED FROM THE PRENATAL CARE OR MEDICAL RECORDS, WHEREAS THE 1989 REVISION DID NOT RECOMMEND A SOURCE FOR THESE DATA.<sup>5</sup> THESE DATA ELEMENTS ALSO HAVE SIGNIFICANTLY HIGHER NUMBERS OF MISSING VALUES IN 2006 AND 2007 COMPARED TO PREVIOUS YEARS.

ANY INDICATORS IN TABLE 2.2 THAT ARE AFFECTED BY THESE CHANGES SHOULD BE CONSIDERED AS NOT COMPARABLE PRE-2006 VS. 2006 AND LATER.

Because many IIC services begin prenatally or at birth, the size of the annual birth cohorts and their characteristics are significant factors in shaping IIC. Cuyahoga County birth trends appear in **Table 2.2**. Although some of the 2006 and 2007 indicators are not comparable due to changes in the birth certificate data, some measures are unaffected by the change. There has been a gradual decline in the total number of births over the last fifteen years. While there had been a commensurate decrease in teen mothers over the period, beginning in 2006 and 2007 the number and rate of teen births showed an upward trend. This parallels a national trend showing increases in teen births beginning in 2006.<sup>6</sup> The percentage of mothers with less than a high school education fell slightly in the years prior to the 2006 data changes, but under the new data approach rose to 19% in 2006.

Table 2.2 also presents information on prenatal services and birth characteristics. The low-birth-weight rate in Cuyahoga County rose to 10.6% in 2006, a statistically significant increase. However, given the change in the birth certificate data, there is the concern that the 2006 and 2007 rates may not be comparable to prior years. The low-birth-weight rate in the nation has also been rising, and was 8.2% in 2007. Prenatal medical care, an essential part of a healthy start for children, is also tracked in Table 2.2. The trends show continuing improvement in the proportion of infants

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<sup>5</sup> Martin JA, Hamilton BE, Sutton PD, Ventura SJ, et al. (2009). Births: Final data for 2006. National Vital Statistics Reports, 57(7). Hyattsville, MD: National Center for Health Statistics.

<sup>6</sup> Guttmacher Institute. (2010). U.S. Teenage Pregnancies, Births and Abortions: National and State Trends and Trends by Race and Ethnicity. Available at <http://www.guttmacher.org/pubs/USTPtrends.pdf>

whose mothers received early and adequate prenatal care, with the exception of the 2006 and 2007 data which is not comparable.

A commonly used index that combines information on birth outcomes and prenatal care is the Healthy Birth Index.<sup>7</sup> A healthy newborn is one that weighs more than 2,500 grams, was born after 37 weeks gestation, and had an Apgar score of 9 or 10 five minutes after birth and whose mother started prenatal care in her first trimester of pregnancy. These factors are weighted equally in the index; however, weeks gestation and prenatal care beginning in the 1<sup>st</sup> trimester are the major contributing factors to newborns being excluded from the healthy birth category. Approximately 69.6% of newborns in 2005 are classified as healthy births using this index.

The rate of low-birth-weight births and the Healthy Birth Index are sensitive to racial and economic health disparities. Nationally, African-American births are almost twice as likely to be of low birth-weight and their mothers generally have less access to prenatal and other types of health care. Even when women get prenatal care, living in poor and deteriorated neighborhoods further increases the risk of unhealthy birth outcomes. While research has been unable to pinpoint the specific mechanisms through which these disadvantages lead to low birth-weight, the persistence of these problems in Cuyahoga County is further testament to the need for the kinds of services offered through IIC and the decision of IIC to expand prenatally so as to address the multitude of risk factors that may affect birth outcomes.

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<sup>7</sup> Healthy Birth Index is defined as: 5 minute Apgar of 9 or 10, receipt of prenatal care in 1<sup>st</sup> trimester, gestational age  $\geq$  37 weeks and birth weight  $\geq$  2500 grams.

**Table 2.2 Trends in Births and Birth Characteristics, Cuyahoga County, 1992 - 2007**

<b>Cuyahoga County</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006<sup>s</sup></b>	<b>2007<sup>s</sup></b>
<b>Infant Births</b>	22087	21491	20274	19876	19495	19040	18998	18392	18895	18189	17374	17248	16912	16340	16675	16450
<b>Teen Births, 10- 19</b>	2921	2871	2644	2593	2548	2459	2573	2362	2324	2178	1939	1871	1887	1862	1963	2016
<b>Teen Birth Rate, 10- 14 <sup>1</sup></b>	1.94	2.12	2.42	1.64	1.59	1.61	1.33	1.48	1.3	1.12	0.86	0.93	0.78	0.78	0.99	0.66
<b>Teen Birth Rate, 15- 19 <sup>2</sup></b>	63.98	62.66	57.21	56.85	55.89	53.85	56.73	51.78	51.12	47.65	42.22	40.22	40.17	39.16	40.38	41.16
<b>Percent of Mothers Without High School Diploma, 1992- 2005</b>	21.4%	21.4%	19.8%	19.0%	18.6%	18.9%	19.4%	18.9%	19.0%	17.3%	17.3%	16.9%	17.1%	17.7%		
<b>Percent of Mothers Without High School Diploma, 2006- 2007</b>															19.0% <sup>9</sup>	19.1% <sup>9</sup>
<b>Percent with Adequate Prenatal Care, 1992- 2005<sup>3</sup></b>	65.9%	68.0%	66.3%	69.5%	71.1%	71.9%	73.5%	77.0%	76.3%	80.8%	79.7%	80.2%	79.0%	76.9%		
<b>Percent with Adequate Prenatal Care, 2006- 2007<sup>3</sup></b>															57.0% <sup>10</sup>	54.1% <sup>10</sup>
<b>Percent with prenatal care in 1st trimester, 1992- 2005</b>	79.5%	81.5%	80.6%	81.5%	83.4%	83.9%	84.7%	85.9%	85.9%	88.3%	86.1%	86.3%	85.7%	84.3%		
<b>Percent with prenatal care in 1st trimester, 2006- 2007</b>															68.2% <sup>10</sup>	67.3% <sup>10</sup>
<b>Percent without prenatal care</b>	4.4%	3.6%	2.4%	1.8%	1.3%	3.4% <sup>7</sup>	4.5% <sup>7</sup>	3.5%	1.7%	1.2%	1.1%	1.0%	1.2%	1.1%	1.5% <sup>10</sup>	1.4% <sup>10</sup>
<b>Percent Low Weight Births<sup>4</sup></b>	9.7%	9.5%	9.2%	9.5%	9.3%	9.0%	9.1%	9.1%	9.0%	9.3%	9.9%	9.4%	10.3%	10.0%	10.6%	10.6%
<b>Percent Very Low Weight Births<sup>5</sup></b>	2.0%	1.9%	2.0%	2.0%	1.9%	2.0%	2.0%	2.0%	1.9%	2.0%	2.2%	1.8%	2.2%	2.1%	2.1%	2.4%
<b>Percent Healthy Births, 1992- 2005<sup>6</sup></b>	66.7%	67.3%	66.8%	66.3%	66.5%	68.0%	67.5%	69.1%	68.3%	71.4%	69.2%	69.2%	66.0%	69.6%		
<b>Percent Healthy Births, 2006- 2007<sup>6</sup></b>															52.0% <sup>10</sup>	51.6% <sup>10</sup>

<sup>1</sup> Teen Birth Rate = (Total teen births / Population of Females ages 10-14 (and 15-19)) \* 1000.

<sup>3</sup> Adequate prenatal care is determined using the Kessner Index, which defines adequate prenatal care as beginning in the 1st trimester and the total number of additional visits must meet or exceed that which would be expected for the child's gestational age.

<sup>4</sup> Low weight birth = birth weight < 2500 grams.

<sup>5</sup> Very low birth weight = birth weight < 1500 grams.

<sup>6</sup> Healthy Birth is defined as: 5 minute Apgar of 9 or 10, receipt of prenatal care in 1st trimester, gestational age >=37 weeks and birth weight >=2500 grams. Source: National Center for Health Statistics (1999).

<sup>7</sup> In 1997 and 1998, there was excessive missing data on prenatal visits from a few Cleveland hospitals. Errors may be responsible for the high rate of no prenatal care in these years. See The Right Start online at [www.aecf.org](http://www.aecf.org).

<sup>8</sup> In 2006 Ohio implemented the 2003 Revision of the US Standard Certificate of Birth, for more information see [http://www.cdc.gov/nchs/vital\\_certs\\_rev.htm](http://www.cdc.gov/nchs/vital_certs_rev.htm). Several items are affected by this change from the earlier 1989 Revision, including mothers without a high school diploma, adequate prenatal care, prenatal care in the first trimester, percent without prenatal care, and percent healthy births.

<sup>9</sup> Categories for mother's education were revised in 2006. Prior to 2006, mother's education was categorized according to the number of years of school attended. A high school diploma was inferred if the mother had 12 or more years of education. Starting in 2006, revised categories permit actual identification of mothers with and without a high school diploma.

<sup>10</sup> Beginning with data year 2006, substantive changes in both question wording and the sources for the prenatal care information based on the 2003 revision of the birth certificate have resulted in data that are not comparable with the previous 1989 revision that was in use through 2005.

Source: Northeast Ohio Community and Neighborhood Data for Organizing (NEO-CANDO), <http://neocando.case.edu/cando/index>, Birth Statistics, 1990-2007.

Analysis of data by Center on Urban Poverty and Community Development, Case Western Reserve University.

**Economic Status of Families**

Poverty is one of the strongest predictors of child well-being, and the devastating effects of poverty on early childhood development are well documented. Recognizing this fact, IIC seeks to promote family economic self-sufficiency. For the purpose of this report, two indicators of self-sufficiency are presented: Children living in poverty and children on cash welfare assistance.<sup>8</sup>

Poverty status of children is determined by the income - to - needs ratio of the families in which they live. The Census Bureau reports the number and percent of children who live in *related* families with income below the poverty threshold. This threshold is adjusted for family size and inflation. The poverty threshold reflects a basic subsistence level. For a family of three, the threshold for poverty in 2008 was set at an annual income of approximately \$17,346.<sup>9</sup>

**Table 2.3 Percent of Children Under Six in Poverty, Cuyahoga County, Ohio, and U.S.**

Year	Source	Cuyahoga County		State of Ohio		United States	
		% Poor	90% CI	% Poor	90% CI	% Poor	90% CI
1990	Census	24.0	23.6 - 24.4	20.9	20.7 - 21.0	20.1	20.1 - 20.1
2000	Census	22.2	21.6 - 22.8	17.1	16.9 - 17.3	18.1	18.1 - 18.1
2000	ACS	22.9	17.8 - 28.0	17.4	15.5 - 19.0	19.3	18.9 - 19.7
2001	ACS	24.2	18.4 - 29.9	18.6	16.9 - 20.0	18.6	18.3 - 18.9
2002	ACS	22.9	18.3 - 27.4	20.0	18.6 - 21.3	19.7	19.3 - 20.0
2003	ACS	21.3	16.9 - 25.7	21.4	19.9 - 22.7	20.2	19.9 - 20.6
2004	ACS	20.1	15.7 - 24.4	22.1	20.3 - 23.6	20.8	20.5 - 21.1
2005	ACS	27.9	24.9 - 30.9	22.3	21.4 - 23.1	21.0	21.0 - 21.0
2006	ACS	22.9	20.4 - 25.0	22.4	21.6 - 23.2	20.7	20.6 - 20.9
2007	ACS	27.6	24.9 - 29.6	21.7	20.8 - 22.6	20.5	20.4 - 20.7
2008	ACS	25.0	22.5 - 27.1	22.7	21.9 - 23.5	20.9	20.7 - 21.1

Source: U.S. Bureau of the Census, AF3, 1990 and 2000, American Community Survey 2000 to 2008, Detailed Tables. Analysis of data by Center on Urban Poverty and Community Development, Case Western Reserve University.

Poverty rates for children under age six are presented in **Table 2.3**.<sup>10</sup> The poverty rate for young children in Cuyahoga County declined between the 1990 and 2000 census. The trend between 2000 and 2008 is difficult to discern. Although the point estimates fell slightly from 2001 to 2004, the confidence intervals were wide suggesting that the drop may have been due to sampling error rather than an actual decrease in child poverty. The poverty rates from 2005-2008 have smaller confidence intervals and cluster in the 23-27% range.

Another indicator of self-sufficiency is the degree to which the families of young children rely on cash welfare payments. Given the low level of monthly welfare payments in Ohio,

<sup>8</sup> Researchers debate the definition of self-sufficiency and these indicators are unlikely to capture all aspects.

<sup>9</sup> There is considerable debate about how the poverty threshold is set and general agreement that it reflects a very minimum, subsistence standard of living (National Research Council. (1995). *Measuring Poverty: A New Approach*. Washington, DC: National Academy Press).

<sup>10</sup> This table presents estimates of poverty from two sources, the decennial census and the American Community Survey (ACS). The two series cannot be directly compared because they use different sampling methods. The confidence intervals are much narrower for the Census than for the ACS estimates because the ACS samples each year are relatively small.

welfare-reliant families by definition live well below the poverty line. A recent study by the Center on Urban Poverty and Social Change documented that the majority of families that left welfare in Cuyahoga County had incomes that were somewhat higher than their welfare incomes had been, but most were still living at or near the poverty line.<sup>11</sup> **Table 2.4** shows that the number and percent of young children in Cuyahoga County on cash welfare has been declining steadily since 1992. It also shows an accelerated decline since welfare reform was implemented in October 1997.

**Table 2.4 Children Under 6 Receiving Cash Assistance, Cuyahoga County, 1992-2008**

Year	Monthly Average	% of Children Under 6	Unduplicated Yearly Count	% of Children Under 6
1992	46,344	39.3%	*	*
1993	45,748	39.1%	*	*
1994	44,014	38.0%	*	*
1995	40,178	35.0%	*	*
1996	36,530	32.1%	*	*
1997	32,053	28.4%	*	*
<b>Welfare Reform in Ohio - October 1997</b>				
1998	26,182	23.4%	39,591	35.3%
1999	20,803	18.7%	33,081	29.8%
2000	16,306	14.8%	29,501	26.8%
2001	12,258	11.3%	23,662	21.7%
2002	10,570	9.9%	19,972	18.6%
2003	9,507	9.0%	18,018	17.1%
2004	8,888	8.6%	16,959	16.3%
2005	8,118	7.9%	15,657	15.3%
2006	7,855	7.8%	15,139	15.0%
2007	7,456	7.5%	14,193	14.4%
2008	6,817	7.0%	13,277	13.7%

\* unable to calculate, data prior to 1998 is in another format, read note below.

Source: CRIS-E Individual Extract Files, Cuyahoga Employment and Family Services

Note: From August 1997 to present, actual data from the Individual extract files was used. Since such data was not available prior to August 1997,

values were inputted based on the analysis of the data relationship between counts produced by the IMF data and counts produced by the Individual extracts.

Prepared by: Center of Urban Poverty and Community Development, Mandel School of Applied Social Sciences, Case Western Reserve University.

<sup>11</sup> Coulton, C., Lickfelt, S., Lulich, N., & Cook, T. (2004). How are they managing: A six month retrospective of families leaving welfare in Cuyahoga County. Cleveland, OH: Center on Urban Poverty and Social Change, Mandel School of Applied Social Sciences, Case Western Reserve University. This study also found that about 20% of families were worse off economically after leaving welfare. Studies of welfare leavers around the country are drawing similar conclusions.

The fact that poverty rates have stayed similar while there has been a steady decline in the welfare caseload suggests that many families with young children are strained economically. Since cash assistance is less available to them, they are predominantly the working poor who have the added burden of managing work and child care in a weaker economy. Thus, a large number of the families served by IIC face economic challenges but no longer have the economic cushion of a steady welfare check. However, there are a number of other key supports within the social safety net available to these families, such as Medicaid health insurance, Food Stamps, and child care vouchers. These governmental benefits continue to show large numbers of families making use of them, as well as programs such as Section 8 housing vouchers and the earned Income Tax Credit. Taken collectively, these comprise the spectrum of supports and services available to eligible low-income families, much broader than the cash assistance available under OWF/TANF.

### **Child Maltreatment**

Child maltreatment represents the most extreme risk for young children, and its reduction is a high priority for IIC. Prevention of maltreatment can take two forms: (1) preventing young children from being initially maltreated (i.e., primary prevention), and (2) identifying or responding to incidents of maltreatment earlier or more effectively so that additional incidents do not occur (i.e., secondary prevention). Evidence that primary prevention is occurring requires a reduction in the proportion of young children who have experienced maltreatment. Evidence of secondary prevention might be seen in the reduction of subsequent occurrences of maltreatment. In this chapter, both first and second incidents of child maltreatment are examined for the entire population of children before and after the implementation of IIC to determine whether there was a decrease. This analysis differs in several ways from what was presented in the first 5 years of IIC. Specifically, we are experimenting with alternative ways of determining the number of children in the county who are in situations where they have been or are at risk of maltreatment.

Measuring the level of child abuse and neglect in the young child population is fraught with difficulties. An important limitation is reliance upon child abuse and neglect reports that are received and investigated by the authorities. There are many factors that affect whether an act or condition of abuse or neglect is actually observed, reported to the child protective services agency, accepted for investigation by them and determined as a result of the investigation to be valid. Changes in surveillance, the process of investigation, or community expectations for parenting are factors that could explain changes in the rates of child abuse and neglect reports over time. In Ohio specifically, changes in the State's interpretation of the guidelines for determining whether an incident can be substantiated have led to administrative changes in the processing of cases at the county level. Further, in Cuyahoga County a decision to shift to the use of a systematic risk-focused approach (i.e., Structured Decision Making) to cases has also led to further shifts in the handling of cases. Thus, it may be difficult to distinguish change in recognition and investigation from a true change in the amount or severity of maltreatment itself. Nevertheless, official child maltreatment reports are the only data source that can be used to track child maltreatment trends over time.

Child maltreatment indicators presented in this report are based on computerized records of child abuse and neglect reports maintained by the Cuyahoga County Department of Children and Family Services (DCFS). These reports come into the agency alleging child abuse or neglect

and are accepted by the agency for investigation.<sup>12</sup> After investigation, each reported incident is classified as either:

- substantiated, which includes incidents where abuse and/or neglect are confirmed.
- indicated, which includes incidents where abuse and/or neglect is suspected but there is insufficient evidence to confirm it.
- unsubstantiated, which includes incidents that are reported but where no evidence of abuse or neglect is found.

Following the investigation, DCFS refers to ongoing services those cases where the child is determined to be at risk for harm. Some cases in which maltreatment allegations are substantiated may not be referred for ongoing services if the risk is evaluated as low. Also, cases in which abuse or neglect is unfounded might still be referred for ongoing services because the future risk is assessed as high. Therefore, in this report three indicators of child maltreatment are presented including:

1. Children with a substantiated or indicated child maltreatment report;
2. Children with any child maltreatment report accepted for investigation, including those that are unsubstantiated;
3. Children with a maltreatment report that is investigated and determined by the agency to require ongoing service whether or not maltreatment is substantiated (high risk cases).

The rates in this report are based on an unduplicated count of the children with one or more reports of maltreatment in a given period. This allows for the calculation of a rate that uses the child population or the birth cohort as the denominator.

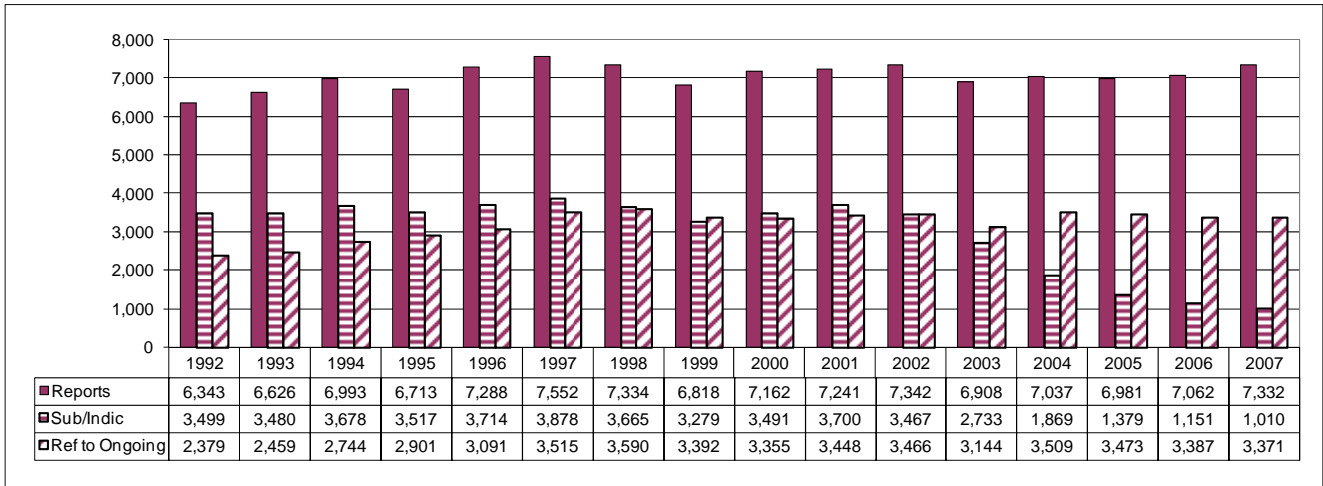
#### Frequency at Points-in-Time

As a way to gauge the magnitude of the populations of children touched by the issue of maltreatment, **Figure 2.2** presents the unduplicated count of children in three groups and **Figure 2.3** presents the proportion of the population under age six in each group. The three categories are children under age 6 who were (1) the subject of a child maltreatment report, (2) the victim in a substantiated/indicated incident, or (3) the victim in a case subsequently referred to ongoing services by DCFS. These counts and rates are determined for each year. These are *point-in-time* estimates because they count children who were maltreated each year. Using this method, a child investigated for maltreatment in two different calendar years would be counted twice, for example.

Throughout IIC's duration, the unduplicated number of children who were the subject of a report accepted for investigation was consistently approximately 7,000 per year or approximately 6.5%-7.0% of the child population. The proportion of children who were involved in a substantiated or indicated incident was approximately 3% of the population until 2003 when it began to drop dramatically reaching a low of 1.0% in 2007. The proportion of children whose family was referred for ongoing services gradually increased from 1992 to 2004 and then leveled off at approximately 3.4% of the population. The patterns for each of these indicators will be examined in subsequent sections.

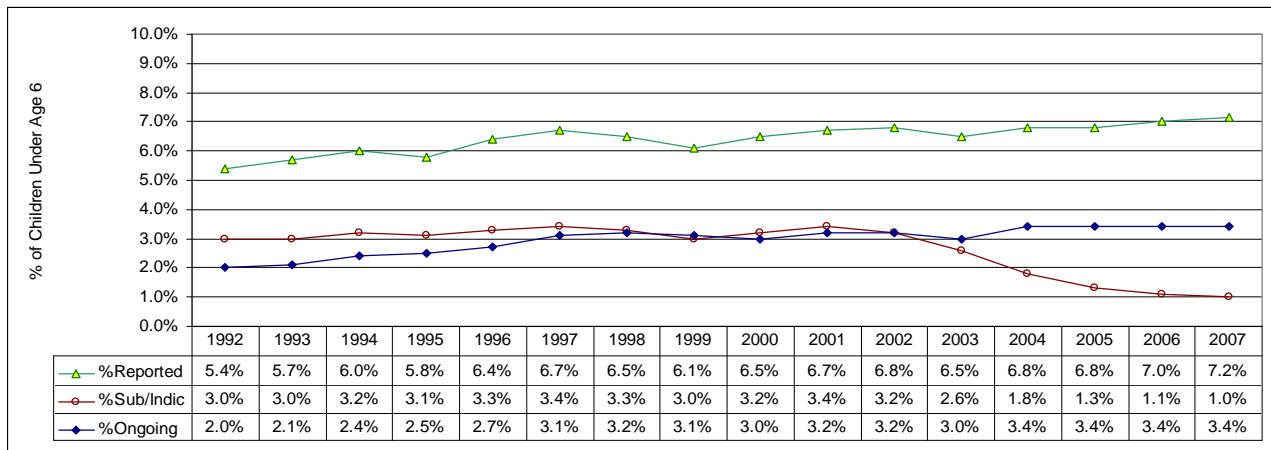
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<sup>12</sup> Calls to the hotline that are screened out by DCFS staff because they are thought not to be appropriate, do not appear in the data base used here.



Source: Child Maltreatment Data, Cuyahoga County Department of Children and Family Services.  
 Analysis of data by The Center on Urban Poverty and Community Development.

**Figure 2.2 Counts of Children Under Age 6 Who Were the Subject of a Child Maltreatment Report, a Substantiated/Indicated Incident, or a Case Referred to Ongoing Services, 1992-2007**



Source: Child Maltreatment Data, Cuyahoga County Department of Children and Family Services.  
 Analysis of data by The Center on Urban Poverty and Community Development.

**Figure 2.3 Proportion of Children Under Age 6 Who Were the Subject of a Child Maltreatment Report, a Substantiated/Indicated Incident, or a Case Referred to Ongoing Services, 1992-2007**

Figures 2.2 and 2.3 illustrate how the yearly rates of substantiated and indicated child maltreatment remained fairly level throughout the decade but showed a rather sudden drop in 2003. The 2004 through 2007 substantiated and indicated maltreatment rates are 10-year lows and are statistically significant decreases from the average of the prior years. However, when all maltreatment reports are taken into account the rate has stayed relatively steady from 1996 onward, suggesting that there has been a change in the rate of substantiation but not in total number of maltreatment reports received and investigated by the DCFS. In the third category the number of children with maltreatment reports that are investigated and referred to ongoing services are presented. This rate too has remained fairly steady since 1996 and in 2007 was 3.4% of the children under 6 in the county.

In the nation as a whole, the latest government report based on a compilation of state data for 2007 gives the maltreatment rate for children from birth through age three as 1.49% and notes that there was an overall decline in incidents of maltreatment since 1990.<sup>13</sup> The national report counts only those maltreatment reports that are substantiated or indicated. The comparable rate for the same period in Cuyahoga County was identical at 1.63%.

### Birth Cohort Estimates

Another way to look at child maltreatment that is pertinent to IIC is to track birth cohorts to determine the probability that they experience an incident of child abuse or neglect during their first 6 years of life. This way of looking at the data can show whether the chances of being maltreated have changed since IIC depending upon the age of the child. The probability of experiencing maltreatment for successive birth cohorts are presented in Table 2.5.<sup>14</sup> The table is only partially complete because recent birth cohorts have not yet passed through their fifth year. For example, the entire 2004 birth cohort will not reach age six until December 31, 2010, so their total victimization rate cannot yet be calculated.

**Table 2.5** is also divided into three sections, each using an alternative method of defining the children affected by maltreatment. The rows in the tables represent the birth cohort years (1992 through 2006) and the columns represent the age at which the children experienced their first incident of maltreatment. The values contained in the table represent the estimated percent of children born in each year who have experienced a first incident of maltreatment at a specific age. For example, in **Table 2.5a** 4.35% of children in the 1992 birth cohort experienced a substantiated or indicated incident of maltreatment before reaching their first birthday. In this same 1992 birth cohort, 2.15% of children experienced their first maltreatment incident after they turned age 1 but before they turned age 2. Similarly, 1.82% experienced their first incident in their 5<sup>th</sup> year of life. Summing the age specific estimated percentages across the six age ranges results in the estimated victimization rate of 13.99% for the 1992 birth cohort. This rate reflects the estimated probability of the birth cohort experiencing an incident of maltreatment before their sixth birthday. In addition, the probability of experiencing a substantiated or indicated incident by the third birthday was 8.44% for the 1992 cohort.

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<sup>13</sup> U.S. Department of Health and Human Services, Administration on Children, Youth & Families. (2009). *Child Maltreatment 2007*. Washington D.C., U.S. Government Printing Office.

<sup>14</sup> To analyze the chances of maltreatment by birth cohorts we adopted methods used in survival analysis. Specifically, in this analysis we combined all the substantiated and indicated child abuse and neglect reports from 1992 through 2007. We then organized the reports by the birth year of the child and determined the age of the child at the time of his or her first report. For each birth cohort we counted the number of children with an initial incident at age 0, 1, 2, 3, 4 & 5. For each birth cohort we then calculated a hazard rate of being maltreated for the first time at each age between 0 and 5. The denominator for the hazard rate at each age is the number of infants in the birth cohort, minus those who have already been maltreated.

**Table 2.5a : Probability of Experiencing a Substantiated or Indicated Maltreatment Incident, by Birth Cohort and Age at First Report (Hazard Rate), Cuyahoga County 1992-2006.**

Cohort Year	Age of victim at first maltreatment						Victimization Rate by Age 3	Victimization Rate by Age 6
	0	1	2	3	4	5		
1992	4.35	2.15	1.94	1.81	1.91	1.82	8.44	13.99
1993	4.45	2.08	1.86	2.09	1.85	1.86	8.39	14.20
1994	4.42	1.93	1.95	1.89	1.59	1.54	8.27	13.32
1995	4.55	2.13	1.94	1.72	1.70	1.96	8.62	14.00
1996	4.76	2.26	1.80	1.81	1.89	1.69	8.82	14.21
1997	4.94	2.09	1.83	1.96	1.85	1.69	8.87	14.36
1998	4.78	2.26	2.45	2.06	1.65	0.96	9.49	14.17
1999	4.82	2.64	2.22	1.74	0.99	0.74	9.68	13.15
2000	5.28	2.82	2.07	1.27	0.69	0.59	10.17	12.72
2001	5.05	2.30	1.34	0.78	0.77	0.62	8.70	10.87
2002	4.45	1.51	0.96	0.72	0.57		6.93	
2003	3.66	1.14	0.85	0.64			5.66	
2004	3.33	0.94	0.57				4.85	
2005	2.55	0.82					Some IIC	
2006	2.09						Full IIC	

Sources: Child Maltreatment Data, Cuyahoga County Department of Children and Family Services; Birth Data, Ohio Department of Health Vital Statistics; Population Estimates by Age, Northern Ohio Data and Information Service, Cleveland State University.

Analysis of data by Center on Urban Poverty and Community Development, Case Western Reserve University.

**Table 2.5b : Probability of Experiencing an Incident of Maltreatment - All Reports, by Birth Cohort and Age at First Report (Hazard Rate), Cuyahoga County 1997 - 2006.**

Cohort Year	Age of victim at first maltreatment						Victimization Rate by Age 3	Victimization Rate by Age 6
	0	1	2	3	4	5		
1992	6.24	3.94	3.54	3.42	3.33	2.93	13.72	23.40
1993	6.61	3.59	3.49	3.63	3.31	2.97	13.68	23.60
1994	6.46	3.80	3.65	3.28	2.87	2.66	13.90	22.71
1995	6.75	3.92	3.82	3.26	2.84	2.97	14.49	23.56
1996	7.20	4.21	3.54	3.28	2.97	3.10	14.95	24.31
1997	7.50	3.99	3.67	3.34	3.23	2.89	15.15	24.62
1998	7.43	4.38	4.15	3.64	3.47	2.98	15.96	26.05
1999	7.69	5.08	3.97	3.83	3.02	3.08	16.75	26.67
2000	9.57	5.24	4.67	3.99	3.43	3.08	19.49	29.99
2001	8.40	5.06	3.85	4.05	3.56	3.59	17.31	28.51
2002	8.18	4.79	4.35	3.89	3.46		17.31	
2003	8.09	4.74	4.05	3.38			16.88	
2004	8.05	4.82	4.10				16.96	
2005	8.53	4.80					Some IIC	
2006	8.70						Full IIC	

Source: Child Maltreatment Data, Cuyahoga County Department of Children and Family Services; Birth Data, Ohio Department of Health Vital Statistics; Population Estimates by Age, Northern Ohio Data and Information Service, Cleveland State University.

Analysis of data by Center on Urban Poverty and Community Development, Case Western Reserve University.

**Table 2.5c : Probability of Experiencing an Incident of Maltreatment Transferred to Ongoing, by Birth Cohort and Age at First Report (Hazard Rate), Cuyahoga County, 1992-2006.**

Cohort Year	Age of victim at first maltreatment						Victimization Rate by Age 3	Victimization Rate by Age 6
	0	1	2	3	4	5		
1992	2.92	1.59	1.37	1.24	1.49	1.45	5.89	10.07
1993	3.23	1.65	1.41	1.55	1.55	1.67	6.28	11.06
1994	3.37	1.63	1.69	1.51	1.32	1.25	6.68	10.76
1995	3.63	1.73	1.62	1.65	1.45	1.39	6.98	11.47
1996	4.01	1.96	1.62	1.52	1.50	1.29	7.60	11.91
1997	4.33	1.88	1.59	1.54	1.44	1.31	7.80	12.10
1998	4.51	1.93	1.96	1.54	1.26	1.32	8.40	12.51
1999	4.58	2.25	1.68	1.54	1.25	1.33	8.51	12.63
2000	4.76	2.15	1.83	1.63	1.49	1.22	8.74	13.08
2001	4.59	2.09	1.71	1.74	1.38	1.24	8.39	12.76
2002	4.64	2.04	2.17	1.56	1.23		8.85	
2003	4.71	2.05	1.65	1.26			8.42	
2004	5.06	2.20	1.71				8.97	
2005	5.03	2.01					Some IIC	
2006	5.14						Full IIC	

Source: Child Maltreatment Data, Cuyahoga County Department of Children and Family Services; Birth Data, Ohio Department of Health Vital Statistics; Population Estimates by Age, Northern Ohio Data and Information Service, Cleveland State University. Analysis of data by Center on Urban Poverty and Community Development, Case Western Reserve University.

Tables 2.5 show that the risk of a first maltreatment incident is much higher in the first year of life than in subsequent years regardless of which measure of maltreatment is used. In **Table 2.5a**, the bottom line on the diagonal reflects the lower number of incidents of substantiated and indicated child maltreatment reports in 2006 for most age groups. In other words, most birth cohorts showed a lower hazard of experiencing a first substantiated or indicated incident of child maltreatment in 2006. The rates of substantiated or indicated victimization by age three increased from 1992 to 2000 and then declined for the 2001 to 2004 cohorts.

In the next two panels (Tables 2.5b and 2.5c) several points are worth acknowledging. In regard to children being the subject of an investigated report of maltreatment (**Table 2.5b**), rates peaked in the 2000 birth cohort, especially in the group under 1. This could reflect heightened surveillance following the launch of IIC that has lessened over a period of years. This is also seen in the reporting rate falling in the 2001 to 2003 birth cohorts and then leveling off. In respect to the transfer to ongoing indicator (**Table 2.5c**) there are consistent increases throughout the study period, until the 1998 birth cohort, when rates become fairly stable.

Based on this comparison of various measures of child maltreatment risk, it appears that there has been a recent (since 2003) decline in substantiated and indicated cases of maltreatment, but little change in the number of reports accepted for investigation. Moreover, it appears that approximately the same proportion of children is being assessed to be at risk as evidenced by the number of children with maltreatment investigations who are referred to ongoing services.

### Secondary Prevention

Secondary prevention of child abuse and neglect is another important objective for young children in the County. Secondary prevention is reflected in the degree to which children that have a first incident of child maltreatment avoid any additional incidents of maltreatment as a result of early detection and treatment. This possibility is examined in Tables 2.6 that track children who have had a first incident of child maltreatment to determine their chances of having a second incident. A second incident is one that is reported and accepted for investigation between 30 and 365 days following the first incident. The data are organized by birth cohort and age of the child at the time of the first incident. This analysis focuses on second incidents within 1 year of the first incident, because data are available only through 2006. The table is divided into two sections reflecting two of the three different measures of maltreatment being used in this report.<sup>15</sup>

**Table 2.6a** shows that following an initial decline, there was an increase in the chances of a second substantiated or indicated maltreatment report among children first reported under age 1 for 2000-2003 but then a drop in 2004. This pattern does not hold, though, when looking at any report that is accepted for investigation where rates have generally increased among children under 1 at the time of the first report (**Table 2.6b**). This could suggest higher levels of surveillance for young children in families where a report had previously been investigated or with the fact that fewer first reports were substantiated or indicated in recent years. For older children, the patterns are fairly mixed but the reader should note that the number of children represented in each group is smaller for older children. The third indicator (referral to ongoing) was examined using a secondary prevention focus, however the approach was deemed inappropriate given the nature of ongoing services. Specifically, when a case is referred to ongoing services this assignment frequently lasts for an extended period, until the family's risk level decreases substantially. Given this, the appropriate interpretation of subsequent referrals to ongoing services occurring within one year is unclear.

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<sup>15</sup> In this section we do not look at second incidents of "transfer to ongoing" because these cases would have been open much of the subsequent period of observation.

**Table 2.6a : Percent of Children Under Six Experiencing a Second Substantiated or Indicated Case of Child Maltreatment within One Year of the First Incident, by Birth Cohort and Age at First Incident: Cuyahoga County, 1992 - 2006.**

Cohort Year	Age of victim at first maltreatment					
	0	1	2	3	4	5
1992	13.3%	13.5%	13.2%	12.0%	15.8%	14.9%
1993	15.5%	14.4%	13.1%	15.4%	18.3%	14.2%
1994	13.5%	12.3%	15.7%	15.9%	14.8%	14.1%
1995	14.8%	18.0%	18.5%	16.1%	12.9%	12.0%
1996	12.9%	17.9%	14.4%	8.4%	15.1%	9.3%
1997	14.2%	13.8%	14.0%	12.8%	12.5%	11.9%
1998	13.0%	13.4%	8.4%	9.7%	10.1%	10.1%
1999	10.7%	14.7%	16.6%	10.8%	10.6%	11.0%
2000	8.9%	14.9%	11.8%	10.8%	10.4%	12.4%
2001	10.4%	12.8%	7.2%	11.0%	4.8%	10.0%
2002	12.5%	9.3%	9.1%	8.8%	9.0%	
2003	14.1%	10.5%	10.0%	9.6%		
2004	9.2%	9.7%	7.5%			
2005	8.2%	5.3%			Some IIC	
2006	8.9%				Full IIC	

Source: Child Maltreatment Data, Cuyahoga County Department of Children and Family Services.  
 Analysis of data by Center on Urban Poverty and Community Development, Case Western Reserve University.

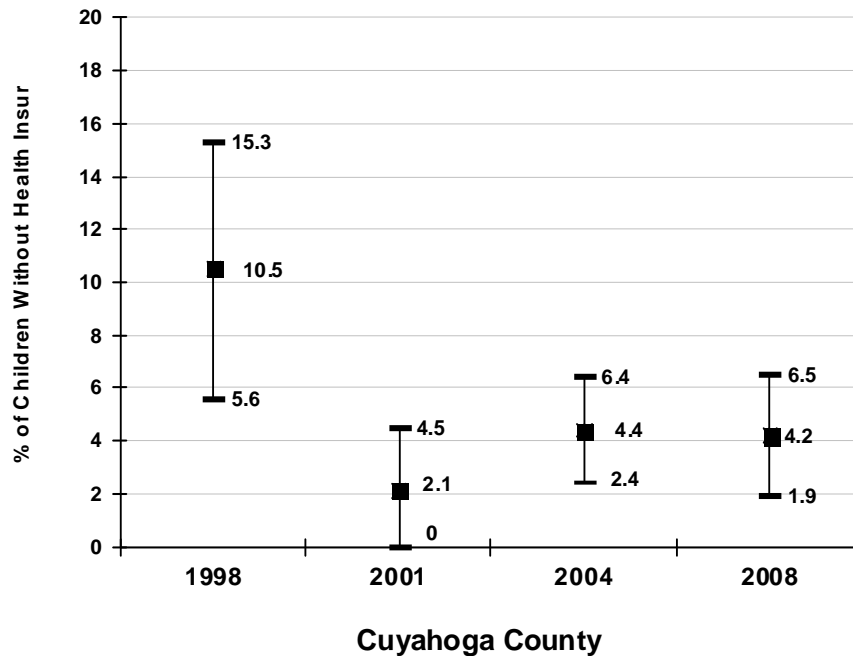
**Table 2.6b : Percent of Children Under Six Experiencing a Second Incident of Child Maltreatment within One Year of the First Incident, by Birth Cohort and Age at First Incident: All Reports, Cuyahoga County, 1992-2006.**

Cohort Year	Age of victim at first maltreatment					
	0	1	2	3	4	5
1992	19.1%	21.6%	19.3%	18.5%	24.7%	18.9%
1993	21.6%	25.1%	24.4%	21.3%	21.4%	18.8%
1994	23.1%	23.4%	20.0%	23.8%	21.2%	21.2%
1995	24.1%	24.7%	22.8%	21.7%	21.6%	18.7%
1996	23.1%	24.6%	22.0%	20.8%	21.4%	19.1%
1997	23.5%	20.7%	22.6%	20.3%	21.4%	19.3%
1998	22.5%	22.7%	20.1%	21.3%	18.9%	17.6%
1999	21.5%	23.6%	22.1%	19.7%	21.6%	16.8%
2000	19.1%	25.1%	22.8%	20.8%	17.8%	25.1%
2001	20.8%	24.8%	24.9%	19.7%	19.0%	18.5%
2002	25.2%	27.3%	25.0%	20.8%	17.7%	
2003	27.6%	25.4%	22.1%	19.2%		
2004	29.2%	27.8%	23.6%			
2005	26.5%	25.2%			Some IIC	
2006	27.8%				Full IIC	

Source: Child Maltreatment Data, Cuyahoga County Department of Children and Family Services.  
 Analysis of data by Center on Urban Poverty and Community Development, Case Western Reserve University.

## Child Health Insurance

Access to health care is fundamental to the health of young children, and children without health insurance are often denied access to regular care. Therefore, the percent of children under age six without health insurance is an important statistical indicator of access to health care. A national polling firm conducted a telephone survey in 1998, 2001, 2004, and 2008 of a probability sample of Cuyahoga County households and asked parents about health insurance coverage of their children.<sup>16</sup> The results of this survey are presented in **Figure 2.4** for children under six.



Source: Ohio Family Health Survey, 1998, 2001, 2004, and 2008. Analysis of data by Center for Community Solutions (1998-2004) and Center on Urban Poverty and Community Development (2008).

**Figure 2.4 Children Under Age Six with No Health Insurance Coverage (with 90% Confidence Intervals), 1998, 2001, 2004, and 2008.**

The change in the proportion of children under six who were uninsured fell markedly between 1998 and 2001. The change was statistically significant ( $p < .01$ ). This represents an unprecedented decline in uninsurance rates that can be attributed, in part, to the expansion of Healthy Start/Medicaid, and outreach, which was part of IIC. Additionally, the percent of children leaving welfare who keep their Medicaid coverage has also risen to 88% (Coulton et al. 2004). By 2004, there was a slight increase in the percent with no health insurance, with slightly over 4% of children remaining uninsured through 2008.

<sup>16</sup> The Center for Community Solutions designed and managed the survey in Cuyahoga County (1998-2004). The survey was weighted since various groups were over-sampled. Standard errors were computed using SUDAAN, which adjusts for the design effects of the weights.

## Child Deaths

Early childhood deaths are another indicator of child health. **Table 2.7** displays the number of deaths and death rates of children under six from 1992 through 2007. There was an overall decline in child death rates between the early 1990s and the period since 1998. The infant mortality rate is shown at the bottom of the table.<sup>17</sup> Although this rate has moved up and down over the years since IIC began, these changes from year to year are not statistically significant. Nevertheless, the infant mortality rate in Cuyahoga County exceeds the national average of 6.9 per 1000 live births.

**Table 2.7 Deaths of Children Under Six and Death Rate per 1000, Cuyahoga County, 1992-2007**

Age	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<1	289	268	254	239	189	206	170	175	176	161	180	144	163	165	159	164
1	14	14	15	20	9	4	9	9	5	13	7	11	10	8	10	13
2	9	7	7	8	11	6	5	5	10	7	3	6	2	2	4	8
3	3	11	9	9	4	8	6	4	10	5	1	1	3	4	3	3
4	4	8	8	6	3	2	5	7	5	3	2	6	1	1	0	2
5	4	5	2	3	7	5	3	3	3	4	2	4	2	3	4	1
<b>Total</b>	<b>323</b>	<b>313</b>	<b>295</b>	<b>285</b>	<b>223</b>	<b>231</b>	<b>198</b>	<b>203</b>	<b>209</b>	<b>193</b>	<b>195</b>	<b>172</b>	<b>181</b>	<b>183</b>	<b>180</b>	<b>191</b>
<b>Death Rate<sup>1</sup></b>	<b>2.6</b>	<b>2.6</b>	<b>2.5</b>	<b>2.5</b>	<b>2.0</b>	<b>2.0</b>	<b>1.8</b>	<b>1.8</b>	<b>1.9</b>	<b>1.8</b>	<b>1.8</b>	<b>1.6</b>	<b>1.7</b>	<b>1.8</b>	<b>1.8</b>	<b>1.9</b>
<b>Death Rate children &lt;1<sup>2</sup></b>	<b>13.1</b>	<b>12.5</b>	<b>12.5</b>	<b>12.0</b>	<b>9.7</b>	<b>10.8</b>	<b>8.9</b>	<b>9.5</b>	<b>9.3</b>	<b>8.9</b>	<b>10.4</b>	<b>8.3</b>	<b>9.6</b>	<b>10.1</b>	<b>9.5</b>	<b>10.0</b>

<sup>1</sup> Number of deaths per 1,000 population

<sup>2</sup> Number of deaths per 1,000 live births

Source: Ohio Department of Health, Death Records, 1992-2007.

Analysis of data by Center on Urban Poverty and Community Development, Case Western Reserve University

## Early Care and Education

IIC envisions a system of high quality care and early education for all young children in Cuyahoga County. This commitment derives from the scientific evidence that effective early childhood education can prevent academic failure and other negative outcomes in later years, especially for at-risk children.<sup>18</sup> Towards that end, IIC endeavored to expand access to regulated child care providers and to link 3- and 4-year-olds to licensed child care and preschool programs. In 2007-2008, Cuyahoga County launched a universal pre-kindergarten pilot program in 24 sites, based in part on child well-being data and on an analysis of the system's capacity to meet the needs of families.<sup>19</sup>

<sup>17</sup> This rate is the number of deaths under age one per 1,000 live births.

<sup>18</sup> Karoly, L. A., Greenwood, P. W., Everingham, S. S., Hoube, J., Kilburn, M. R., Rydell, C. P., et al. (1998). Investing in our children: What do we know about the costs and the benefits of early childhood interventions. Santa Monica, CA: Rand Corporation.

<sup>19</sup> Fischer, R. L., Nelson, L., Mikelbank, K., & Coulton, C. (2008). Space to learn and grow: Assessing early childhood and education in a large urban county. *Child and Youth Care Forum*, 37(2), 75-86.

With respect to child care enrollment, an indicator of progress is the number of children enrolled in regulated child care. Starting Point, the local child care Resource and Referral (R & R) agency, periodically conducts a survey of family and center-based child care providers. The survey obtains information on enrollment from each provider. **Table 2.8** uses Starting Point's survey to estimate the number of children enrolled in regulated center-based child care. The number of children in regulated care increased steadily until 2004, when the rates leveled off, so that by 2008 there were 38,862 children enrolled, or 46.8% of the population. The rate of increase was greatest for children under age three, the group targeted by IIC.

**Table 2.8 : Number of Children Enrolled in Regulated Child Care by Age Group and Setting; Cuyahoga County, 1996, 1998, 2000-2008.**

Year	Infant 0-17 mos.	Toddler 18-35 mos.	3-5 yrs old, not in kindergarden	Total	Percent of Population <sup>1</sup>
1996	1,707	3,340	21,885	26,932	26.0%
1998	2,744	5,765	26,035	34,544	36.0%
2000	3,491	6,534	24,979	35,004	37.3%
2002	3,957	7,525	21,900	33,382	36.2%
2003	4,243	7,834	25,906	37,983	41.9%
2004	3,982	7,542	27,270	38,794	43.4%
2005	3,970	7,495	26,954	38,419	43.6%
2006	3,976	7,514	28,113	39,603	46.0%
2007	4,154	7,585	26,767	38,506	45.7%
2008	4,245	7,807	26,810	38,862	46.8%

<sup>1</sup> Northern Ohio Data and Information Service population estimates, adjusted for 3-5 year olds not in kindergarden

Sources: Starting Point Child Care Resource and Referral System, and the Northern Ohio Data and Information Service, Cleveland State University.

Prepared by: Center of Urban Poverty and Community Development, Case Western Reserve University.

An additional indicator of improved access to child care in recent years comes from data on the use of child care vouchers to pay for care. Families with incomes below 185% of poverty are eligible for help in paying for child care.

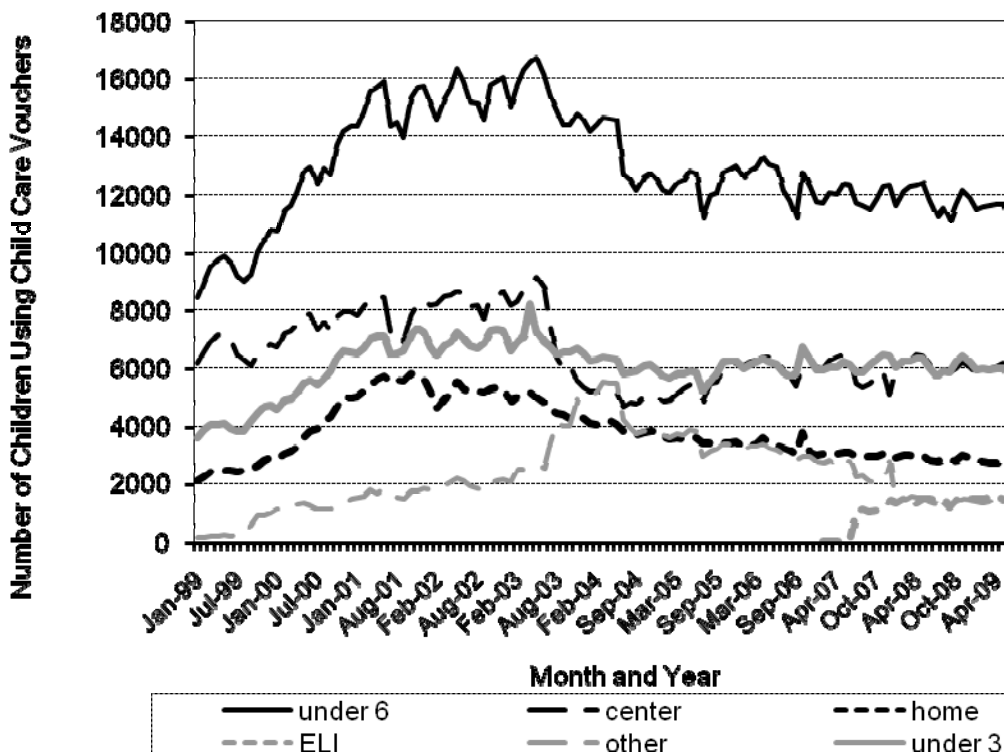
**Table 2.9 Children Under 6 Receiving Daycare Vouchers, Cuyahoga County, 1999-2008**

Year	Monthly Average	% of Children Under 6	Unduplicated Yearly Count	% of Children Under 6
1999	9,541	8.6%	20182	18.2%
2000	12,628	11.5%	24191	22.0%
2001	14,610	13.4%	27009	24.8%
2002	15,398	14.4%	27651	25.8%
2003	15,398	14.6%	27411	26.0%
2004	13,405	12.9%	26344	25.4%
2005	12,356	12.1%	28137	27.5%
2006	12,511	12.4%	24095	23.8%
2007	11,936	12.1%	22768	23.1%
2008	11,816	12.2%	22396	23.1%

Source: Daycare Voucher data, Cuyahoga Employment and Family Services

Prepared by: Center of Urban Poverty and Community Development, Case Western Reserve University.

As shown in **Table 2.9** and **Figure 2.5**, the number of families redeeming child care vouchers increased until 2003, when there was a down turn. This downturn has leveled off in recent years. The growth in the use of vouchers was greatest in family child care homes whose expansion and quality have been explicitly targeted by IIC programs. However, since 2003 the use of vouchers in family child care homes has decreased. There was also an increase around 2003 in the “other” category which was mainly children using child care vouchers in Head Start programs. However, this has also leveled off. Two factors external to IIC may have influenced redemption of child care vouchers. The 2001 recession threw more individuals out of work, so the need for child care may have decreased temporarily in 2001-2003. Second the eligibility threshold for child care subsidies varied during the study period. From 1997 to 2002, the threshold was 185% of poverty level, but in 2003 it was lowered to 150%. It was subsequently raised to 185% of poverty in 2004. Currently, this standard translates to a maximum income for first receipt of a voucher of \$35,208 for a family of three (2008 eligibility standard).

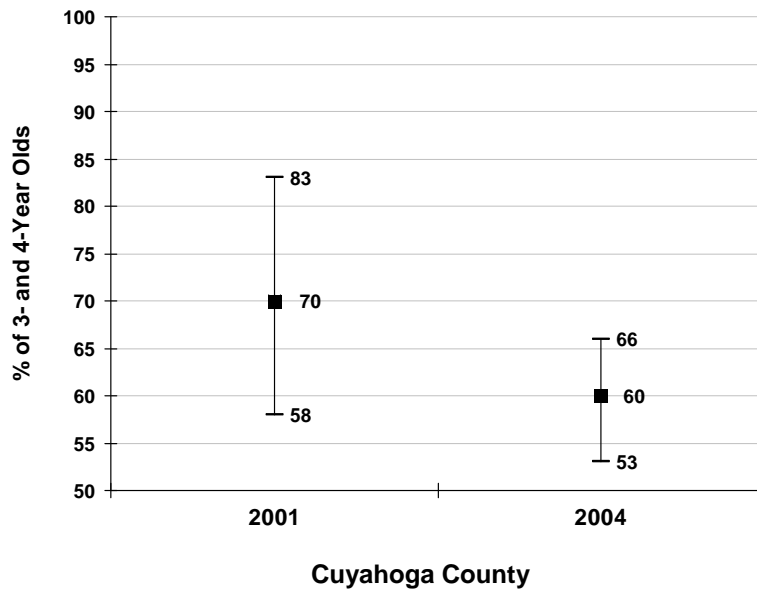


**Figure 2.5 Monthly Use of Child Care Vouchers, Children Under Six, Cuyahoga County, June 1997 – May 2009**

Source: Cuyahoga County Employment and Family Services, Day Care Voucher files, June 1997- May 2009. Analysis of data by The Center on Urban Poverty and Community Development.

Preschool enrollment is difficult to track for the child population, because it is provided in many settings that are not part of an organized system of care, such as Head Start or public preschool. Many low-income children are enrolled in Head Start, but since more mothers are now working, a growing number of children may be participating in preschool programming within the context of child care centers. Public preschool for children with special needs is administered through numerous local boards of education. Myriad non-profit and neighborhood-based organizations operate preschool programs as well. Thus, valid and unduplicated counts of enrollment cannot be obtained at the present time.

The lack of data prompted the evaluation team to request that several questions about preschool enrollment be included in the 2001 and 2004 Ohio Family Health Survey for Cuyahoga County residents. Respondents were asked whether their children, ages three to four, were participating in preschool programs such as Head Start, a private preschool, a preschool program within a child care center, or a public preschool. The question was identical to the one asked on a national survey, so the results in Cuyahoga County can be compared to the nation.



Source: Ohio Family Health Survey, 2001 and 2004.  
 Analysis of data by Center for Community Solutions and by The Center on Urban Poverty and Social Change.

**Figure 2.6 Enrollment of 3- and 4-Year Old Population in Preschool, Nursery School and/or Head Start (with 90% Confidence Intervals)**

According to the survey data, the estimate of preschool enrollments for children ages three and four in Cuyahoga County was 70% in 2001 and 60% in 2004. Given the margin of error in the surveys (dictated by sample size), this difference is not statistically significant.<sup>20</sup> As illustrated in **Figure 2.6**, the 90% confidence intervals for these estimates overlap substantially. These participation rates compare favorably with a national enrollment rate of approximately 54.5% for the latest year reported, which is 2003.<sup>21</sup>

<sup>20</sup> In 2001 the survey sample had only 120 respondents with children ages 3-4 and 288 qualifying respondents in 2004. .

<sup>21</sup> U.S. Department of Education, National Center for Education Statistics. (2003). Retrieved November 17, 2008, from <http://childtrendsdatabank.org/indicators/103prekindergarten.cfm>

## Early Identification of Children with Developmental Delays and Disabilities

Children with developmental delays and other disabilities should be identified as early as possible so that they can receive timely services. Through its network of services and public information, IIC anticipated that children with special needs would be identified and involved with Early Intervention (EI) services earlier in life. EI services are provided to eligible children under Part C of the federal Individuals with Disabilities Education Improvement Act (IDEA) that was reauthorized in 2004. The age at which children receive their first Individualized Family Service Plans (IFSP) is used as an indicator of early identification. **Table 2.10** shows the number of children in EI by birth cohort and their age at their first visit. It can be seen that the number of children with their first visit before 6 months of age has more than doubled since the inception of IIC. EI also appears to be reaching a larger percentage of the birth cohort since ICC began. For example, the percentage of the birth cohort with EI services by age 3 rose from 5.04 in 1997 to 11.52 by 2005. Although the counts for the 2006 birth cohort are incomplete, up to age 24 months it exceeds the number in 2005.

**Table 2.10 : Number of Children in Early Intervention by Birth Cohort and Age of First EI Visit**

Birth Year	0 - 6 mo	6 - 12 mo	12 - 18 mo	18 - 24 mo	24 - 30 mo	30 - 36 mo	≥ 36 mo	Percentage of Cohort
1997	340	103	87	111	128	108	82	5.04
1998	366	133	113	146	222	162	46	6.25
1999	540	192	151	177	234	166	49	8.20
2000	511	241	197	202	237	174	24	8.39
2001	614	206	160	227	242	162	13	8.93
2002	696	219	173	256	251	146	8	10.07
2003	781	166	183	219	288	171	6	10.54
2004	705	244	250	270	310	157	5	11.48
2005	758	192	193	290	275	171		11.50
2006	734	213	204	324				
2007	741	210						

Note: Data incomplete for 2006 - 2007 birth cohorts

Source: KIDS database provided by Help Me Grow, 1997-Dec. 2008.

Analysis of data by Center on Urban Poverty and Community Development, Case Western Reserve University

### **SECTION 3**

#### **The Scope and Reach of IIC: 2009 Update**

##### **Summary**

This section examines the scope and reach of Invest in Children (IIC) in regard to the services provided to the early childhood population (age birth to six years of age) in Cuyahoga County. The scale of IIC programs has continued to grow and the services have achieved considerable scope. Programmatic elements of IIC now reach the vast majority of newborns and their families in the county. As intended, the reach continues to be both broad yet focused. IIC continues to solidify a system that combines breadth and depth in its efforts to meet the needs of young children and their families in Cuyahoga County. Overall findings on IIC's scope and reach include:

- In its first 8.5 years, IIC reached over 177,000 Cuyahoga County children prenatal to 6 years of age. The number of children served annually has grown to 65,000 across all programs.
- Over 75% of children born between July 1999 and December 2007 have received one or more IIC services. Among older children age-eligible for services (born July 1993-June 1999) 40% have received one or more IIC services.
- Infants are being served earlier in life over time. For the most recent birth cohort on which complete data are available, over 75% had contact with at least one IIC service before 6 months of age.
- There is greater evidence of IIC families engaging multiple IIC services over time. All children under six and infants under 1 year old who are touched by IIC rely upon services from more than one of the components, and the extent of cross-program usage within IIC has increased over the first 8 years. Of particular note is the steady increase of cross program use among recipients of the newborn home visit (from 38% to 61%). As a key gateway program for first-time and young parents, this trend shows enhanced linkages to other services.
- IIC families also rely on a number of other public services but these rates have fluctuated over time. In some cases there has been a decline in receipt over time - cash assistance Ohio Works First (OWF) (from 35% in 2000 to 24% in 2007) and child care vouchers (from 20% in 2000 to 15% in 2007). Food Stamp participation by IIC families dropped from 46% in 2000 to 41% in 2001 but has steadily increased to 53% in 2007. In regard to having an open case with the Department of Children and Family Services (DCFS) in the six months following an IIC service, the rate has held at 10-12% in 2000-2007. Declining trends in DCFS involvement are evident among the population of children served by early intervention. The overlap with other public systems is greatest for families using ongoing home visiting, family child care, and Healthy Start/Medicaid.
- The programs of IIC have reached considerable geographic spread throughout the County. Overall, 57% of the children reached by IIC were residents of the City of Cleveland and 43% were residents of the County outside the City. In programs of IIC targeted to at-risk families more than two-thirds of the families served resided within the City of Cleveland. Other programs serve larger numbers of families outside the City (up to 58%), reflecting greater geographic dispersion in the families they target.

## Introduction

Efforts to impact community-wide social issues present an array of challenges for evaluators seeking to assess their impacts.<sup>22</sup> The magnitude of such community initiatives and their often complex nature result in data availability and access issues, as well as the analytic difficulties of linking targeted programs to community-level indicators.<sup>23</sup> Despite these challenges, the evaluation of Invest in Children (IIC) has included methods to assess program implementation and to explicitly monitor the extent to which the effort reaches its intended audiences<sup>24</sup>.

Although IIC comprises multiple agencies and programs, its vision continues to be singular—a system that fosters and supports effective parents and families, safe and healthy children, and high quality early care and education. The system, as envisioned, is more than just a set of services but includes the myriad connections among families and organizations. To achieve that vision, the scope of IIC is broad and extends to all families who have a need for such supports. This sub study addresses the question of the scope and reach of IIC system by tracking birth cohorts to determine the degree to which they become active in the multiple IIC service components. It also examines the overlap of IIC population with other public services and the geographic spread of IIC programs across the County. IIC services are defined as (a) home visiting (prenatal, newborn, ongoing), (b) home-based child care at a home certified during IIC, (c) technical assistance and placement services delivered through the special needs child care program, (d) Early Intervention (EI) services, and (e) enrollment in the Healthy Start/Medicaid program.

## Methodology

This report builds on ongoing data monitoring activities associated with the work of Invest in Children and its evaluation. Previous reports included findings on the scope and reach of IIC programming.<sup>25</sup> Computerized individual records from IIC programs and public agencies served as the principal data sources for these analyses. The challenges of working with large administrative data sets are well documented, and as such numerous strategies were employed to maximize their usability.<sup>26</sup> The methodology involves tracking participation in IIC programs and other public services by the population of children in Cuyahoga County who were under 6 years of age at any time between July 1999 and December 2007. This window begins with the initiation of IIC and extends to the end of 2007, the period for which full data were available. IIC defined as its target population all County residents from birth through age five. Much of the

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<sup>22</sup> Saunders, R. C. & Heflinger, C. A. (2004). Integrating data from multiple public sources: Opportunities and challenges for evaluators. *Evaluation*, 10(3), 349-365.

<sup>23</sup> Gambone, M. A. (1998). Challenges of measurement in community change initiatives. In Fulbright-Anderson, K, Kubisch, A. C., & Connell, J. P. (Eds.), *New Approaches to Evaluating Community Initiatives, Volume 2: Theory, Measurement, and Analysis* (pp. 149-163). Washington: Aspen Institute.; Hollister, R. G., & Hill, J. (1995). Problems in the evaluation of community-wide initiatives. In Connell, J. P., Kubisch, A. C., Schorr, L. B., & Weiss, C. H. (Eds.), *New Approaches to Evaluating Community Initiatives: Concepts, Methods, and Contexts* (pp. 127-172). Washington: Aspen Institute.

<sup>24</sup> Fischer, R. L., Lalich, N., & Coulton, C. (2008). Taking it to scale: Evaluating the scope and reach of a community-wide initiative on early childhood. *Evaluation and Program Planning*, 31, 199-208.

<sup>25</sup> Fischer, R., Lalich, N., Andrade, M., & Coulton, C. (2005). The scope and reach of ECI: Monitoring the coverage and connections of Initiative programs. Ch. 3 in *Cuyahoga County Early Childhood Initiative Evaluation: Phase II Final Report*. Cleveland, OH: Case Western Reserve University. June. Coulton, C., Withers, J., Andrade, M., & Fischer, R. (2003). The scope and reach of ECI: coverage and connections of IIC programs. In *Cuyahoga County Early Childhood Initiative evaluation: Phase I final report*. (pp. 3-1: 3-12). Cleveland, OH: Case Western Reserve University.

<sup>26</sup> English, D. J., Brandford, C. C., & Coghlan, L. (2000). Data-based organizational change: The use of administrative data to improve child welfare programs and policy. *Child Welfare*, LXXIX(5), 499-515.

analysis organizes the data by 6-month birth cohorts. A birth cohort includes children who were born during each 6-month period.

Computerized individual records from IIC programs and public agencies served as the data sources for these analyses. All records were maintained on highly secure servers and could be accessed only by authorized personnel certified in guarding the privacy of records. The data processing and storage methods complied with the University's regulations on the protection of confidential data. The study population was identified from the following administrative records:

***Birth Certificates:*** Birth certificate records for Cuyahoga County residents were obtained from the Ohio Department of Health. Records of all live births were extracted for calendar years 1993 through 2007.

Data on Use of IIC Services:<sup>27</sup>

***Home Visiting and Early Intervention:*** Records of participation in the Help Me Grow programs—prenatal, newborn and ongoing home visiting and Early Intervention--were extracted from Help Me Grow's proprietary database (i.e., KIDS system). Children who were under 6 years old between July 1999 and December 2007 and had at least one home visit, or completion of an Individualized Family Service Plan (IFSP) through Early Intervention recorded in the database were counted as participating in the program.

**CHANGE IN METHODOLOGY**

BEGINNING WITH THE 2009 UPDATE, COVERING SERVICE DATA FROM JULY, 1999 THROUGH DECEMBER, 2007, WE OBTAINED ADDITIONAL DATA ON ONGOING HOME VISITING IN THE CITY OF CLEVELAND THROUGH THE MOMSFIRST PROGRAM AT THE CLEVELAND DEPARTMENT OF PUBLIC HEALTH. CHILDREN WHO WERE BORN AFTER JANUARY 1, 2007 AND HAD AT LEAST ONE HOME VISIT ARE INCLUDED IN THIS REPORT. SERVICE DATA IS INCLUDED THAT OCCURRED AFTER JANUARY 1, 2007. MOST OF THE MOMSFIRST CLIENTS ARE FIRST SEEN PRENATALLY. IN THIS REPORT, THE PRIMARY CHANGES WE SEE DUE TO THE ADDITIONAL DATA ARE INCREASES IN THE NUMBER OF CHILDREN FIRST SERVED PRENATALLY, AND INCREASES IN SOME MEASURES OF CROSS-PROGRAM PARTICIPATION.

***Medicaid Enrollment:*** Monthly extracts of Medicaid eligibility records were obtained from the Ohio Department of Job and Family Services' (ODJFS) Client Registry Information System-Enhanced (CRIS-E) system. Children who were under six at the time and had at least 1 month of eligibility for Medicaid between July 1999 and December 2007 were counted as participating in that component of IIC.

***Family Child Care:*** Children who received care in family child care homes that were part of IIC were identified through their County child care vouchers. The family child care homes in IIC were listed and matched to the voucher file prepared by ODJFS. Children

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<sup>27</sup> Beginning with the 2008 Update the methodology for identifying children who received care in family child care homes and children enrolled in Medicaid, welfare, and food stamps (and their dates of enrollment) was modified. This resulted in a substantial increase in the number of children receiving care in family child care homes from 1999 through 2006. We used a newer data extract to identify children enrolled in Medicaid, welfare, and food stamps, and their dates of enrollment. The previous extract, known as the IMF extract, was discontinued at the end of 2005. We now use the newer "Case and Individual" extract. The primary change is that a larger percentage of children were enrolled in Medicaid during the first 3 months of life, while a smaller number were enrolled in months 3-6.

who received at least 1 month of care in these IIC family child care homes between July 1999 and December 2007 and were under 6 years of age were counted as participants. This method misses the estimated 20% of children in these family child care homes who were not using child care vouchers.<sup>28</sup>

***Special Needs Child Care:*** A database from Starting Point was used to identify children whose child care providers were given technical assistance on their behalf or for which placement services were provided. However, children for whom there was no signed parental consent form were not included in the database.

Data on Use of Other Public Programs:

***Welfare and Food Stamp Records:*** Children receiving cash welfare (Ohio Works First, OWF) and/or Food Stamps in Cuyahoga County were identified from monthly extracts from ODJFS's CRIS-E system.

***Child Care Vouchers:*** Children who received child care (center-based or home-based) through the use of County child care vouchers were identified in the database maintained by ODJFS. Children who received at least one month of care subsidized through the use of a voucher between July 1999 and December 2007 and were under 6 years of age were counted as participants.

***Child Welfare:*** Child welfare participation was determined using records from Cuyahoga County Department of Children and Family Services. Children who were under 6 years old and had an open case with the agency at any time between July 1999 and December 2007 were counted as child welfare participants.

In order to determine which children received multiple IIC and public services, it was necessary to match the records extracted from the above data sources to create a single record per child. The data sources did not all contain common or unique identifiers so probabilistic matching was performed. The data entities were matched using the individual demographic information for each child according to the variables common to both databases. The variables included: child's date of birth, child's first name, child's last name, mother's date of birth, mother's first name, mother's last name, street name, street number, city, zip code, sex, social security number, and Soundex variables for names.<sup>29</sup>

Data sets for matching were prepared for each of the data entities. Two blocking strategies were employed in which a successful match required congruity between data sets on specific variables (child's date of birth and the Soundex value of the child's first name). The birth certificate data served as the base of the matching, and all other data entities were first matched to the birth certificate data. Records that could not be matched to the birth certificates were matched to the Invest in Children Register. IIC Register is a cumulative data file of all children appearing in any data set, including children not born in Cuyahoga County, with the unique identifiers for each of the data entities matched to each other and to an IIC identifier that

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<sup>28</sup> Based on sample data from the Family Child Care Homes portion of the evaluation, 20% of the children present at the time of observation were not using a child care voucher; of these, half were the care provider's own children and the other half were private-pay clients.

<sup>29</sup> Two SAS macros were obtained from the Manitoba Centre for Health Policy [www.umanitoba.ca/centres/mchp/]. One macro was used for computerized probabilistic linkage, and the second macro was used to create Soundex variables based on names to compensate for some of the inconsistencies found in misspelled names.

has been created for the purposes of the evaluation. All records were geocoded so that they could be analyzed spatially. Unless otherwise noted, the maps are based on the home address of the child on the date of receiving his or her first IIC service. In other words, a map of Medicaid participants would be based on the first address in the data file for that child after IIC began in July 1999. Maps that show the location of children who used multiple IIC services use the child's address at the time of the first service.

Evaluation of each matching process involved the following procedures: (a) analysis of the probabilistic weights, (b) assessment of the child's first and last names, (c) assessment of the child's date of birth (in the case of strategies that were not blocked by the date of birth), (d) analysis of ties (these included twins and siblings as well as duplicated assignment to entities' identification key variables), and (e) matches not meeting a certain level of probability, or other criteria specific to each database, were clerically reviewed.

Some of the analyses in this chapter required the calculation of a proportion of the birth cohort that received an IIC service. The birth certificates provide a fairly accurate estimate of the size of the birth cohort at the outset, but as the birth cohort ages, migration begins to have an effect. Since the counts of IIC program participants are cumulative, the denominator in most instances has been adjusted for in-migration. In other words, the size of the birth cohort is adjusted upward for an estimate of the number of individuals born in that time period who would have moved into Cuyahoga County. The in-migration adjustment for 1 year is fairly trivial (i.e., approximately 1%) but this will accumulate over time. The question remains as to when and how to adjust for out-migration rates. Children born in the County who later move out have a chance to participate in IIC, even though their IIC exposure is cut short.

### **Population Coverage**

If IIC continues to be successful in delivering a system of supports and services for the early childhood population, it should be touching large numbers of children early in life. Although the number of Cuyahoga County children and families in need of IIC services is not precisely known, the assumption of IIC was that it needed to achieve a large scale so that any and all with a need could be served. Therefore, this section addresses the question: What proportion of the early childhood population has received one or more IIC services and by what age are they first involved? If IIC has moved to scale as planned, an ever greater proportion of young children will be enrolled at earlier ages, until some plateau is reached that exhausts the need.

In order to examine the reach of IIC, **Table 3.1** presents unduplicated counts of the number of children in the County who have a record of being reached by one or more IIC services since its inception.<sup>30</sup> The counts are organized by birth cohort and by the age at which the child was first served by an IIC program. Between July 1999 and December 2007, IIC reached over 177,000 children. An examination of the column labeled "percent of birth cohort" shows that IIC has reached the vast majority of recent birth cohorts. In fact, 75% of all children born since July 1, 1999 have been reached by one or more programs, and that coverage rate has been increasing over time.

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<sup>30</sup> This analysis relies on computerized records on each individual served that were supplied by the agencies delivering IIC services. Most of the records are believed to be fairly complete. However, with respect to special needs child care, there are significant gaps in records due to parental consent and other factors. Since these are unduplicated counts, though, if a child who is missing from the special needs child care records also received another IIC service, he or she is counted. Thus, the undercount is believed to be relatively small in this particular analysis.

**Table 3.1 Number of Children Served by IIC, by Birth Cohort and Age at First Encounter for Children Born (July 1993 - December 2007)**

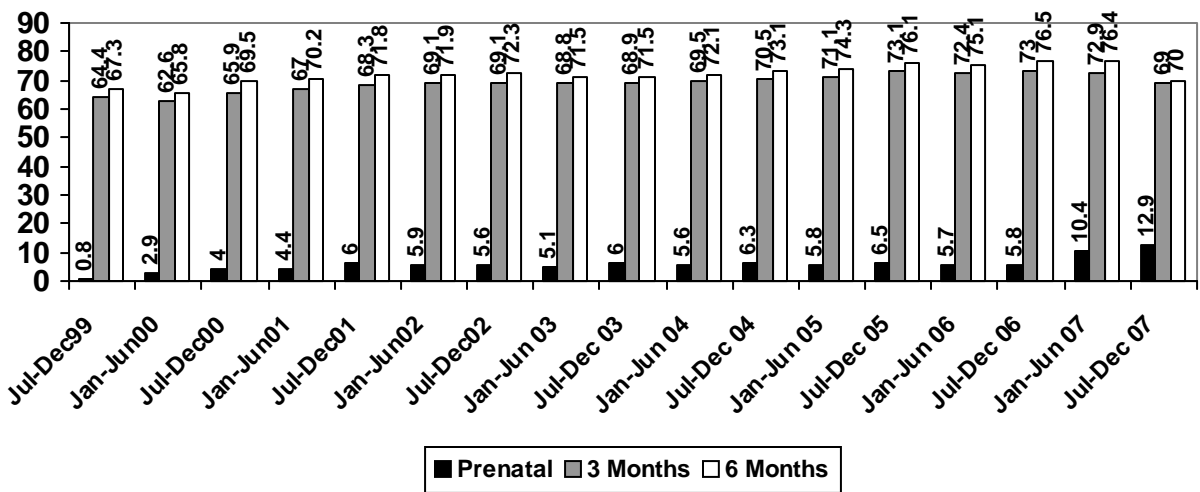
Birth Cohort												Total Cohort Served	% of Birth Cohort Served						
	prenatal	3 mo	6 mo	12 mo	18mo	24mo	30 mo	36 mo	48 mo	60 mo	72 mo								
Jul-Dec 93	<b>Pre-IIC Period</b>											2405	2405	20%					
Jan-Jun 94												3337	3337	28%					
Jul-Dec 94												2322	1262	3584	31%				
Jan-Jun 95												3221	582	3803	33%				
Jul-Dec 95												2388	1200	594	4182	37%			
Jan-Jun 96												3288	558	490	4336	39%			
Jul-Dec 96												2705	1205	599	416	4925	44%		
Jan-Jun 97												2688	777	643	494	348	4950	46%	
Jul-Dec 97												2896	850	319	621	446	294	5426	49%
Jan-Jun 98												2928	820	388	330	443	339	230	5478
Jul-Dec 98	3277	798	308	320	265	357	267	213	5805	54%									
Jan-Jun 99	1463	2062	696	260	281	261	224	284	233	182	5946	56%							
Jul-Dec 99	73	5846	271	286	278	212	185	142	233	198	139	7863	75%						
Jan-Jun 00	279	5664	304	315	253	171	189	159	229	203	151	7917	73%						
Jul-Dec 00	380	5818	336	291	236	174	140	157	205	185	169	8091	75%						
Jan-Jun 01	406	5719	289	297	213	155	173	136	202	163	135	7888	75%						
Jul-Dec 01	547	5637	312	279	204	167	161	128	187	158	134	7914	76%						
Jan-Jun 02	502	5410	238	258	190	180	143	114	187	146	114	7482	78%						
Jul-Dec 02	492	5602	278	260	159	169	165	104	199	156	56	7640	77%						
Jan-Jun 03	435	5396	229	208	171	123	159	125	167	121		7134	77%						
Jul-Dec 03	522	5523	227	196	185	154	179	109	173	49		7317	76%						
Jan-Jun 04	473	5436	215	233	184	181	135	107	142			7106	78%						
Jul-Dec 04	531	5401	220	246	187	163	180	127	54			7109	79%						
Jan-Jun 05	475	5301	255	217	161	192	154	74				6829	80%						
Jul-Dec 05	532	5470	249	249	162	184	92					6938	81%						
Jan-Jun 06	475	5523	225	221	175	103						6722	79%						
Jul-Dec 06	487	5642	293	268	93							6783	79%						
Jan-Jun 07	845	5072	285	171								6373	79%						
Jul-Dec 07	1079	4668	91									5838	70%						
<b>Total</b>	8533	94591	6379	7968	6837	6633	6562	6102	11207	11058	11251	177121							

Note: Percent of birth cohort figures were calculated by dividing the number of children served by the estimated birth cohort size adjusted for in-migration.

The timing of the launch of IIC results in children having varying lengths of exposure to its programs depending on when they were born. For example, the second most recent birth cohort (Jan-June 2007) has only been followed through December 2007. By that time, the children born in January had almost reached their first birthday, but the children born in June had only attained 6 months of age. Not all children in the table have been observed for a full 6 years, so the percentage of the birth cohorts served is accurate only for the possible window of exposure to IIC. Indeed, as time goes by additional children in this birth cohort will come into contact with

IIC services. Even though recent cohorts have had a briefer time in which to experience IIC, it can be seen that IIC is reaching a growing percentage of subsequent birth cohorts. Thus, a longer period of follow-up with these recent birth cohorts is likely to show an even higher coverage rate as the infants mature.

Another important dimension of a successful early childhood program is that it reaches children as early in life as possible so that health care, parenting and child care needs can be met from the start. **Figure 3.1** focuses on children born since the inception of IIC and examines their IIC contact prenatally and during the first 6 months of life. Indeed, as the figure shows, infants are being reached earlier in life. The percent of newborns with an IIC contact prior to 3 months of age increased from 64.4% in July-December 1999 to 73% by January-June 2007. Three and six month data are incomplete for the July-December 2007 cohort but, despite this, IIC had already reached over two-thirds the children by these age demarcations. In addition, the percent of children reached prior to birth has increased from under 1% (73 children) in July-December 1999 to 13% (1,079 children) in more recent cohorts. (The marked increase in 2007 reflects the addition of 2007 data on prenatal home visiting from the Cleveland MomsFirst program.) Thus, not only has total coverage risen with each birth cohort, but IIC programs are now reaching more children in those crucial early stages of life.



Note: For the July-December 2007 cohort, follow-up data are incomplete for children not yet reaching the 3 or 6 months of age by December 31, 2007. Birth cohorts are Unadjusted for in-migration.

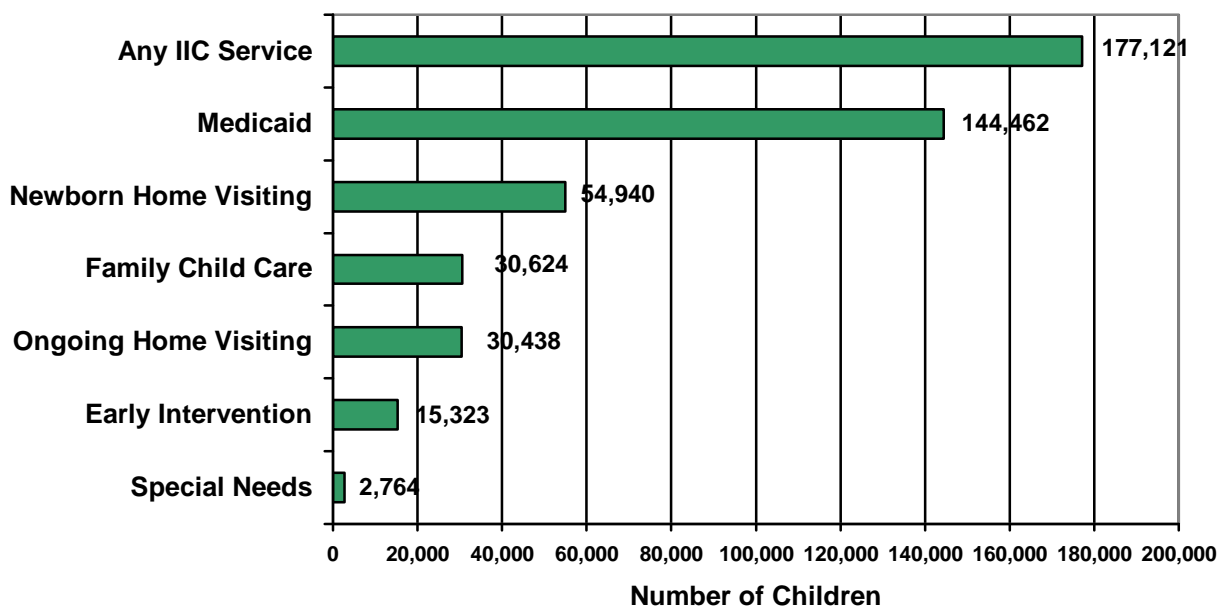
**Figure 3.1 IIC Contact with Young Children: Cumulative Percent of Recent Birth Cohorts Reached Prenatally and by 3 and 6 Months of Age**

### Cross Program Involvement

Although IIC is universal in its offering of services that could be used by any family with young children, each of its component programs was intended to meet specific needs of the early childhood population. A relatively small group of families may need to use several of the services that IIC has to offer, while others may benefit from only one IIC component. If IIC is

working effectively as a system, families served by one component will find it easy to access other services when and if they need them. At the same time, the most vulnerable families will be able to avail themselves of all that IIC has to offer.

**Figure 3.2** illustrates the fact that some IIC services are highly specialized while others are directed toward a large proportion of the early childhood population. The figure displays the use of IIC services by all children who were under 6 years of age between July 1999 and December 2007 (n=177,121). Children who received more than one service are counted multiple times but the count in each service category is unduplicated. Medicaid, through its expanded eligibility and outreach, is the service used by the largest proportion of young children. Newborn home visiting, which targets first time and teen parents, is the second largest program in terms of children reached. Ongoing home visiting, an intensive home visiting program, reaches a smaller group of families as intended. The Family Child Care Homes (FCCH) component of IIC has reached a large number of children through the numerous providers certified under IIC. The Early Intervention (EI) services have reached a substantial number of children identified as having developmental delays and other conditions requiring specific assistance.<sup>31</sup>

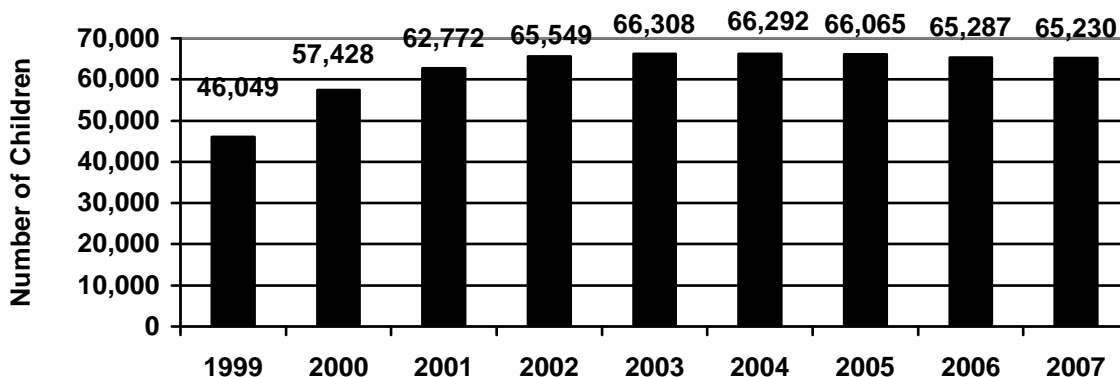


**Figure 3.2 IIC Services Received: Cumulative Number of Children Under Age 6 Served by IIC Programs (July 1999-December 2007)**

In regard to the numbers of children reached by the programs on an annual basis, **Figure 3.3** reports a count of children served by all IIC services. The figure shows growth over the implementation of IIC with over 65,000 children being served in each of the last five years. Note that these figures include children in each year they were served, so it is inappropriate to sum

<sup>31</sup> Children receiving special needs child care services through IIC are under-represented in Figure 3.2 because data from Phase I were incomplete. Across the first 8 years of IIC, 3,926 children were identified as receiving services through the special needs child care component and, of these, individual-level data are available on 2,764 children (70%).

counts across years.



Note: Data for 1999 are for half-year (July to December) and other years are for full calendar year.

**Figure 3.3 IIC Services Received: Number of Children Under Age 6 Served, by Year of Service (July 1999-December 2007)**

Another important aspect of IIC is that it is not a single program but rather a set of programs designed to offer a variety of health and development services to parents and young children in the County. The services can be complementary to one another for those children with multiple needs but families whose needs are specific can also use them singly. The program developers expected some degree of intersection among IIC components and anticipated that families involved in one component might gain information that would enable them to access another component if necessary.

Figures 3.4 and 3.5 summarize data on IIC program use by all children under age six and children under age one. Both figures represent the trend in the annual proportion of children served by each program who also received one or more of IIC's other services.

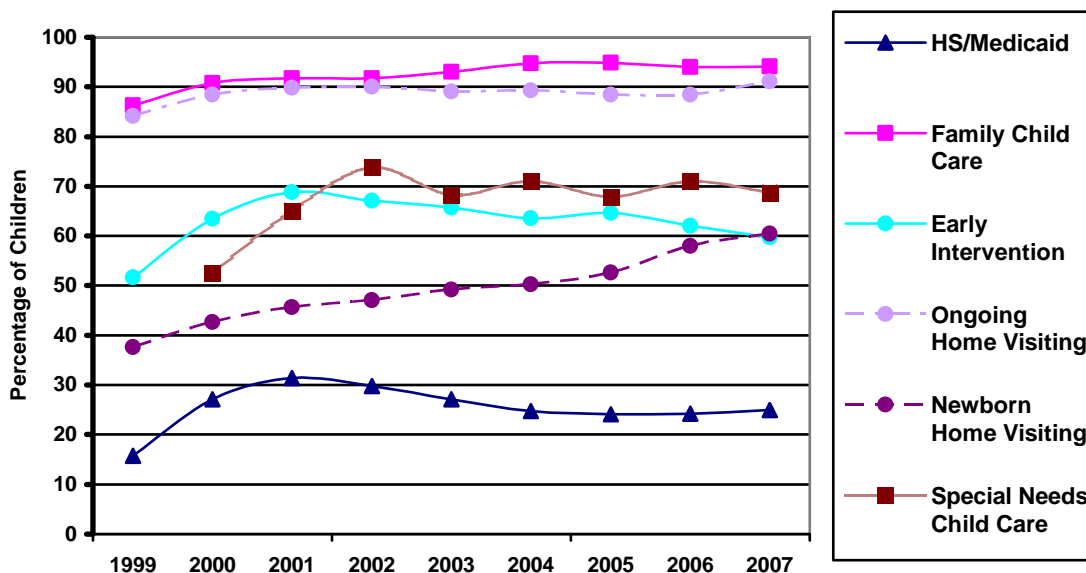
Children under age six:

As demonstrated in **Figure 3.4**, many children under age six receive more than one IIC service, and this multiple program usage varies substantially by IIC component. The populations differ both in terms of the absolute/average level of multiple program use during the period and in regard to the observable trends over time. For example, of all children enrolled in Healthy Start/Medicaid approximately 25% received some other IIC service, compared to over 90% of children in family child care.<sup>32</sup> Child recipients of the other programs show intermediate levels of multiple program usage (from least to most) – new born home visiting (40-60%), Early Intervention (60-70%), and ongoing home visiting (~90%).

Beyond these average levels of multiple program use, most of the programs show discernible patterns of multiple program usage among the children served over time. For example, among children on Medicaid the proportion using other IIC services increased from 16% in 1999 to 31% in 2001 and then down slightly to 25% in 2007. Among children in Early Intervention the proportion increased from 52% in 1999 to 60% in 2007 (after peaking at 69% in

<sup>32</sup> Note that the children using family child care are identified by the family's use of a child care voucher for the care and excludes any children whose parent pays for care privately.

2001). Among children receiving ongoing home visiting the proportion increased from 84% in 1999 to 91% in 2007. Among children served through newborn home visiting the proportion increased from 38% in 1999 to 61% in 2007. This trend is particularly important to the extent that the newborn home visit is used as a gateway to other IIC services – clearly the level of connection is increasing over time. Among children served through family child care, the proportion of multiple program users remained high (over 90%) across the full period.



Note: The sample sizes upon which the proportions are calculated vary substantially. The average annual numbers of children served are as follows: HS/Medicaid (58,374), family child care (8,182), early intervention (2,755), ongoing home visiting (7,308), Welcome Home (6,461), and special needs child care (480). Service years 1999 and 2007 include only the last six months or first six months of the year, respectively. Special needs child care began in January 2000.

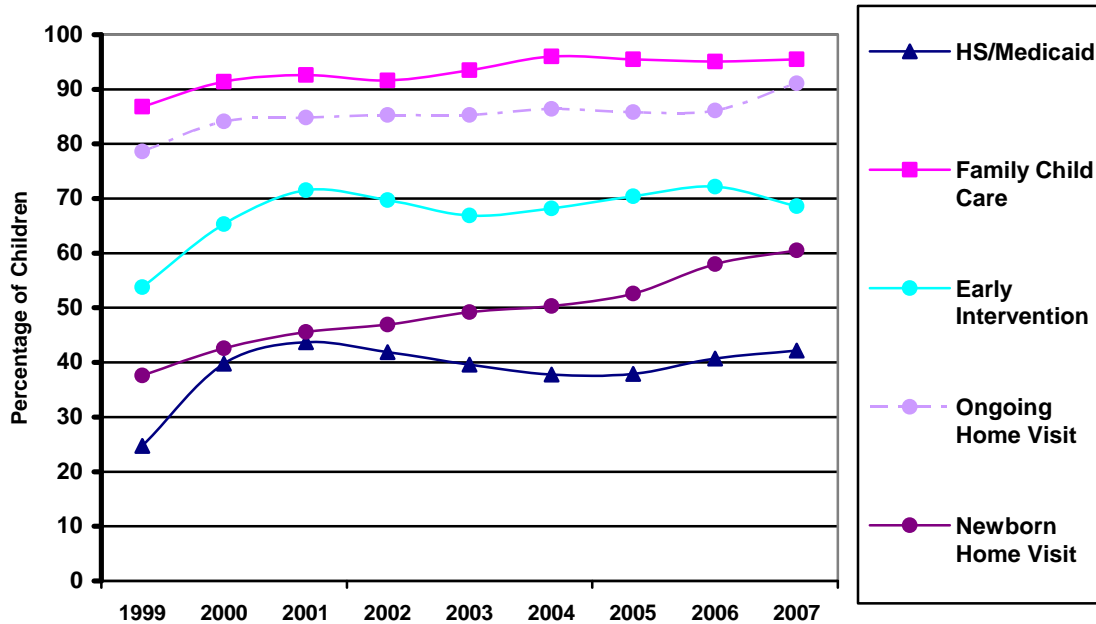
**Figure 3.4 IIC Services Received: Percentage of Children Under 6 Served by IIC Programs by Year Who Received More Than One IIC Service**

Children under age one:

As demonstrated in **Figure 3.5**, children under age one exhibit a pattern of multiple program usage within IIC similar to the broader child population under age six. The proportions for special needs child care are suppressed due to very low sample size (20 per year). Many infants receive more than one IIC service, and this multiple program usage varies substantially by IIC component. In terms of the absolute/average level of multiple program use the patterns are comparable to the broader population. Child recipients of the programs show varying average levels of multiple program usage (from least to most) - Healthy Start/Medicaid (~40%), newborn home visiting (50-60%), Early Intervention (~70%), ongoing home visiting (~85%), and family child care (~95%). One distinction here is that infants enrolled in Medicaid show much higher multiple program usage within IIC (40%), compared to the broader under six population (25%), perhaps reflecting the early emphasis of IIC programs, especially newborn home visiting.

Similarly, most of the programs show patterns of increased multiple program usage among the infants served over time. For example, among infants on Medicaid, the proportion using other IIC services increased from 25% in 1999 to 42% in 2007 (after a peak of 44% in 2001). Among infants in Early Intervention, the proportion increased from 54% in 1999 to 69%

in 2007. Among infants in ongoing home visiting, the proportion increased from 78% in 1999 to 91% in 2007. Among infants served through newborn home visiting, the proportion increased from 37% in 1999 to 60% in 2007. Among infants served through family child care, the proportion of multiple program users remained high (>90%) across the full period.



Note: The sample sizes upon which the proportions are calculated vary substantially. The average annual numbers of children served are as follows: HS/Medicaid (16,655), family child care (1,893), early intervention (1,125), ongoing home visiting (4,002), and Welcome Home (6,453). Service years 1999 and 2007 include only the last six months or first six months of the year, respectively.

**Figure 3.5 IIC Services Received: Percentage of Children Under One Served by IIC Programs by Year Who Received More Than One IIC Service**

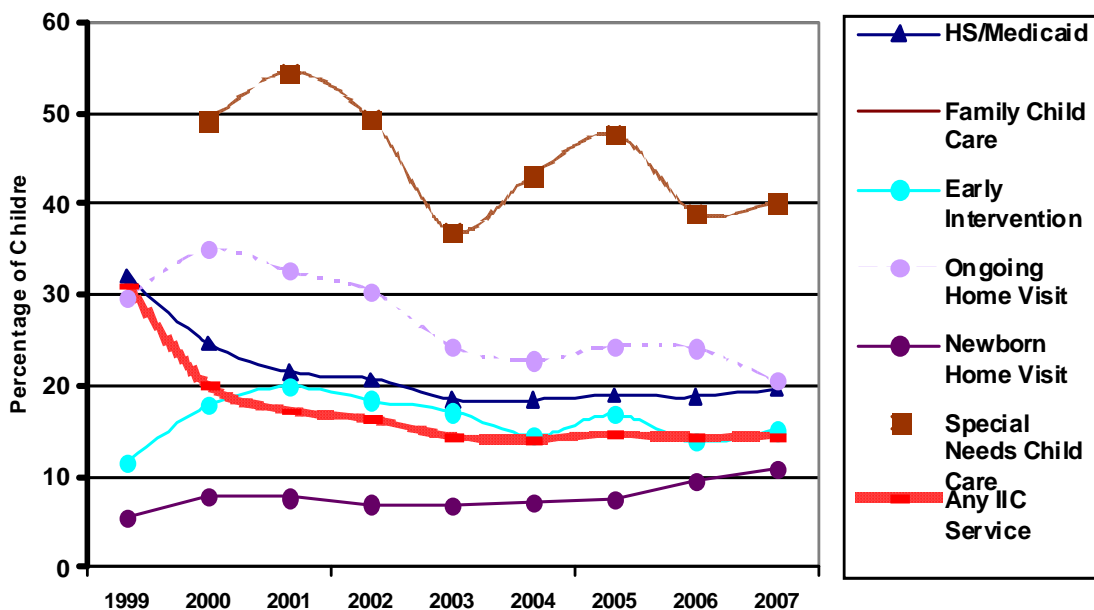
Collectively, these data show marked levels of multiple program usage within IIC and most patterns reflect increased usage over time. These results likely reflect in part enhanced interaction and communication between the programs of IIC over its first 7 years of implementation. Given the expressed goal of IIC to improve accessibility to services for all families, regardless of their entry point to the system, these trends are encouraging. However, it should be noted that these data are also influenced by the changing needs of the underlying population of children and families, along with changes in program policies and practices. The fact that multiple program usage declined slightly among children on Medicaid and children in Early Intervention over the 2002-2004 period provides evidence that these trends may be sensitive to a wide array of programmatic and contextual factors (e.g., changes in income eligibility standards for Medicaid and child care vouchers).

### Other Public Systems and IIC

The services that have been incorporated into IIC interface with a variety of other public programs that provide additional supports to families with young children. In specific, it is envisioned that for some families, IIC could help them to access and use these public services more effectively. The level of cross-system participation between IIC recipients and other public systems was determined by looking at the 6-month period after a child entered any IIC service to

examine whether there was a record of service with one of four other public programs. The analysis was restricted to children born July 1, 1999 through June 30, 2007. The results appear in **Figures 3.6 a-d** and each figure presents data for one public system. Note that three of the public programs, Ohio Works First, Food Stamps, and the Child Care Vouchers program (for centers and homes combined) are targeted to families with income below or near poverty.<sup>33</sup> For example, in 2007 families with income below 185% of the federal poverty line could become eligible for child care vouchers.<sup>34</sup>

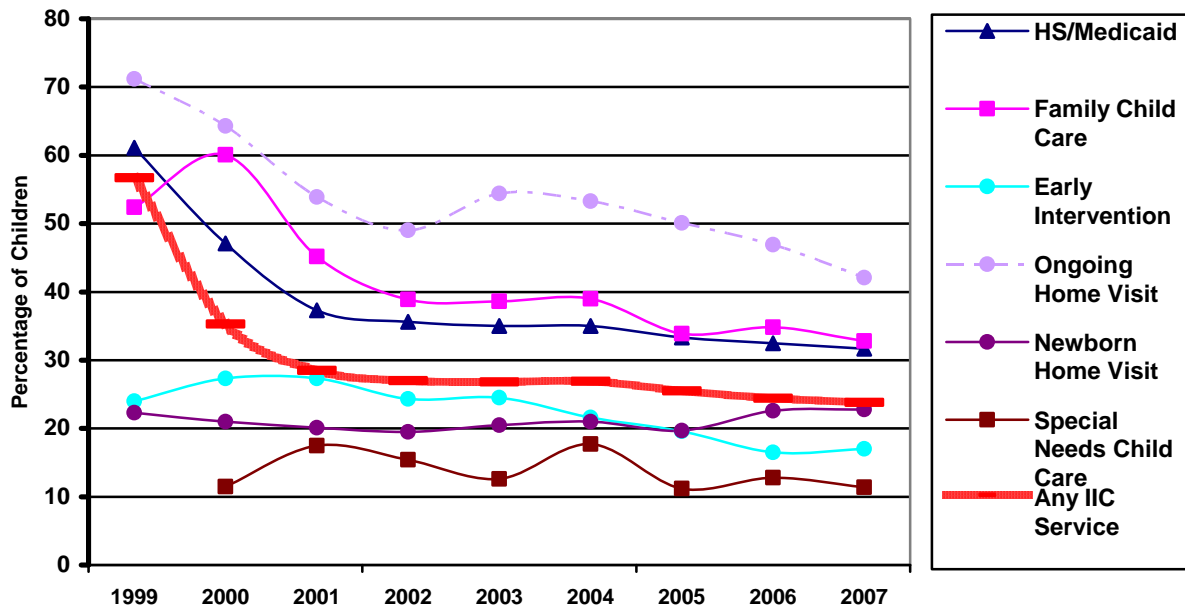
Newborn home visiting, Early Intervention, and Special Needs Child Care are IIC programs that have the least cross-system participation with the means-tested public services, in part because they are offered to families regardless of income. Healthy Start/Medicaid, ongoing home visiting, and Family Child Care Homes have the greatest cross-system usage with the means-tested public programs.<sup>35</sup> Healthy Start targets low-income families. Ongoing home visiting is targeted to families that need intensive support during the first 3 years of their infants' lives and low income is often a significant stressor for young families. Also, OWF families with children under three were routinely referred to ongoing home visiting beginning in 2001.



Note: Service years 1999 and 2007 include only the last six months or first six months of the year, respectively. For prenatal home visits, substituted birthdate for the initial service date.

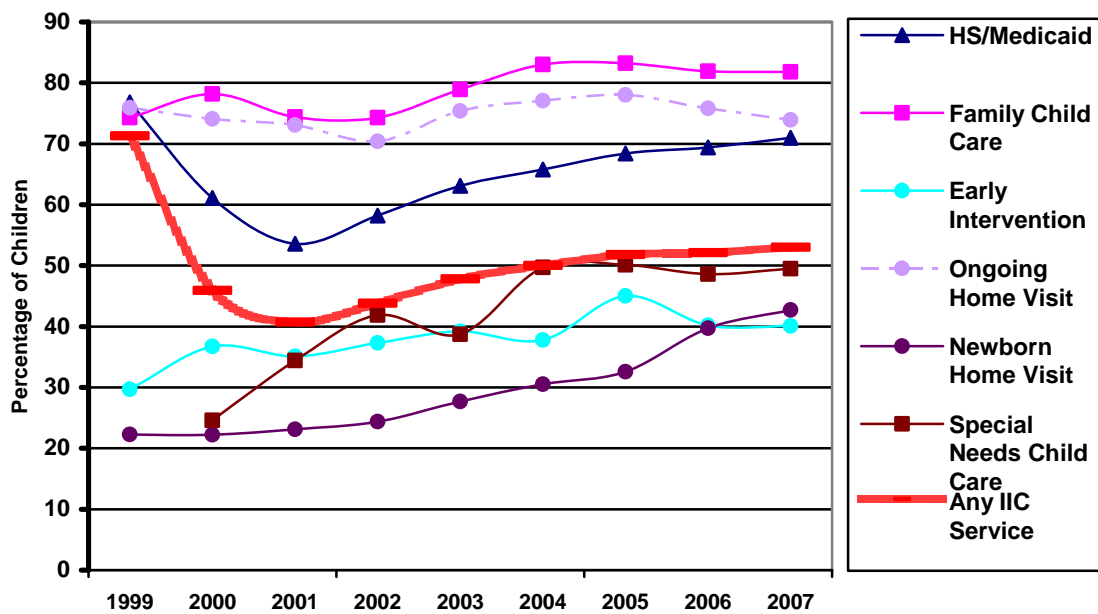
**Figure 3.6a Child Care Vouchers: Percentage of Children Served by IIC Programs by Year of First Service in the Program, Who Received Child Care Vouchers Within 6 months of initial Service Date.**

<sup>33</sup> For reference, in 2007 (the latest period covered in these data) the federal poverty threshold for a family of four was \$21,100.  
<sup>34</sup> Eligibility criteria for child care vouchers was changed in 2009 so that initial eligibility was set to 150% and ongoing eligibility to 200% of federal poverty line.  
<sup>35</sup> Part of the overlap between child care vouchers and FCCH is an artifact of the way FCCH children are identified for this analysis (through voucher data). If private pay children are served in any of the FCCH homes, they are not identified in a database and cannot be included in this analysis.



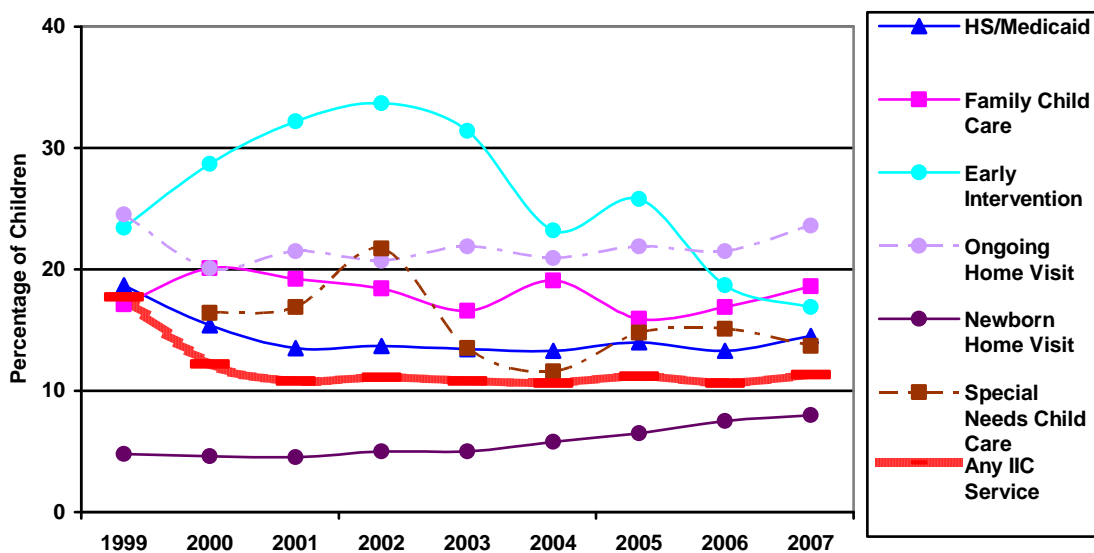
Note: Service years 1999 and 2007 include only the last six months or first six months of the year, respectively. For prenatal home visits, substituted birthdate for the initial service date.

**Figure 3.6b Cash Welfare (OWF): Percentage of Children Served by IIC Programs by Year of First Service in the Program, Who Received Cash Welfare Within 6 months of Initial Service Date.**



Note: Service years 1999 and 2007 include only the last six months or first six months of the year, respectively. For prenatal home visits, substituted birthdate for the initial service date.

**Figure 3.6c Food Stamps: Percentage of Children Served by IIC Programs by Year of First Service in the Program, Who Received Food Stamps Within 6 months of Initial Service Date.**



Note: Service years 1999 and 2007 include only the last six months or first six months of the year, respectively. For prenatal home visits, substituted birthdate for the initial service date.

**Figure 3.6d Child Welfare (DCFS): Percentage of Children Served by IIC Programs by Year of First Service, Who Were Known to DCFS Within 6 months of Initial IIC Service Date.**

Cross-system participation with the child welfare system through the County’s Department of Children and Family Services (DCFS) is another important aspect of the interface between IIC and public systems. Overall, the proportion of children served through IIC that were known to DCFS in the 6 months after initiating service in IIC remained fairly steady at approximately 10-12%. This should be as in part reflective of the economic status of many of the families served by IIC. There is a considerable literature that demonstrates the correlation between child maltreatment and poverty, particularly between the rate of extreme poverty and the frequency of substantiated incidents, as well as the occurrence of physical abuse and neglect.<sup>36</sup>

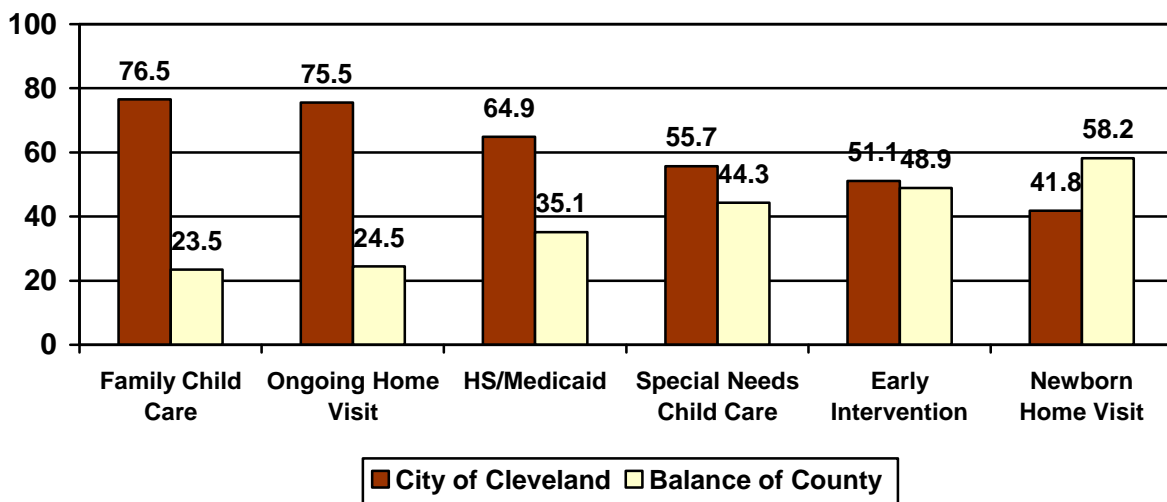
The lowest rates are among the newborn home visit population, although the rates have slowly increased from 4.8% to 8.0%. The highest rates are among children receiving Early Intervention services, potentially due to the County’s policy of referring all children in DCFS custody for developmental delays and other special needs. The rates of participation with DCFS for children in Early Intervention reached a high of 33.7% in 2002, and then declined to 16.9% in 2007. The rates are also elevated among the family child care (16-20%), special needs child care (12-16%), and ongoing home visiting (21-23%) populations. It should also be noted that in some

<sup>36</sup> Paxson, C., & Waldfogel, J. (2001). Welfare reforms, family resources, and child maltreatment. Chapter 2 in *The Incentives of Government Programs and the Well-Being of Families*, B. Meyer & G. Duncan (eds.). Chicago: Joint Center for Poverty Research.

instances the opening of a case by DCFS predated IIC involvement, while in other cases it followed the service event.

### The Geography of IIC

IIC reaches families throughout the County with its varied services and programs. Newborn home visiting is the most geographically dispersed of IIC programs. Across the strategies during the first 8.5 years, 57% of the children served were residents of the City of Cleveland and 43% were County residents outside Cleveland. The City/County service proportions vary across the programs of IIC. See **Figure 3.7**. Children served through Family Child Care, ongoing home visiting, and Medicaid are concentrated in the City of Cleveland, mirroring the concentration of poverty within the County and the targeting of these programs. Children served through special needs child care and Early Intervention services are more evenly split between the City and the suburban municipalities. Children served through newborn home visiting showed the greatest geographic spread and were more often residents of the County (58%) outside the City of Cleveland, slightly less than the percentage of County births that occur outside the City (63-65%).



**Figure 3.7 Percent of Children Served by IIC Programs by Residence (City of Cleveland versus Cuyahoga County outside Cleveland) 1999-2007**

### Conclusion

IIC continues to solidify its broad scale and extend its efforts to more effectively reach the County’s youngest children. Over 177,000 children from birth through their fifth year of age have been served since its inception, including 75% of the children born in the County between July 1999 and December 2007. In this sense, IIC is universal and continues to exhibit the potential to represent a functional system of support for young children and their families.

In most every definition of scope and reach (i.e., numbers served, trends over time, early initiation, geographic distribution, interconnection among programs), the data show that IIC has grown and improved over the 8.5 years since its inception. These system-level data, however, speak only to the broadest conception of service delivery. Attention to issues of program delivery and quality has characterized the management of IIC and its programs from early on, but

documentation of the impact of these efforts remains a challenge. In short, these data do not directly address the extent to which children and families that have been reached have tangibly benefited.

The ongoing task of refining the programs of Invest in Children as a universal system for promoting effective parents and families, healthy and safe children, and high quality early care and education continues. The evidence shows that IIC has built and maintained a strong foundation to reach nearly the entire early childhood population and to provide intensive support to children and families with the greatest needs. This existing combination of breadth and depth continues to provide the vehicle to effectively deliver the established set of IIC programs, as well as to extend and refine the strategies to address newly identified needs and challenges facing young children and their families.