1-15-2008

Taking it to Scale: Evaluating the Scope and Reach of a Community-Wide Initiative on Early Childhood

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Recommended Citation

Author's Accepted Manuscript

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www.elsevier.com/locate/evalprogplan

Cite this article as: Robert L. Fischer, Nina Lalich and Claudia Coulton, Taking it to scale: Evaluating the scope and reach of a community-wide initiative on early childhood, *Evaluation and Program Planning* (2008), doi:10.1016/j.evalprogplan.2007.12.002

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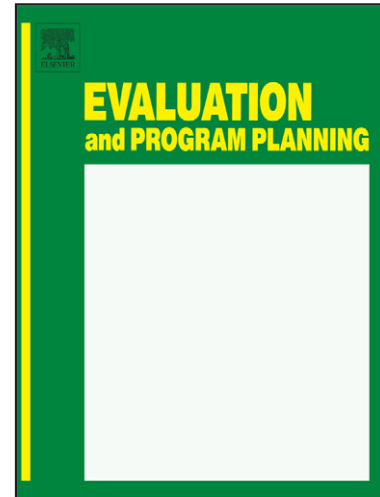Robert L. Fischer*, Nina Lalich, and Claudia Coulton

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1. Introduction

Community-wide efforts to impact social issues present an array of challenges for evaluators seeking to assess the effectiveness of such strategies. The magnitude of such community efforts and their often diffuse nature result in data availability and access issues, as well as the analytic difficulties of linking targeted programs to community-level indicators (Gambone, 1998; Hollister & Hill, 1995). In Cuyahoga County, Ohio, a community-wide initiative has been fielded to address the needs of young children (prenatal to age 6) and their families. Launched in 1999, the programming involves several interrelated strategies: home visiting for new mothers and the most at-risk families, certification of home-based child care providers and support for caring for children with special needs; and expansion of public health coverage for children in low-income families. Each program strategy involved a program-specific evaluation approach, but there was also a desire to examine the collective reach and interaction of the efforts. This study reports on the methods used to study the initiative's overall reach into its target population and the findings such a study can generate.

In the last two decades there has been a dramatic growth in interest in research on community initiatives and a parallel increase in efforts to improve the methods associated with such studies (Connell, Kubisch, Schorr, & Weiss, 1995; Fulbright-Anderson, Kubisch, & Connell, 1998). The movement to engage in community change initiatives, community-wide initiatives, and the like, draws its theoretical support from work suggesting that narrowly circumscribed efforts often fail because they are not potent enough or they ignore key contextual

factors in the community (Auspos & Kubisch, 2004). By broadening the programmatic approach and expanding the range of community stakeholders involved, the efforts seek to increase the likelihood of program success and sustainability.

In specific metropolitan areas, the desire for more community and neighborhood-level data has been addressed through the creation of local data clearinghouses such as those sponsored by the National Neighborhood Indicators Project (NNIP), which was launched in 1988 (Sawicki & Flynn, 1996). The original seven NNIP pilot sites subsequently expanded to include 28 sites that offer varying depths of data across eight substantive domains - vital statistics, housing, school, public assistance, crime, health services, economy, and asset/deficit inventory (Howell, Pettit, Ormond, & Kingsley, 2003). These sites provide continually updated data sets that can be brought to bear on a range of public and private planning, development, and evaluation decisions and needs, such as in the areas of public health and welfare, municipal planning, economic development, and community revitalization. In the present study, access to a data clearinghouse of this type proved invaluable to the conduct of the research (http://neocando.case.edu).

A key purpose of community-level indicator data is to monitor community change, usually surrounding the implementation of some wide-scale community initiatives. While the prospect of using such data in this way is considerable, the challenges in regard to measurement and interpretation are also noteworthy (Coulton & Hollister, 1998; Gambone, 1998; Hollister & Hill, 1995). The literature now contains a smattering of examples of evaluation efforts that have used community indicators to varying degrees, principally in the areas of public health and wellness (Conner & Tanjasiri, 1999; Kegler, Twiss, & Look, 2000), and child and family services (Barton, Powers, Morris, & Harrison, 2001; Galano, Credle, Perry, Berg, Huntington, &

Stief, 2001). Collectively, these examples show the potential usefulness of indicator data for evaluating community initiatives, along with the continuing challenges of securing and interpreting the data.

The evaluation of community wide strategies requires access to data of various types. The assessment of scope and reach is particularly reliant on administrative data maintained by governmental and nonprofit entities. The challenges of working with large administrative data sets are well documented, and as such numerous strategies were employed to maximize their usability (DiLeonardi & Yuan, 2000; English, Brandford, & Coghlan, 2000; Iezzoni, 2003; Ray, 1997). Computerized individual records from IIC programs were matched to one another and to birth certificates and the resulting longitudinal files 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 process of matching records across administrative datasets for the purpose of evaluation has seen marked refinement in recent years but still faces a number of logistic and analytic challenges (Gomatam, Carter, Ariet, & Mitchell, 2002; Murphey, & Braner, 2000; Saunders & Heflinger, 2004). These span several domains, including maintaining access to records and data security, ensuring the reliability of initial matching procedure, and constantly improving methods for resolving data discrepancies and redundancies in the matching effort.

2. Background

Cuyahoga County's Invest in Children (IIC) initiative was forged by public and private stakeholders who were influenced by national, state, and local research, practice and policies

related to young children. IIC developed within the context of a national movement to focus on

and invest in the early development of young children. The organizational and decision making

structure of IIC was multi-layered and built on existing relationships within the community. The

developers selected programmatic elements that had been implemented in other communities and

were seen as appropriate to fill notable gaps in the existing system and maintain established

programs for serving young children and their families within Cuyahoga County. Finally, the

evaluation of program was designed to achieve the dual goals of providing useful information for

program improvement activities, as well as documenting the effects of the initiative.

2.1 The building of a community early childhood initiative

Early in 1999, the Cuyahoga Board of County Commissioners announced their

commitment to a new public/private partnership focused on early childhood. The initiative

involved securing approximately $40-million in funding for the first three years and brought

together more than 50 community service agencies, hospitals, private funders and departments of

County, State and Federal government. On July 1, 1999, the initiative was officially launched

and all program components were in place to serve infants born in 2000.

Targeting children from birth to age 6, and their parents, guardians and caregivers, the

initiative was centered on achieving three specific goals: (1) to promote effective parenting, (2)

to provide children access to health care; and (3) to assure the availability of quality child care.

To address these goals, the program encompasses five interrelated efforts: (1) Newborn Home

Visiting—a one-time home visit by a nurse provided to all first-time or teen mothers and their

newborns; (2) Ongoing Home Visiting—intensive home visits provided to families whose

children (up to age 3) are identified as facing developmental challenges due to family and

environmental characteristics; (3) expansion and quality enhancement of certified home-based

child care; (4) training of child care providers to better serve children with special needs; and (5)

outreach and expansion of government-subsidized health insurance coverage for children of low-

income families through enrollment in Healthy Start and other Medicaid programs. Although the

initiative comprised multiple funders, agencies and programs, its vision was singular—a system

that fosters and supports effective parents, healthy children and high quality early care and

education for all.

2.2 The distinguishing features of the initiative

IIC is a community-wide undertaking, distinguished by a number of key characteristics.

These aspects set IIC apart from other early child-focused efforts that have emerged during the

same period around the country. These characteristics include five key dimensions: (1) The

extent of the public/private partnership. Many efforts have merged public and private funds but

no other example exhibited a funding partnership that included numerous private sector funders

and agencies, and County government. Similarly, the operational structure of IIC represents an

integrated service delivery approach, involving public and private sector elements; (2) The

simultaneous use of universal and targeted services across multiple program domains. Most

other efforts focusing on newborns and their parents tried to implement either home visitation

efforts or center-based reform. Few other efforts have drawn together home visitation, child

care, and health care all within a single package in the way IIC has. This multi-sector approach,

drawing on models of prevention and intervention, successfully wove together a diverse set of

threads into a conceptually strong Initiative; (3) The commitment to evaluation. Most other

community-wide efforts have used administrative data to track changes or conducted

experimental pilot studies. Few have invested in meaningful, ongoing evaluation studies to assess implementation and outcomes for the purpose of making programmatic improvements at the scale IIC has; (4) The continuous adaptability of the County to changes in state and federal policy directives. During difficult economic and political times, IIC has demonstrated considerable flexibility in adapting the components of the initiative. These adaptations have included altering child care reimbursement rates, expansion of training programs, moving to establish quality assurance standards, dealing with management information systems challenges, and developing a pre-natal expansion of the home visiting component. Throughout the first three-year phase, the IIC leadership has faced and responded to the dilemmas inherent in implementing a complex initiative; and, (5) The governance structure. The developers of IIC sought to innovate by basing the operational structure of the initiative within County government, while also establishing input and oversight from private sector funders through the formation of the IIC Partnership Committee.

2.3 Evaluation and the IIC

The current examination of scope and reach is one element of a larger set of studies examining the IIC and its program elements. At the macro level there is the overall study of scope. In addition, there is also a study of child well-being for the 0-6 population that focuses on a range of social and health status indicators being tracked at the county level over time (Coulton, Fischer, Hardy, & Lalich, 2006). The well-being study aims to track the context for delivering services to young children in the county and makes it possible to observe changes in community-level indicators that are theoretically linked to the work of IIC (e.g., child abuse and neglect, school readiness). Further, at the program level, there are ongoing studies of the

delivery and effectiveness of the individual strategies. Such studies have been undertaken in the core service areas of home visiting, family child care, special needs child care, Medicaid outreach, and others are currently in process. These program evaluations use administrative and participant data to describe how the strategies have been implemented over time and what the initial outcomes of service have been. Taken together, the system-level studies and the program-level evaluations provide a rich view of how the overall effort has been undertaken and what it has meant for the target populations and community.

3. Methodology

This study seeks to assess the scope and reach of Invest in Children (IIC) programming by tracking birth cohorts of children to determine the degree to which they were engaged in IIC service components. 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 2004. This window coincides with the start of IIC in July 1999 and extends through December 2004, so that adequate follow-up periods for all cohorts could be ensured. The initiative defined as its target population all County residents from birth to age six. Much of the analyses organize the data by successive cohorts of children who were born during each 6-month period (half calendar years). The study also examines the extent to which families with children in the IIC population utilize other public services, as well as the geographic spread of program users. The present study builds on earlier analyses completed as part of this broader agenda of research (Coulton, Withers, Andrade, & Fischer, 2003; Fischer & Coulton, 2003).

3.1 Data Sources

Computerized individual records from IIC programs and public agencies served as the principal data sources for this study. Individual child records were matched using probabilistic matching techniques, which was necessary because these records did not contain a common, unique identifier. Procedures were modified from standard probabilistic matching techniques (Banks & Pandini, 2001). Once matched in this way, a sampling of electronic records was subjected to clerical review for the purposes of assessing accuracy. In addition, the full child registry file was periodically matched to itself to eliminate any redundancies in records.

All data collected for this study were governed by approved Institutional Review Board (IRB) protocols. The type of informed consent varied according to the data set and data provider. In many cases, individual guardians provided signed consent for access to records. In other cases, particularly involving governmental records, the need for signed informed consent was waived by the IRB. Instead, the agency providing the data approved the methodology and data handling procedures. All records were stored and processed on secure servers and could be accessed only by authorized personnel certified in human subject privacy protection. The data processing and storage methods complied with all governing regulations on the protection of confidential data.

The population for the present study was identified from a core set of administrative records. The construction of the sample frame begins with birth certificate records and then proceeds to each of the program-level administrative data sources.

3.1.1 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 2002,[1] to include all children who would have had the opportunity to be reached by an IIC service prior to their sixth birthday.

3.1.2 Data on use of Initiative services

Initiative (i.e., IIC) services are defined as (a) home visiting through the Newborn or Ongoing Home Visiting programs, (b) home-based child care at a home certified during IIC, (c) early intervention (EI) services, (d) enrollment in the Healthy Start/Medicaid program, and (e) services delivered through the special needs child care program. Each data source is discussed briefly:

***Home visiting*:** Records of participation in home visiting were extracted from a proprietary database maintained by the Help Me Grow Collaborative of Cuyahoga County. Children who were under 6 years of age between July 1999 and December 2004 and had at least one visit by Newborn or Ongoing Home Visiting recorded in the database were counted as participating in the program. The database provided information on all dates of service as well as termination of service.

Early intervention: Records of participation in the EI were extracted from a proprietary database maintained by the Help Me Grow Collaborative of Cuyahoga County. Children who were under 6 years of age between July 1999 and December 2004 and had completed an Individualized Family Service Plan (IFSP) through EI records in the database were counted as participating in the program.

Family child care: Children who received care in family child care homes that were involved in IIC quality enhancement services were identified through their use of County child care vouchers. The family child care homes in IIC were listed and matched to the voucher file prepared by the Ohio Department of Job and Family Services (ODJFS). Children who received at least one month of care in these family child care homes between July 1999 and December 2004 and were under 6 years of age were counted as participants. This method excludes an estimated 20% of children in the regulated family child care homes (i.e., Type B homes) in the County not using child care vouchers.

Medicaid enrollment: Monthly extracts of Medicaid eligibility records were obtained from the ODJFS Client Registry Information System-Expanded (CRIS-E) system. Children who were under 6 and had at least one month of coverage through Medicaid between July 1999 and December 2004 were counted as participating. The rationale for inclusion of this population is based on the IIC funding of enhancements to outreach and recertification approaches by County agency governing Medicaid (i.e., Cuyahoga Employment & Family Services).

Special needs child care: A proprietary database was obtained from the child care referral agency (Starting Point) and was used to identify children whose child care providers received technical assistance on their behalf or to which placement services were provided. Data include records of the dates of technical assistance as well referral services.

3.2 Building the Data Registry

The electronic records extracted from all component data sources were matched to create a single record per child. The data sources did not contain unique identifiers for individuals so probabilistic matching was performed. The birth certificate data served as the base for the

matching approach, 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 IIC Register, a cumulative data file of all children appearing in any data set, including children not born in Cuyahoga County. A data set for matching purposes was prepared for each of the data entities.

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, race, social security number, and Soundex variables for names (i.e., phonetic indexing of name by sound). Various blocking strategies were employed in which a successful match required congruity between data sets on specific variables (i.e., child's date of birth and the Soundex value of the child's first name). Two SAS macros were obtained from the Manitoba Centre for Health Policy [http://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.

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) random sampling of all of the matching records and subsequent clerical review of 10%. A master file (i.e., IIC Register) was created, with the unique identifiers for each of the data entities matched to each other and to an identifier that has been created for the purposes of the evaluation. All records were also geocoded so that they could be

analyzed spatially. The earliest known home address of the child was used for the purposes of geocoding.

3.3 Migration

Some analyses in this study required the calculation of a proportion of the birth cohort that received a specific service. The birth certificates provide one estimate of the size of the birth cohort at the outset, but as the birth cohort ages, migration begins to have an effect. In the analysis, the size of the birth cohort is adjusted upward for in-migration based on an estimate of the number of individuals born in that time period who would have moved in to Cuyahoga County. An in-migration estimate was computed based on child population estimates and projections from the U.S. Census and the Ohio Department of Development. The in-migration adjustment for one year is fairly trivial (i.e., approximately 1%) but this accumulates 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 receive services, even though their exposure is cut short. Since this report only covers 5.5 years of participation, the bias due to out-migration should be minimal.

4. Findings

The findings from the analysis fall into three areas - program reach/coverage, program usage interaction among participants, and the geography of services.

4.1 Population coverage

A key element of successful early childhood services is the notion that the population

should be reached as early in their lives as possible. **Figure 1** 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 2004 (N=131,342). The service figures

represent an unduplicated count of children within each bar, but individual children may be

counted multiple times across the service categories. For example, a child may be included once

under Medicaid and once in Newborn home visiting. Medicaid, through expanded eligibility and

outreach activities, 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 served. Ongoing home visiting, an intensive home visiting program, serves a smaller

group of families as intended. The family child care homes component of IIC provides services

to a large number of children through the numerous providers certified under IIC.[2] The Early

Intervention (EI) services have served a substantial number of children identified as having

developmental delays and other conditions requiring specific assistance.

Insert Figure 1 here

Although there is no way to know precisely how many children and families are actually

in need of IIC services, the assumption of the initiative developers was that it needed to achieve a

large scale so that any and all with a need could be served. Despite this approach, clearly some

programs are somewhat more universal in nature (e.g., newborn home visiting) while others are

targeted based on income eligibility (e.g., Medicaid) or child status (e.g., special needs child

care). Presently, no systematic data are available to estimate the size of the cohort of children

that are both eligible for and in need of services.

To focus this examination, the study first 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 an ever greater proportion of young children is enrolled in services at earlier ages, this would suggest positive movement. In order to examine the reach of IIC, **Table 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. The counts are organized by birth cohort and by the age at which the child was first served by an IIC program. In its first 5.5 years of operation, IIC reached over 131,000 children. An examination of the column labeled "percent of birth cohort" shows that the 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.

Insert Table 1 here

Based on their age children have experienced varying lengths of exposure to initiative programs. For example, the second most recent birth cohort (January-June 2004) has only been followed through December 2004. 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. This problem of right censoring occurs because not all children have been observed for a full six years. Indeed, as time goes by additional children in this birth cohort will come to have contact with IIC. 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 these infants mature.

Another important aspect of a successful early childhood program is that it reaches children early in life so that their needs for health care, effective parenting and quality child care can be met as early as possible. **Figure 2** reports on children born since the inception of IIC and examines their program contact prenatally through the first 6 months of life.

Insert Figure 2 here

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 61.9% in July-December 1999 to 67.3% by January-June 2004. In addition, the share of children reached prenatally increased from under 1% in July-December 1999 to 5-6% in more recent cohorts. Thus, not only has total coverage risen with each birth cohort but programs are now reaching more families in those crucial early months of life.

4.2 Cross-program usage

Although the overall initiative is "universal" in that it contains services that might be used by any and all families of young children, each of its component programs was intended to meet specific needs of the early childhood population. It was envisioned that a relatively small group of families may need to use certain categories of service, while others may benefit from only one program component. The services can be complementary to one another for those children with multiple needs but families whose requirements are limited can also use them

singly. Program developers expected some degree of intersection among components and anticipated that families involved in one component might gain information that would enable them to access another component if necessary. **Figure 3** presents data on the use of multiple IIC program components during the first year of life. The figure shows the trend in the annual proportion of children served by each program who also received one or more of IIC's other services during that year.

Insert Figure 3 here

For example, over the period of infants enrolled in Healthy Start/Medicaid approximately 30% received some other IIC service, compared to approximately 90% of children in family child care. Child recipients of the other programs show intermediate levels of multiple program usage (from least to most) – new born home visiting (~40%), Early Intervention (~65%), and ongoing home visiting (~80%). Similarly, most of the programs show patterns of increased multiple program usage among the infants served over time. Of particular note is the increase in the proportion of infants served through newborn home visiting, rising from 31.0% in 1999 to 47.1% in 2004. These increases simultaneously reflect the expanded interconnections among programs as well as potentially the increased need for services among the population.

4.3 The geography of services

A final dimension of the scope and reach is the geographic spread of services. The IIC reaches families throughout the County with its many and varied services and programs. One basic dichotomy is whether program recipients reside in the central city or in the suburbs. Across

the strategies during the first 5.5 years, 60% of the children served were residents of the City of Cleveland and 40% were county residents outside Cleveland. The city/county service proportions vary across the programs of the IIC, as shown in **Figure 4**. 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 (60%) outside the City of Cleveland, matching exactly the percentage of County births that occur outside the City.

Insert Figure 4 here

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5. Discussion

The present study has focused on measuring the breadth and depth of a community-wide initiative on early childhood. Based on the data available it is clear that the initiative has achieved a very large scale by most measures. However, these findings need to be understood in the relevant context and with due consideration of the applicable limitations.

5.1 Implications

The programs of the initiative are now reaching approximately 75% of the births in the County. Over 131,000 children from birth to age six have been served since its inception and

these children reside throughout the County, both within the City of Cleveland and in most all suburban areas. In this sense, IIC is universal and has the potential to represent a system of support for young children and their families. IIC has built a system that combines breadth and depth. As intended, the reach is both broad and focused. Most families avail themselves of only one IIC service but others, especially families in low-income neighborhoods, are involved with several components of IIC along with other public programs. This pattern of service is consistent with a model system that is universal but also intensive for challenged families and vulnerable children. Infants are being served earlier in life over time. For example, in the most recent birth cohort, 67% had contact with at least one IIC service before 3 months of age.

If the overall initiative is functioning effectively as a system, families served by one component will find it easy to access other services when and if they are needed. At the same time, the most vulnerable families will be able to avail themselves of all services that are appropriate and desired. Collectively, these data show marked levels of multiple program usage within the IIC and most patterns reflect increased usage over time. These results likely reflect in part enhanced interaction and communication between the programs of the initiative over its first 6 years of implementation. Given the expressed goal of the IIC to improve accessibility to services for all families, regardless of their entry point to the system ("no wrong door"), 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).

There is growing evidence of families engaging multiple IIC services over time. Of particular note is the steady increase of cross program use among recipients of the newborn home visit (from 31% to 47%). As a key gateway program for first-time and young parents, this trend shows enhanced linkages to other services. Families in every part of the County are touched by IIC. Newborn Home Visiting has the widest geographic spread with 60% of its participants residing in the suburbs. Children who receive multiple and intensive IIC services are concentrated in low-income neighborhoods within Cleveland where the need is great.

Also, as anticipated, there is a smaller group of families that are served by multiple components of IIC. Many of these families appear to be facing the economic and personal hardships of poverty. In this sense, IIC seems to be targeting high-risk children and families and has the potential to prevent negative developmental outcomes that are known to occur at high rates in the absence of intervention. Moreover, this pattern of multiple program usage by at-risk families is suggestive of a system that has become more accessible. However, it also points to the importance of these agencies and service providers building upon the work of one another to assure that families with complex needs can manage their multiple agency relationships and that duplication does not occur.

5.2 Challenges and limitations

The present study demonstrates a method for assessing the scope and reach of services of a large-scale community initiative. Despite the considerable value of the findings generated, there are several substantive issues that limit the work and its implications. First, the focus of the study is explicitly on program coverage. This means that the data speak only to the participation in service, not to the quality of services, nor the benefit of services. Though there are program-

level evaluations that address the value of these services, the present focus is simply on its magnitude and interaction. Second, the data sources for the study are solely administrative records maintained by public and private agencies. These data systems are often idiosyncratic and prone to errors of data entry and/or missing data; to the extent that these issues are serious, they could lead to miscounting or undercounting of service participation. Despite the most thorough methods for handling data difficulties, errors do creep in. In addition, data are limited to aspects of service for which records exist. For example, the counts of children in family child care are based on child care voucher data which do not reflect all families that utilize such regulated care. Third, the resources required to undertake and maintain the monitoring of the scope of a community-wide initiative are substantial. As such, the replicability of such an approach may be limited by the ability of other locales to secure the needed funding. One particularly important aspect of the present study was its integration with the work of an existing data clearinghouse that already had access to a number of core data streams and possessed the expertise in data handling and analysis.

5.3 Future directions

Having attained a scope in which the community initiative is touching the majority of young lives in the geographic area, it raises questions of what else can be achieved through this structure. Are there families that are currently outside its scope that have needs that have not yet been addressed by IIC? Are there additional types of information or programs that would benefit the families who up until now have received only a single visit or service? Can this very large group of families reached by IIC be mobilized as a constituency for early childhood or as advocates for more resources to support this age group?

The answers to these remaining questions will point to avenues for refining the overall strategy of Invest in Children as a comprehensive system for promoting healthy children, effective parents and quality early care and education. Yet it is already evident that IIC has built a foundation to reach nearly the entire early childhood population and to provide intensive support to children and families with the greatest needs. This combination of breadth along with depth is an accomplishment that should be articulated to the public to assure new parents that their community values very young children and the resources are available to assist them during this vital stage of development.

As this planning continues the need for ongoing tracking data is evident. Modifications to program approaches and intent will likely impact the scope and reach of the strategies as well as the cross-program usage. Monitoring of the impact over time will allow program funders and implementers to understand the policy context and how their decisions ultimately play out in program engagement by the target population.

Notes

1. Due to data release delays at the State level, birth certificate data for the years 2003 and 2004 were not available at the time of this report.

2. Note that the children using family child care are identified by the family's use of a child care voucher for the care and therefore excludes any children care was not subsidized in this way.

Acknowledgement

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Table 1 Number of Children Served by IIC Programs, by Birth Cohort and Age at First Encounter for Children Born July 1993 - December 2004

Birth Cohort	prenatal	3 mo	6 mo	12 mo	18mo	24mo	30 mo	36 mo	48 mo	60 mo	72 mo	Total Served	% of Birth Cohort Served
Jul-Dec 93											2317	2317	19%
Jan-Jun 94											3265	3265	28%
Jul-Dec 94										2228	1259	3487	30%
Jan-Jun 95										3144	566	3710	32%
Jul-Dec 95									2274	1226	596	4096	36%
Jan-Jun 96									3194	580	505	4279	38%
Jul-Dec 96								2601	1190	614	446	4851	43%
Jan-Jun 97							2564	803	642	521	360	4890	46%
Jul-Dec 97						2763	873	327	630	482	298	5373	48%
Jan-Jun 98					2817	832	405	323	482	351	248	5458	50%
Jul-Dec 98				3157	816	314	349	273	371	284	221	5785	53%
Jan-Jun 99		1291	2129	748	261	283	265	258	301	230	151	5917	57%
Jul-Dec 99	73	5613	424	319	292	218	202	166	228	211	55	7801	76%
Jan-Jun 00	279	5426	452	351	278	184	191	175	247	181		7764	75%
Jul-Dec 00	384	5529	558	341	228	203	150	153	214	64		7824	76%
Jan-Jun 01	408	5588	451	348	238	183	176	138	191			7721	79%
Jul-Dec 01	548	5525	471	360	242	185	170	132	72			7705	80%
Jan-Jun 02	504	5396	481	333	205	189	158	73				7339	82%
Jul-Dec 02	490	5669	471	303	200	160	96					7389	80%
Jan-Jun 03	429	5249	383	266	182	77						6586	75%
Jul-Dec 03	512	5404	365	233	120							6634	74%
Jan-Jun 04	466	5296	332	183								6277	73%
Jul-Dec 04	509	4237	128									4874	55%
Total	4602	60223	6645	6942	5879	5591	5599	5422	10036	10115	10288	131342	

Pre-IIC Period

Complete Data Not Yet Available

Note: Percent of birth cohort figures were calculated by dividing the number of children served by the estimated birth cohort size. Birth cohort sizes for 2003 and 2004 were approximated by using the 2002 birth cohort size.
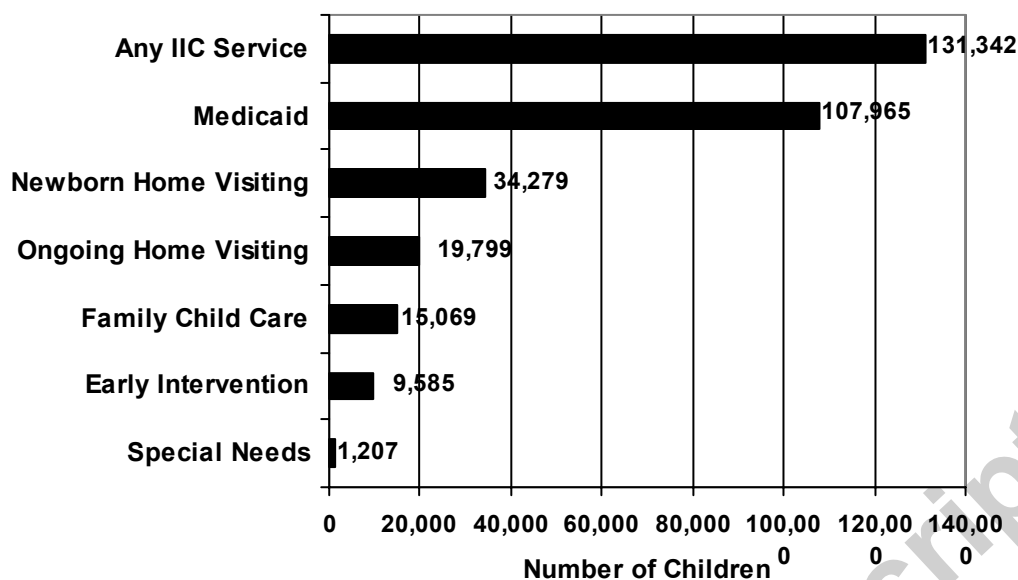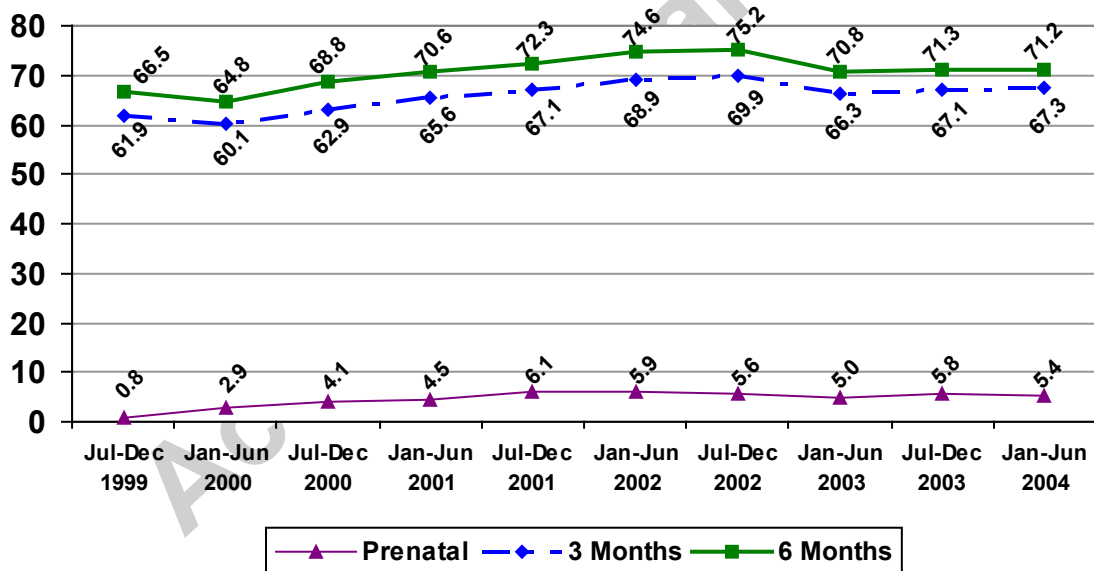
Figure 1 IIC Services Received: Cumulative Number of Children Under Age 6 Served by IIC Programs (July 1999-December 2004)

Note: For the July-December 2004 cohort, follow-up data incomplete for children not yet reaching 3 or 6 months of age by December 31, 2004.

Figure 2 IIC Contact with Young Children: Cumulative Percent of Recent Birth Cohorts Reached Prenatally and by 3 and 6 Months of Age
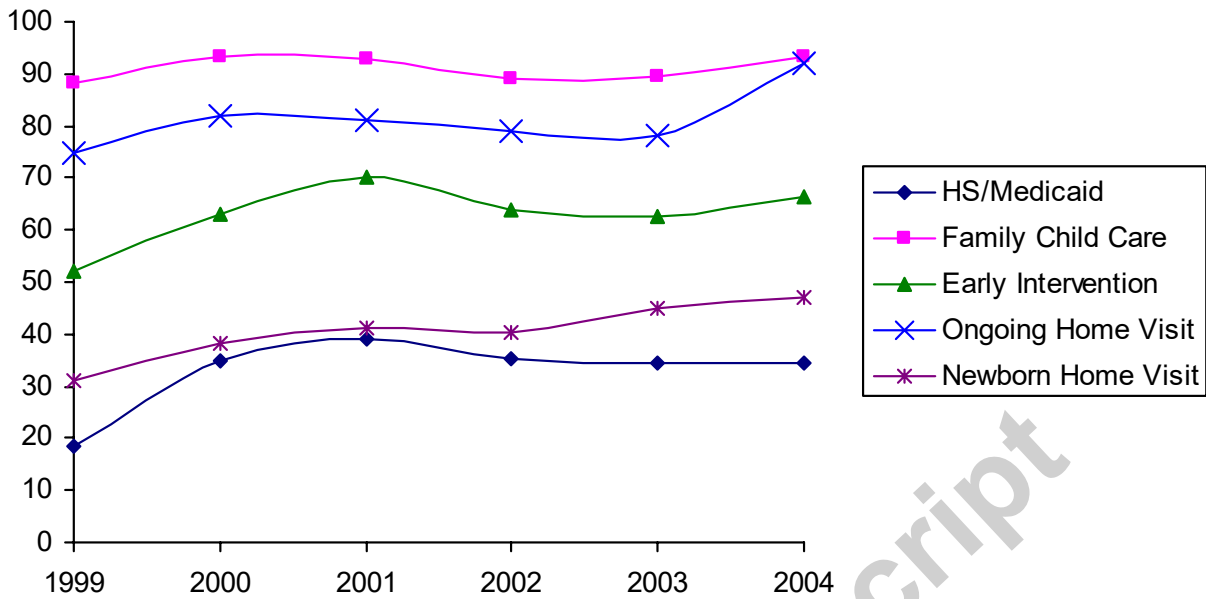
Note: The sample sizes upon which the proportions are calculated vary substantially. The average annual numbers of children served are as follows: HS/Medicaid (15,432), family child care (1,275), early intervention (1,089), ongoing home visiting (3,882), and newborn home visit (6,192). Service years 1999 and 2004 include only the first six months or last six months of the year, respectively.

Figure 3 IIC Services Received: Percentage of Children Under One Served by IIC Programs by Year Who Received More Than One IIC Service
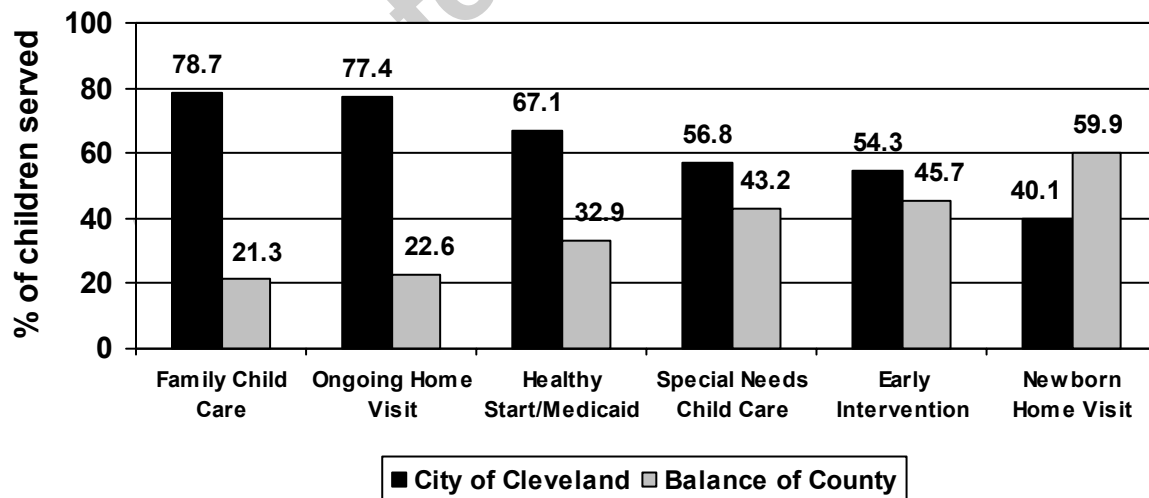

Figure 4 Percent of Children Served by IIC Programs by Residence (City of Cleveland versus Cuyahoga County outside Cleveland) 1999-2004

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