A light yellow map of the state of Illinois is positioned on the right side of the cover, set against a blue gradient background.

Maternal Infant and Early Childhood Home Visiting (MIECHV)

**3rd Annual Benchmark and
Outcome Technical Report
FY 2015**

March, 2016



**CENTER FOR PREVENTION
RESEARCH AND DEVELOPMENT**

**School of Social Work
University of Illinois**

Performance Task:

The evaluation of the Illinois MIECHV program is funded by the Health Resources and Services Administration to the Illinois Department of Human Services. MIECHV is managed through the Illinois Governor's Office of Early Childhood Development, and the evaluation contracted to the Center for Prevention Research and Development, School of Social Work at the University of Illinois, Urbana.

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I. Background and Overview

The 3rd Annual Illinois Maternal Infant and Early Childhood Home Visiting (MIECHV) Report was produced by the research and evaluation team at the Center for Prevention Research and Development (CPRD), School of Social Work, at the University of Illinois Urbana-Champaign (UIUC). As the external evaluator for the MIECHV initiative, CPRD has completed the third full year MIECHV program evaluation, as required by the federal Health Resources and Services Administration (HRSA) under the Affordable Care Act of 2010. Most recently, Illinois submitted MIECHV Year 4 (FY 2015) Performance Benchmark (PB) data in October 2015; this submission was approved by HRSA in December 2015.

This annual report incorporates an array of evaluation activities related to MIECHV implementation and outcomes, including the 33 PBs for both home visiting services as well as doula services (a briefer, intensive pregnancy support program for pregnant women and their families). CPRD prepares and analyzes the data associated with the PBs and other required data, which are then annually submitted to HRSA. Home visiting service providers are required to document and record data pertaining to the delivery of these services: screenings and assessments, types and number of services provided, and progress made toward established PBs and other goals. These local implementing agencies (LIAs) use the Visit Tracker database to collect and submit administrative, demographic, programmatic, and assessment data in accordance with federal requirements. CPRD supports five Field Data Collectors (FDCs) conducting in-home assessments in the six target communities.

MIECHV results presented in this report represent both quantitative and qualitative data that have been collected and analyzed, and that were submitted to HRSA in the FY 2015 report. These data also were the basis for several focused studies and sub-studies conducted and updated over the past three years. Evaluation report topics other than those based on benchmarks include: continuous quality improvement (CQI) activities, site visits, program completion, home visitor turnover, safety, job satisfaction, and survey results of MIECHV's Community Systems Development (CSD) activities.

The required HRSA performance benchmarks capture day-to-day home visiting and doula services, as well as more immediate and intermediate outcomes collected by CPRD's five field data collection specialists. The FDCs conduct in-

home assessments of the home visiting families as they enter one of Illinois' four program models, and track families at one- and two-year follow-up if they remain in the program. The data collected by the home visitors are entered into Visit Tracker, combined with the FDC outcome data, and provided to HRSA for the required annual benchmark report. This third Annual MIECHV Report integrates the performance benchmark results and other evaluation and CQI activities in order to provide a comprehensive account of MIECHV programs and activities.

HRSA requires that MIECHV programs and services be designed to provide evidence-based services to mothers and children who are at-risk for a range of adverse outcomes. Four essential strategies comprise Illinois' proposed approach to the implementation of MIECHV:

1. Expanding or enhancing one of four home visiting models, as well as doula services;
2. Ensuring that home visiting programs are effectively connected to the community-based organizations and services that are required to achieve performance benchmarks, including primary care providers;
3. Providing and participating in comprehensive CQI processes and procedures at the LIA, community, and state levels, in order to monitor and improve the quality and effectiveness of home visiting and ancillary services; and
4. Developing and strengthening a statewide system of evidence-based and innovative approaches to home visiting, as well as the state and local infrastructure necessary to support effective service delivery.

Adoption and implementation of these strategies includes the development and testing of a system of universal screening and coordinated intake, and the enhancement of an early childhood collaborative in each target community. A list of the Illinois communities, MIECHV home visiting providers, model types, and ancillary services are provided in **Figures 1** and **2** below:

Community	Agency	Home Visiting Service
Cicero	Children's Center of Cicero-Berwyn	Parents as Teachers
	Family Focus Nuestra Familia	Parents as Teachers
	Family Services and Mental Health	Coordinated Intake and Community Systems Development
Elgin	Elgin School District U-46	Parents as Teachers
	Family Focus DuPage	Healthy Families Illinois
	Kane County Health Department	Nurse-Family Partnership <i>(Discontinued after June 30, 2015)*</i> , Coordinated Intake and Community Systems Development
	Visiting Nurse Assn. Fox Valley	Healthy Families Illinois
Englewood	Children's Home + Aid Society	Coordinated Intake and Community Systems Development
	ChildServ	Parents as Teachers
	Family Focus Englewood	Healthy Families Illinois
	Henry Booth House	Healthy Families Illinois
	Women's Treatment Center	Parents as Teachers
Macon	Decatur Public School District 61 (Pershing)	Parents as Teachers
	Macon County Health Department	Healthy Families Illinois, Coordinated Intake and Community Systems Development
	Macon Resources	Parents as Teachers
Rockford	City of Rockford Human Services	Early Head Start
	Easter Seals Chicago	Healthy Families Illinois
	La Voz Latina	Healthy Families Illinois
	Rockford Public Schools 205	Parents as Teachers

Community	Agency	Home Visiting Service
	Winnebago County Health Dept.	Coordinated Intake and Community Systems Development
Vermilion	Center for Children's Services/Aunt Martha's	Parents as Teachers and Coordinated Intake
	Danville School District 118	Parents as Teachers
	East Central Illinois Community Action	Early Head Start and Community Systems Development

Figure 1. Illinois MIECHV Home Visiting Agencies by Community

Agency	Doula Service
Center for Children's Services/Aunt Martha's	Parents as Teachers
Chicago YMCA	Healthy Families Illinois
Child Abuse Council	Healthy Families Illinois
Family Focus Lawndale	Parents as Teachers
One Hope United	Healthy Families Illinois

Figure 2. Illinois MIECHV Doula Agencies

Illinois MIECHV Communities

Illinois MIECHV has 20 home visiting programs serving six disadvantaged communities, as well as five doula agencies (see **Figures 1 and 2** above and **Figure 3** below). The four evidence-based models used by these agencies are: Parents as Teachers (13 agencies), Healthy Families Illinois (10 agencies), Early Head Start (2 agencies), and Nurse-Family Partnership (NFP) (1 agency).* The NFP MIECHV contract was discontinued in July 2015.

Figure 3 below shows both the county locations of each MIECHV agency and the percent of children aged 5 years or younger living in poverty (<185% of the Federal Poverty Level) in 2013 (IECAM, 2013). The map's color gradient corresponds to four levels (quartiles) of child poverty, with darker shades indicating higher levels of child poverty. Agency locations indicate that MIECHV

serves areas with poorer families and children. It should also be noted that Illinois has numerous communities with pockets of family and child poverty that are often masked or harmonized by the more affluent counties in which they are imbedded. These pockets of poverty are often not evident when most state data is only available at the county level. For example, home visiting and doula services are located in Waukegan, Cicero, and Elgin—disadvantaged communities located in the affluent counties respectively of Lake, Cook, and Cook/Kane. Child poverty data was obtained from the [Illinois Early Childhood Asset Map \(IECAM\)](#) website, which is maintained by the Early Childhood and Parenting Collaborative at the University of Illinois.

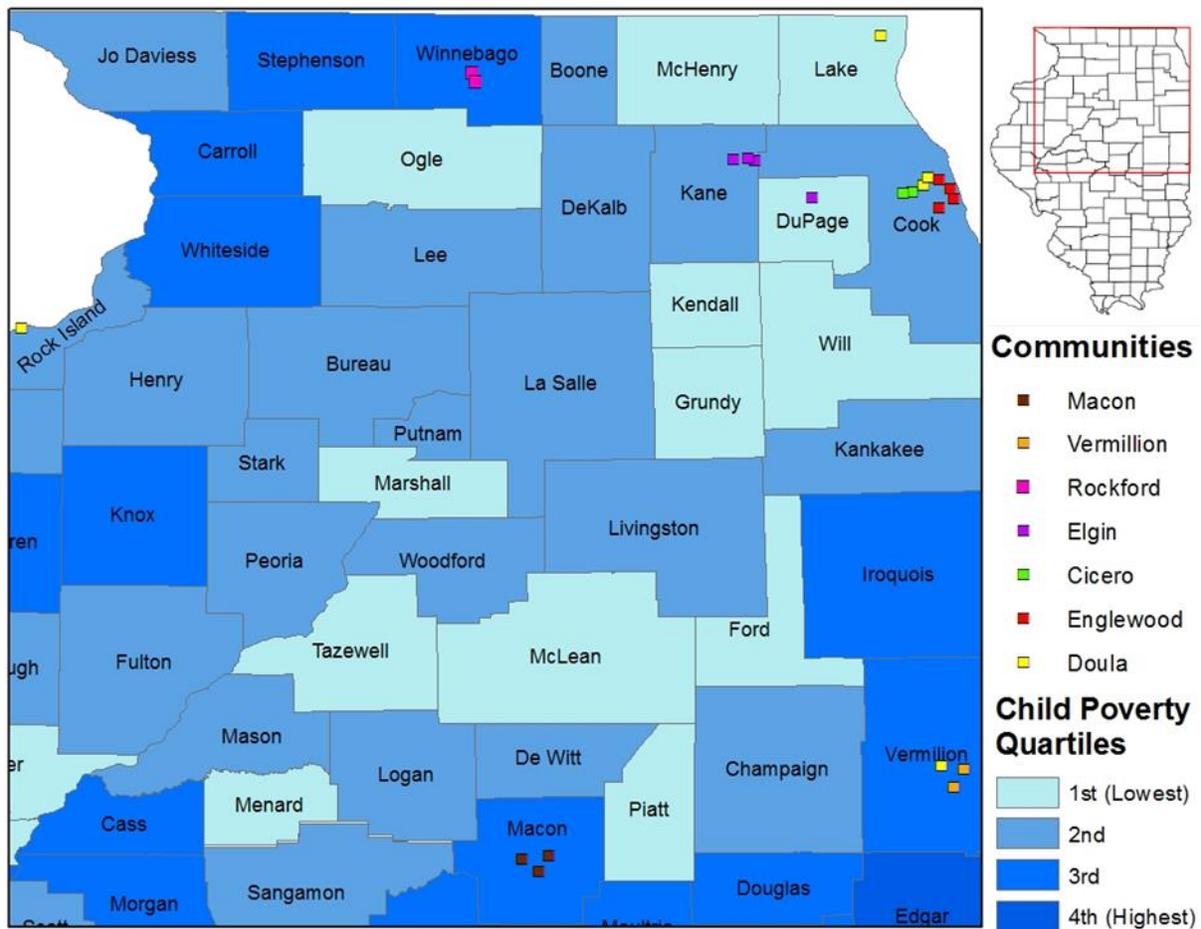
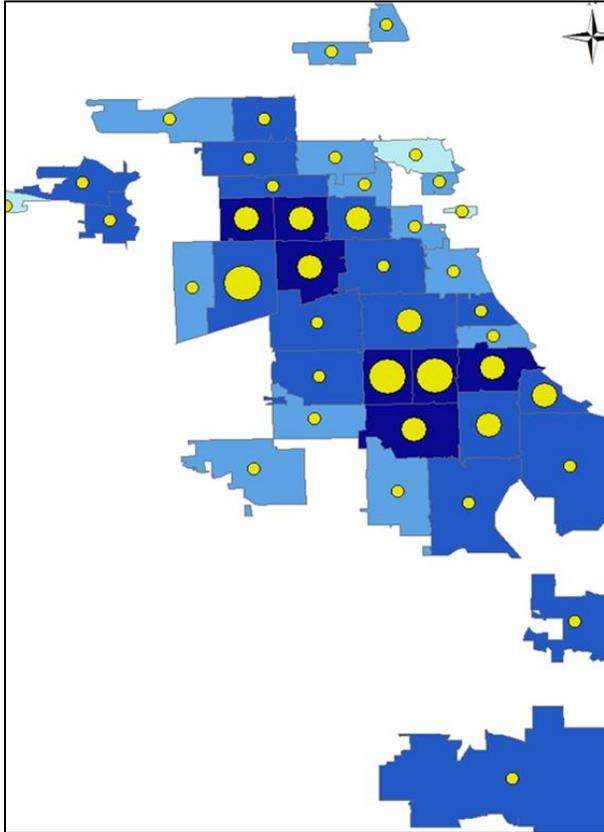


Figure 3. MIECHV Agency Locations in MIECHV Communities by County Poverty Level

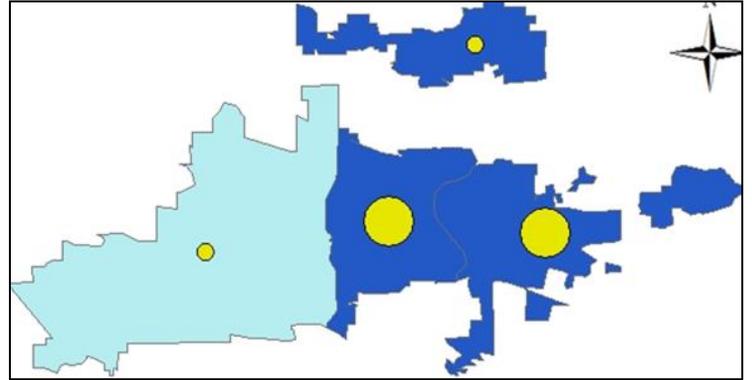
MIECHV Community Maps by Zip Code, Population, and Poverty Level

Figure 4 below shows inset maps of the eight targeted communities receiving home visiting and doula services. (Note: Scales for each inset map below are customized according to the size of each community.) The Rock Island and Waukegan areas provide doula services, and most home visiting services in those communities are provided by non-MIECHV funded programs. The maps show gradations of poverty in blue, ranging from the dark blue (most disadvantaged) to light blue (least disadvantaged), and the number of home visiting participants by the size of the dot. Data presented by poverty levels and number of home visiting participants are shown by Zip Codes to provide the lowest unit of analysis without risk of revealing an individual's identity. The majority of home visiting and doula services are provided in the most disadvantaged areas—dark and medium blue. As shown below, the Chicago-Englewood and Cicero catchment areas reflect the largest populations, and appear to be serving the most disadvantaged families. To that end, the map shows that Illinois MIECHV programs are serving the priority populations. However, Illinois' MIECHV programs serving these disadvantaged communities are reaching only a small percent of Illinois families that would be considered eligible priority populations under the MIECHV legislation.

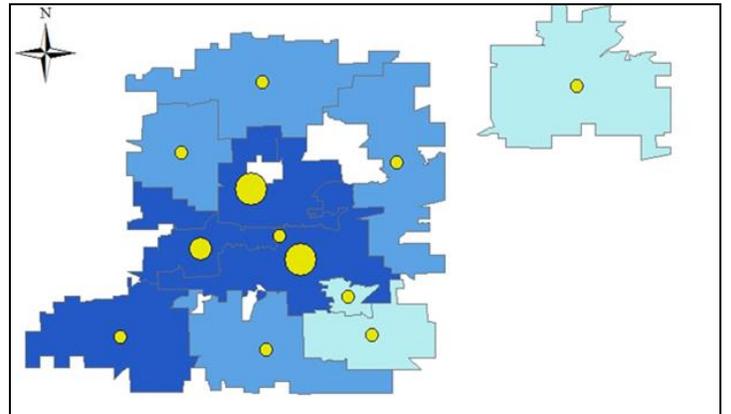
**Chicago-Englewood
and Cicero**



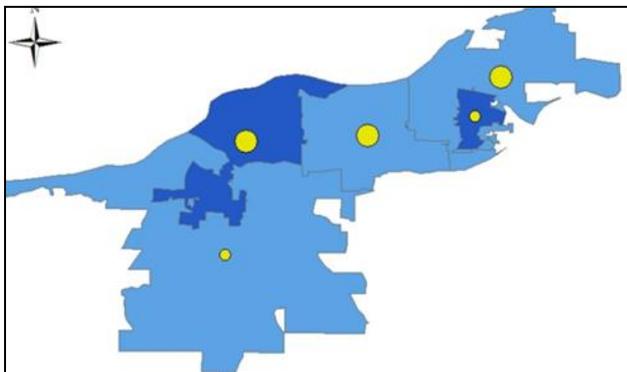
Elgin



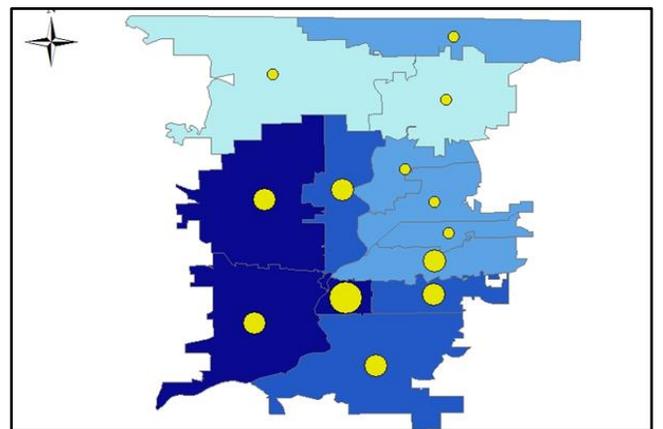
Macon



Rock Island



Rockford



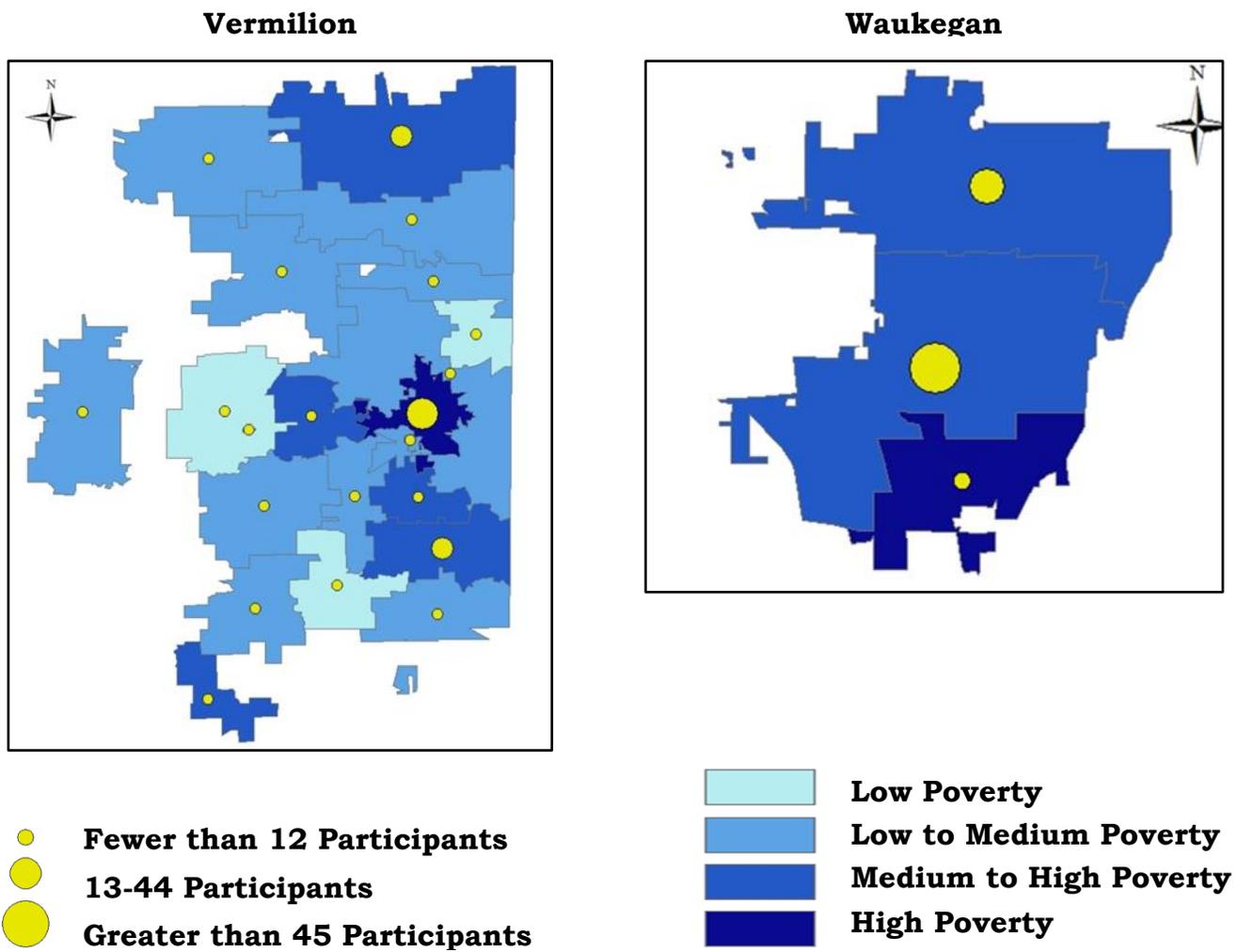


Figure 4. Illinois MIECHV Communities by Zip Code by Population and Poverty Level

MIECHV Participant Demographics, 2015

The MIECHV program was designed and approved under the Affordable Care Act of 2010 to target high risk or priority populations that are believed to be in greatest need of high quality evidenced-based maternal and child health services and thus provides the greatest potential benefit in terms of health, well-being and fiscal investment. These high-risk categories or priority populations include low income, under 21 and pregnant, families with a history of child abuse or neglect, developmental delays, use of substances, and military families.

This section of the report describes the characteristics and socio-demographics of MIECHV families served by home visiting and doula programs. This annual snapshot allows readers to understand who participates in MIECHV programs, whether MIECHV is reaching priority populations, and how these demographic factors influence access and engagement to these critical services. It is clear from these data that the families served by Illinois MIECHV have multiple risk factors and are clearly eligible priority populations.

Caregiver Age

Almost 80% of home visiting participants are caregivers between 18 and 34 years of age, with very few under the age of 18 and almost 20% above the age of 35. Doula participants are a much younger group, with almost 20% under 18 years of age and over 65% under 25 years old. Doula programs target teen parents and have a much higher percent of teen (under 18) participants than home visiting programs.

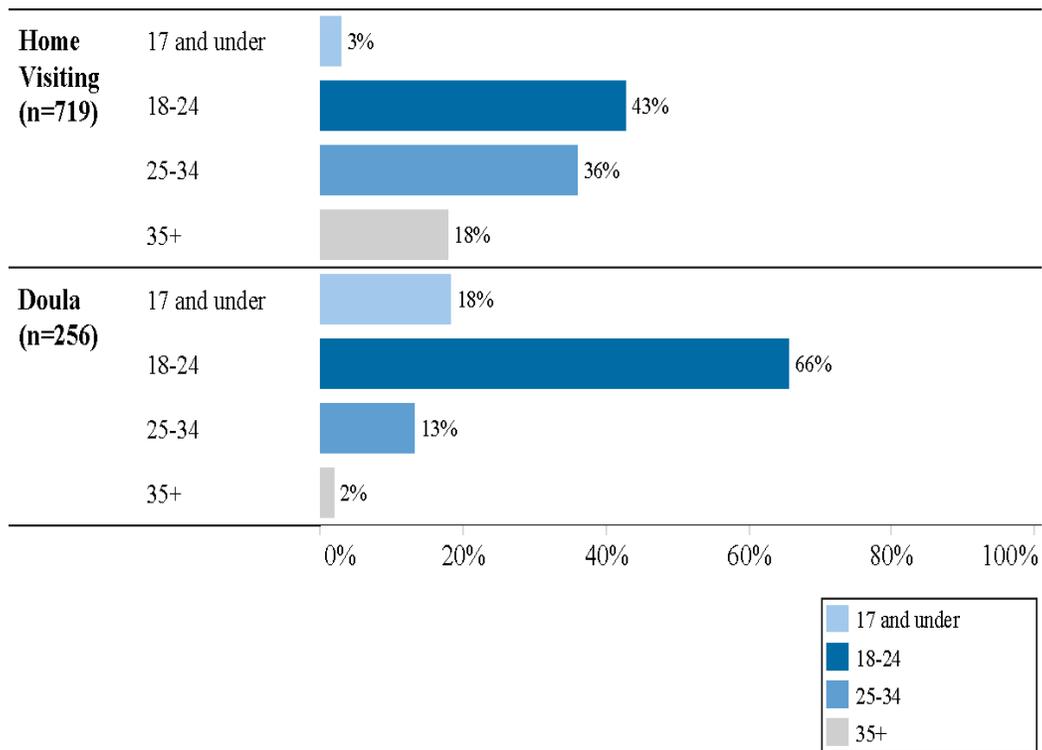


Figure 5. Caregiver Age

Caregiver Age by Ethnicity

Forty percent of home visiting caregivers are Hispanic/Latino. Latino caregivers in home visiting programs tend to be older than non-Latino caregivers. The percentage of Hispanic/Latino women 35 years and older is more than twice that of non-Latino home visiting participants.

Twenty-two percent of doula caregivers are Hispanic/Latino. The majority of both Latino and non-Latino doula participants fall within the 18-24 age range. Latino doula participants are younger overall—25% are teens and only 6% are 25 or older—compared to non-Latino participants, of which 17% are teens and 18% are 25 or older.

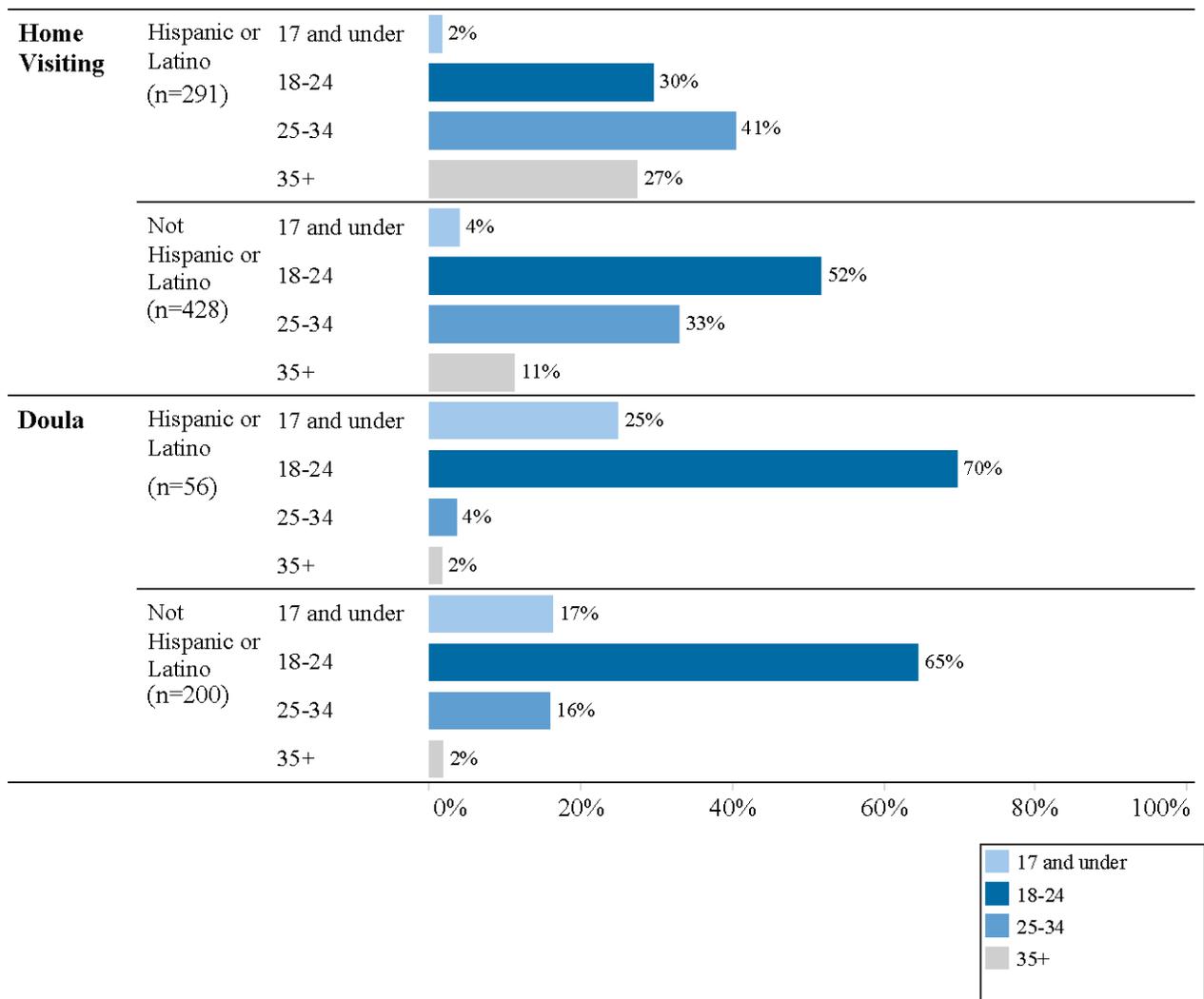


Figure 6: Caregiver Age by Ethnicity

Caregiver Age by Race

African American and Caucasian home visiting participants have similar age profiles. Just over half are 18-24 years of age, with very few teens enrolled. Multi-racial and “other” (including Native American, Hawaiian/Pacific Islander, and Asian) home visiting participants tend to be older, with 20% and 12% under the age of 25, respectively.

Doula participants are younger than home visiting participants overall and regardless of race. These programs serve participants who are mainly under 25. Ninety-four percent of Caucasian and other doula participants are under age 25. Close to 90% of multi-racial participants are under age 25, and almost a quarter of African American doula participants fall into this category as well.

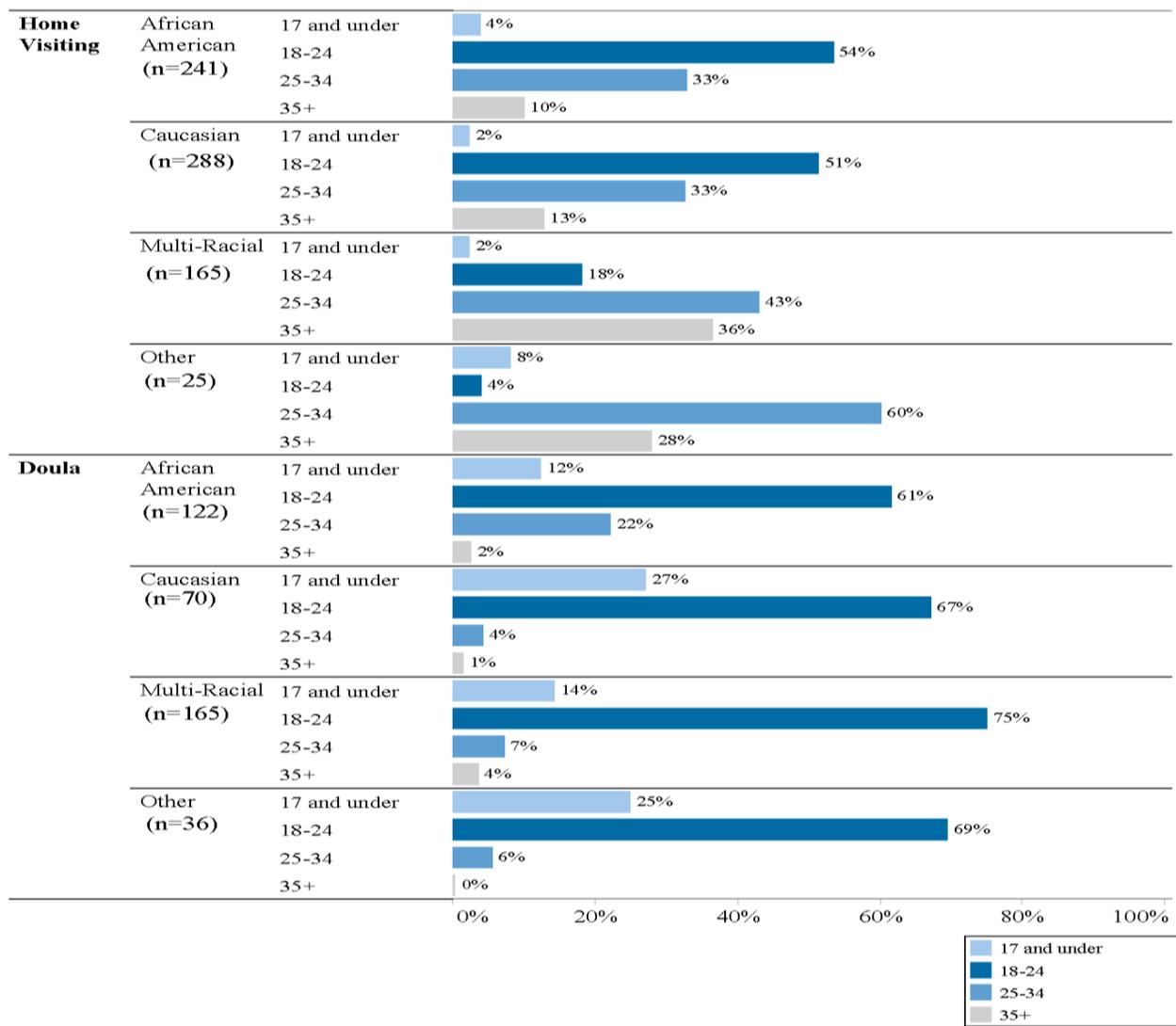


Figure 7. Caregiver Age by Race

Caregiver Marital Status

Almost two thirds of home visiting participants are single and 30% are married. Almost 90% of doula participants are single, with fewer than 10% currently married. Differences between these groups may be partially explained by the younger age of doula participants. In both groups, very few participants have been divorced, separated, or widowed.

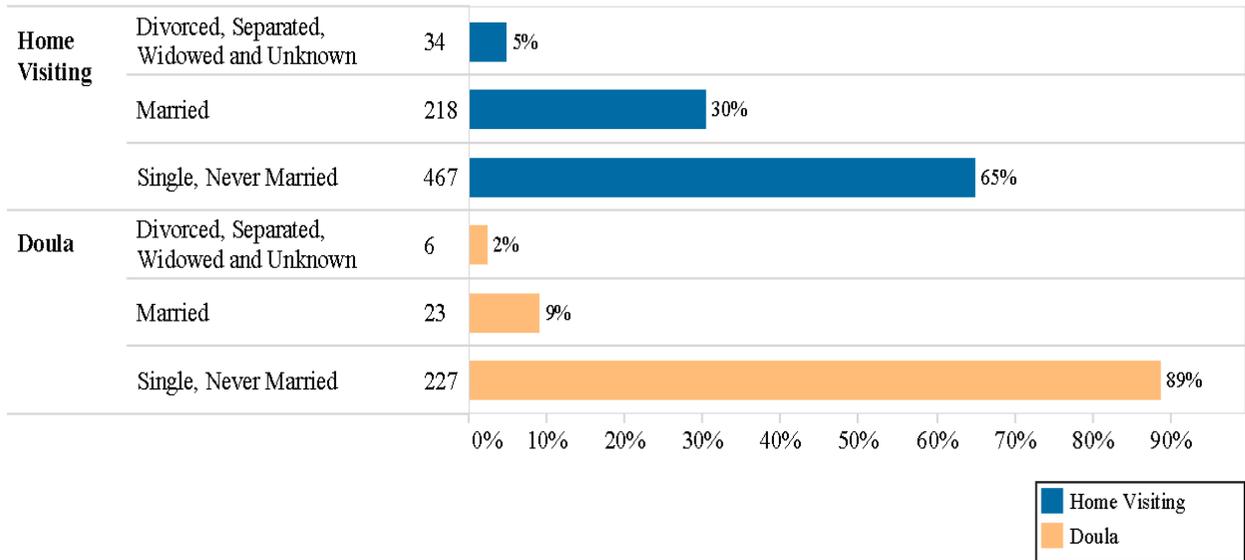


Figure 8. Caregiver Marital Status

Caregiver Household Income by Federal Poverty Guidelines

The overwhelming majority of MIECHV families reside in poverty, with over 40% of home visiting participants and almost 60% of doula participants falling at or below 50% of the 2015 Federal Poverty Level. The number of MIECHV families in poverty is based on annual income in relation to federal poverty guidelines. **Figure 9** (below) shows that for 2015, 84% of home visiting participants report income less than 100% of poverty guidelines (i.e. below the income level defined as the upper limit of families of that size living in poverty). Similarly, 84% of doula families live below the 100% guideline. It is likely that doula families report less income than home visiting program participants because many are teenagers and likely live with other family members. These proportions of MIECHV families living in poverty are almost identical to results from FY 2014.

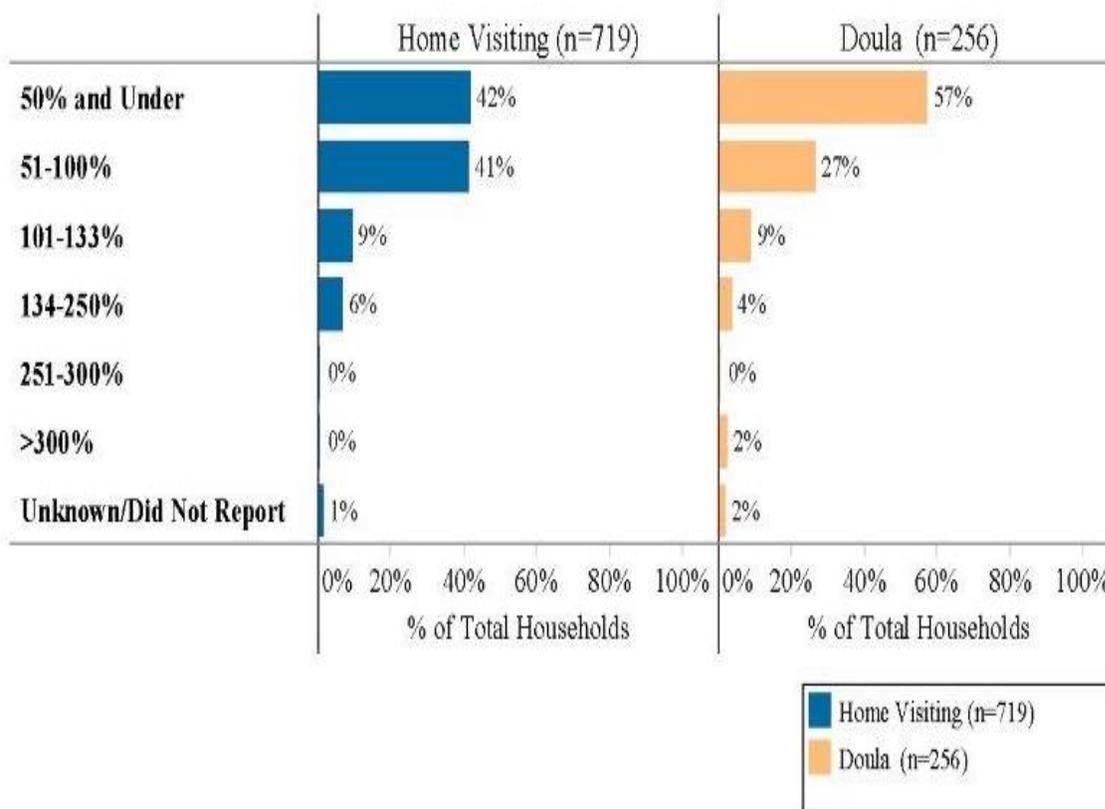


Figure 9. Caregiver Household Income by Federal Poverty Guidelines

Caregiver Educational Attainment

Two thirds of home visiting participants and 82% of doula participants have an education level of a high school (HS) diploma or less. We would expect a larger percent of doula participants to have less than a HS diploma compared to home visiting participants because they are more likely to be teens. This is the case, with almost half of doula participants having less than a HS diploma. Almost 90% of doula participants with less than a HS diploma who are still eligible to be enrolled in high school are, in fact, enrolled. These young women face additional challenges attempting to complete high school as new parents. A key question regarding future outcomes is to what extent doula participants are able to graduate from high school/post-high school and become gainfully employed.

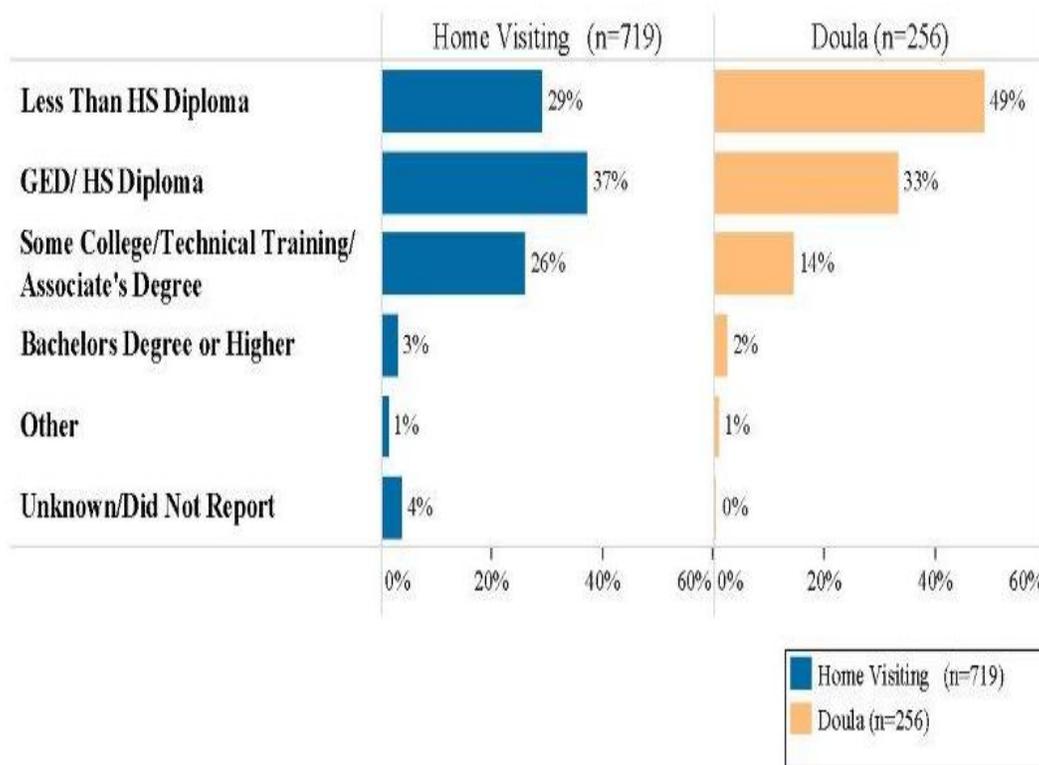


Figure 10. Caregiver Educational Attainment

Insurance Status by Caregiver

Most MIECHV home visiting and doula participants have health insurance at program enrollment. The majority are insured through state programs (Medicaid and the Illinois’ Children’s Health Insurance Program (CHIP)). Small percentages of participants in both programs have private or military insurance coverage, classified as “other” in **Figure 11**.

Eighteen percent of caregivers and 7% of pregnant women were not insured when they enrolled in MIECHV home visiting. Doula programs had smaller percentages of uninsured participants at enrollment—2% of caregivers and 3% of pregnant women. This difference may be due to the younger age of doula participants. These parents may be more likely to be insured through a parent or to have continued Medicaid/CHIP coverage as dependent minors. Home visitors assess the insurance status of all participants at enrollment, and facilitate connections to Medicaid offices and health insurance navigators. Performance benchmark 5.3 also shows that 95% of home visiting families and 75% of doula families have health insurance.

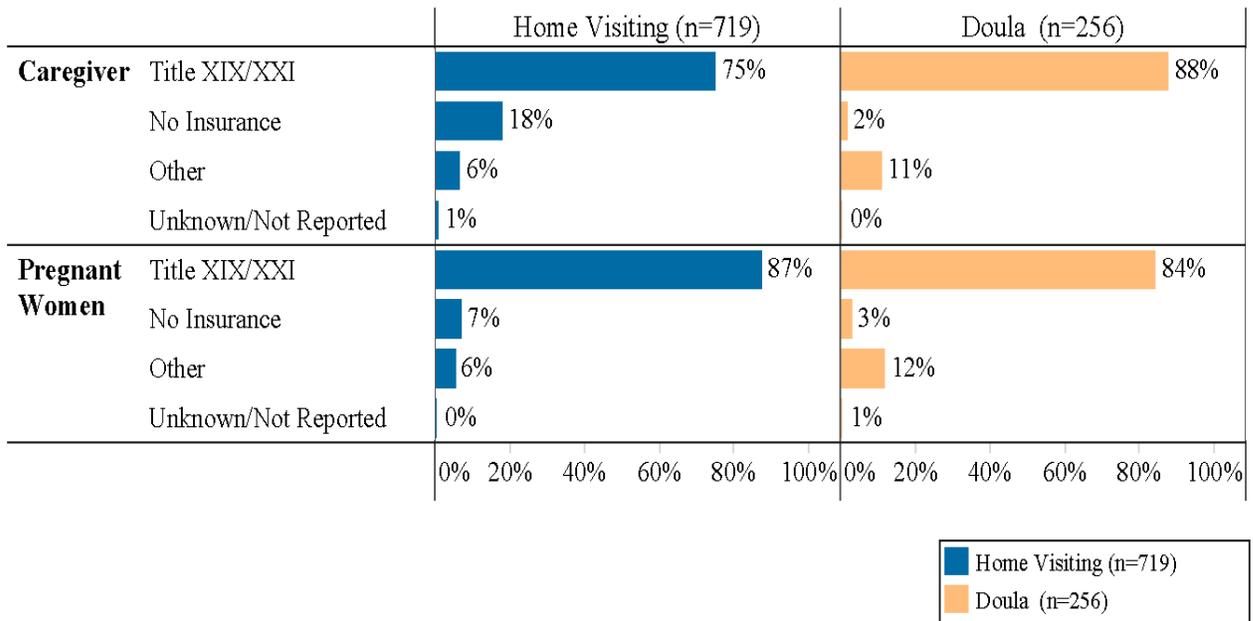


Figure 11: Insurance Status by Caregiver

Insurance Status by Child

Over 90% of children enrolled in both home visiting and doula services are insured through Medicaid (Title XIX) and the State Children’s Health Insurance Program (Title XXI) at the time of their MIECHV program enrollment. No doula children were uninsured at enrollment, and only 1% of home visiting children were uninsured. All doula participants are enrolled while pregnant; thus program staff are more likely to make certain children are insured; whereas home visiting programs accept children after birth, and they may not be insured.

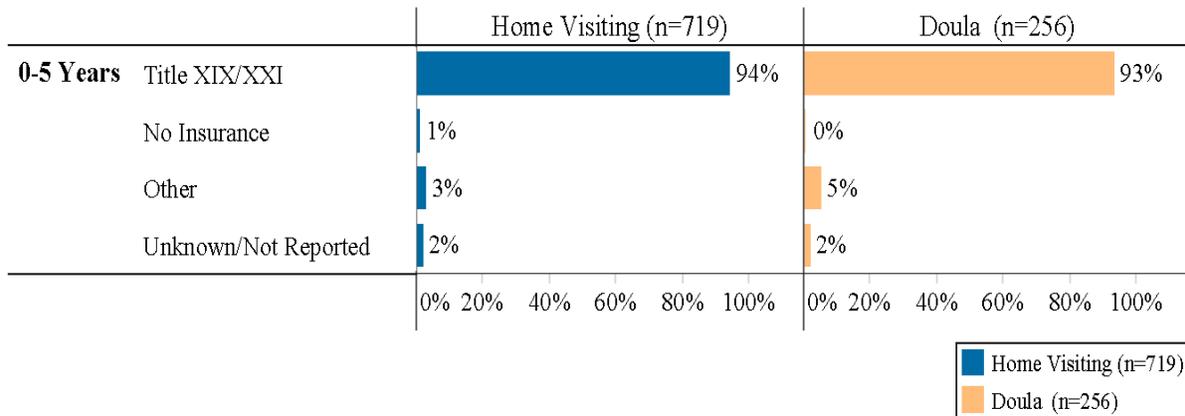


Figure 12: Insurance Status by Child

II. MIECHV Performance Benchmarks, 2015

As described above, CPRD's major ongoing evaluation tasks include the support and management of MIECHV's in-home data collection system, implementing CQI process and procedures, assessing and retooling the Visit Tracker System, conducting multiple sub-studies, and preparing performance benchmarks for HRSA submission. In FY 2015, the FDCs continued to collect the five key measures: Knowledge of Infant Development Inventory (KIDI), Home Observation for Measurement of the Environment (HOME), Parenting Stress Index (PSI), Parent Satisfaction Survey (PSS), and Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO).

In 2015, the evaluation team, with approval from the Governor's Office of Early Childhood Development (OECD) staff, vetted and added the Adverse Childhood Experiences (ACE) survey to the in-home survey protocol that is administered to targeted families at the one-year follow-up. Inclusion of the ACE survey is intended to provide a better understanding of the prevalence of ACEs, and whether families with high ACE scores differ from families with low or no ACE scores in terms of home visiting participation and outcomes.

CPRD continued preparing, tracking, entering, analyzing, and validating all of the assessment results collected by the FDCs, and conducting both monthly and quarterly meetings to ensure high levels of consistency and validity in data collection and scoring procedures. CPRD staff also continued to manage the required consent forms and gift cards which are linked for both evaluation and audit purposes. Gift card and consent procedures are accountable to University of Illinois research and administrative polices, and IRB approval is renewed annually.

It should be noted that CPRD was notified in FY 2015 that, due to upcoming changes to the federal HRSA benchmark requirements, FY 2016 will be the final year for field data collection. The benchmark reporting requirements are being revised to include fewer performance benchmarks. The data collection by CPRD FDCs will no longer be conducted after the current federal fiscal year – FFY 2016. Due to this shift, field staff are currently focusing on one-year post-enrollment and two-year follow-up visits. Baseline data collection is being discontinued, as follow-up assessment visits with new participants will not be completed after September 30, 2016, when the new benchmarks take effect.

The HRSA required performance benchmarks, operationalized by the State of Illinois in their original grant submission, serve as the core indicators of

Illinois' successes and challenges related to process and outcome indicators. Through high quality home visiting services, Illinois MIECHV aims to:

- Improve maternal and newborn health;
- Reduce child injuries, neglect, and Emergency Department (ED) visits;
- Increase school readiness and academic achievement;
- Prevent, identify, and treat domestic violence;
- Increase family economic self-sufficiency; and
- Increase completion of referrals to needed services.

These six broad MIECHV PBs consist of three to eight process or outcome indicators related to the particular benchmark area. These indicators measure whether a home visiting participant has received information, completed a service, or achieved behavior change. Examples include receiving information about the importance of birth spacing, completing recommended prenatal care visits, and initiating contraception use. These MIECHV PBs measure knowledge and behaviors that have the potential to facilitate improved outcomes over time for MIECHV families.

Performance on MIECHV benchmarks for FY 2013 (October 1, 2012-September 30, 2013) through FY 2015 (October 1, 2014-September 30, 2015) is presented below in trend graphs that show the benchmark, indicator and data point over the three-year period. Because HRSA requires separate reporting on the home visiting and doula grants, PBs are divided by home visiting services and doula services.

2015 Benchmark Glossaries for both [home visiting](#) and [doula](#) programs provide more information about the MIECHV benchmarks. Overall, Illinois' MIECHV program has been able to meet or exceed HRSA's annual benchmark requirements for the past three years.

Benchmark 1: Improving Maternal and Newborn Health

The first set of PBs measures an array of evidence-based services and activities that home visitors provide to families upon entering home visiting services—with the intention of improving maternal and newborn health. **Figure 13** shows change between Years 2 and 4 (FY 2013 and FY 2015) for each construct.

Overall, both home visiting and doula programs show considerable improvements in these important areas.

Each program year, more pregnant women completed the recommended number of prenatal visits (according to the American College of Obstetricians and Gynecologists) and more children received the recommended number of well-child visits (according to the American Academy of Pediatrics).

Other maternal and newborn health areas show great improvement over time, though the year to year results were slightly uneven for either the home visiting or the doula program. Overall, more women received information about birth spacing within 6 weeks of having a baby, and initiated birth control by eight weeks postpartum. More women and children gained access to health insurance, and more babies were breastfed for at least six months.

Screening for maternal depression using the Edinburgh Postnatal Depression Scale initially rose quite markedly from Year 2 to year 3. In Year 4, screening levels remained quite high, although very slightly slower than Year 3.

Construct 1.2 measures whether women who reported using alcohol, tobacco, or illegal substances during pregnancy stopped using these substances while pregnant. These results are uneven and warrant additional investigation. For doula programs, relatively high levels of women quit in Year 2, with a dip in Year 3, and a rise in Year 4. Home visiting programs saw declines in women abstaining from substance use over time, with a sharp drop from Year 2 to Year 3. However, because so few women report substance use during pregnancy, these numbers are particularly unstable. More research is needed to better understand these differences over time and between programs.

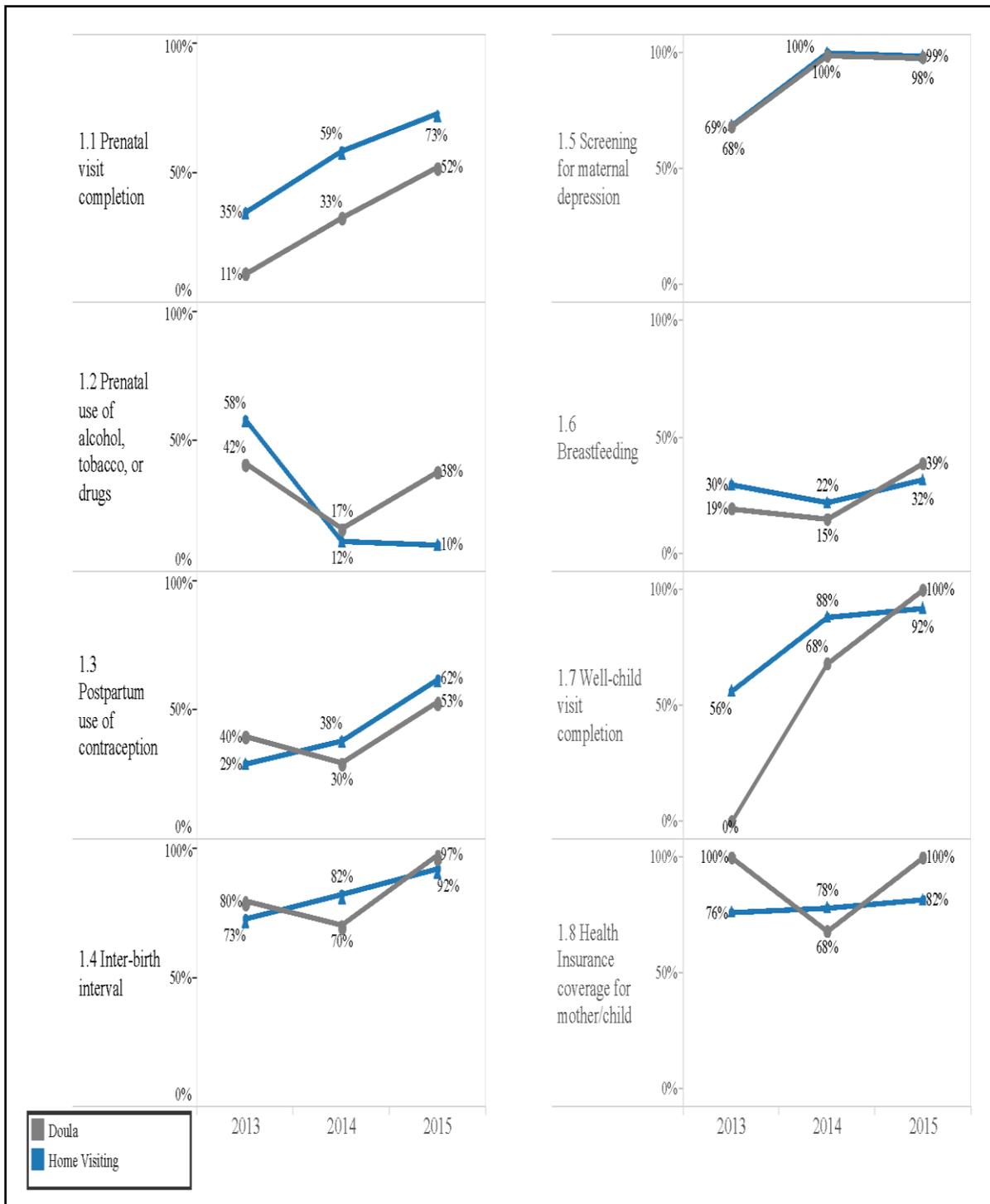


Figure 13. Benchmark 1: Improving Maternal and Newborn Health

Benchmark 2: Reduction in Child Injuries, Neglect, and ED Visits

Home visiting and doula programs provide safety information to families within the first three months of program enrollment. This information focuses on how to prevent child injuries, and keeping your child and household safe. Both programs have seen great improvement in provision of safety information over time, with almost all families receiving this information within three months of enrollment.

All visits to the ED by mothers and children have been tracked over time. For both home visiting and doula programs, child ED visits were initially low in Year 2, rising in Year 3, and falling slightly in Year 4, though remaining at higher levels than in Year 2. Visits to the ED by mothers remained steady across years for the home visiting program, while the doula program saw an increase in Year 3, falling to zero in Year 4. Overall, few women and children use the ED for care.

Emergency Department visits specifically related to child injury are even more rare. While numbers have shifted slightly over time, both programs have seen very few injury-related ED visits.

Reports of child maltreatment to the Department of Children and Family Services (DCFS) – both suspected and substantiated – despite some variability, have also remained low over time. As with the Emergency Department visits, because the number of DCFS reports is small, these results must be interpreted with caution.

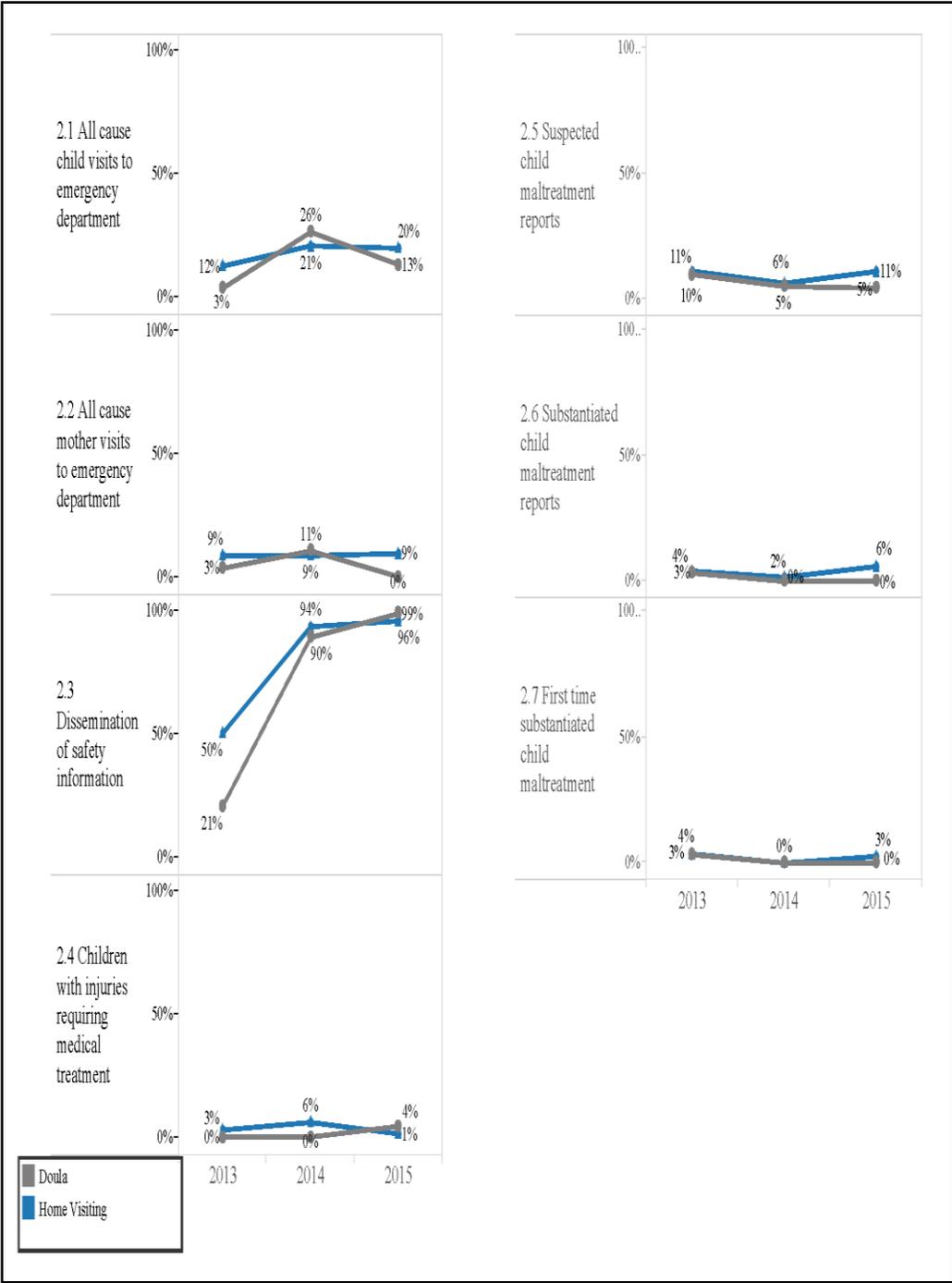


Figure 14. Benchmark 2: Reduction in Child Injuries, Neglect, and ED Visits

Benchmark 3: Increasing School Readiness and Academic Achievement

Benchmark 3 (**Figure 15**) includes both process and outcome measures related to school readiness, social-emotional well-being, and academic achievement.

Almost all children enrolled in home visiting and doula programs were assessed for developmental delays at one year of age in Year 4, with increases year after year for both programs. Constructs 3.5-3.8 measure whether the developmental assessments, Ages and Stages Questionnaires (ASQ-3 and ASQ-SE), were given between 10 and 14 months of age, rather than the total score on each assessment. ASQ-SE (Social-Emotional) coverage was slightly lower than ASQ-3 for both programs, though it still remained high.

Between Years 2 and 4, home visiting and doula participants increased their overall scores on the four assessments used as part of the MIECHV outcome evaluation—the Home Observation for Measurement of the Environment (HOME), Knowledge of Infant Development Inventory (KIDI), Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO), and Parenting Stress Index (PSI). Constructs 3.1-3.4 measure parental skills and knowledge that have been linked with increases in school readiness and academic achievement for children. These assessments will be discussed in greater detail later in this report.

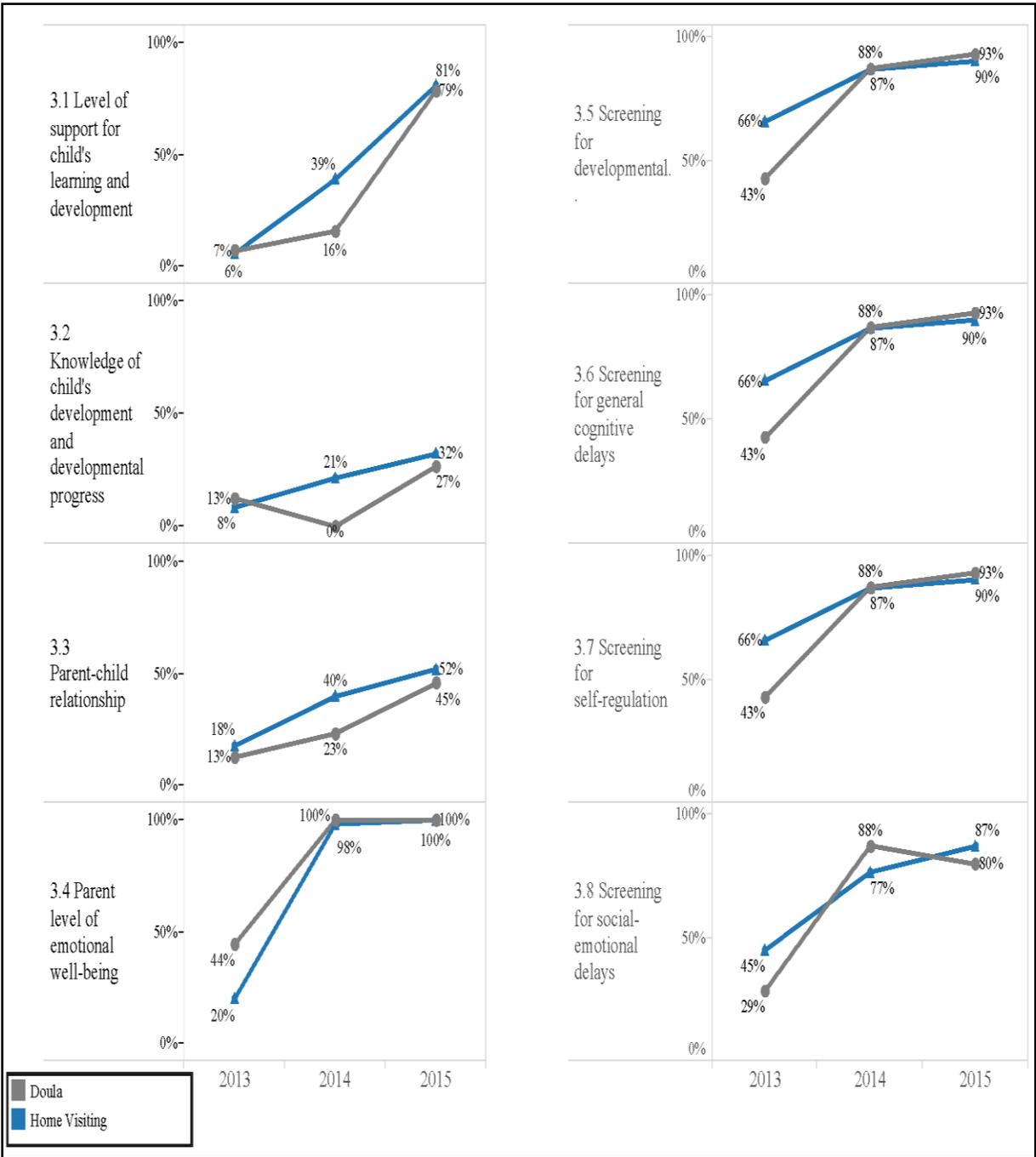


Figure 15. Benchmark 3: Increasing School Readiness and Academic Achievement

Benchmark 4: Preventing, Identifying, and Treating Domestic Violence

The fourth PB (**Figure 16**) consists of three constructs related to preventing, identifying, and treating domestic violence.

Screening for intimate partner violence (IPV) using the Futures Without Violence assessment has increased from Years 2 to 4, with near universal screening for both programs. All families with positive screens on the Futures assessment, indicating current or past domestic violence, received referrals to appropriate community resources in both programs. This is a slight increase from Year 3, although levels of referral have remained high over time. All families with positive screens on the Futures Without Violence assessment also completed safety plans, personalized plans designed to increase safety for people experiencing IPV. Home visiting programs have seen increases in completion of these plans over time. Doula programs' numbers have been uneven over time, reflecting the small number of women with positive screens in that program and the difficulty many women face completing these plans.

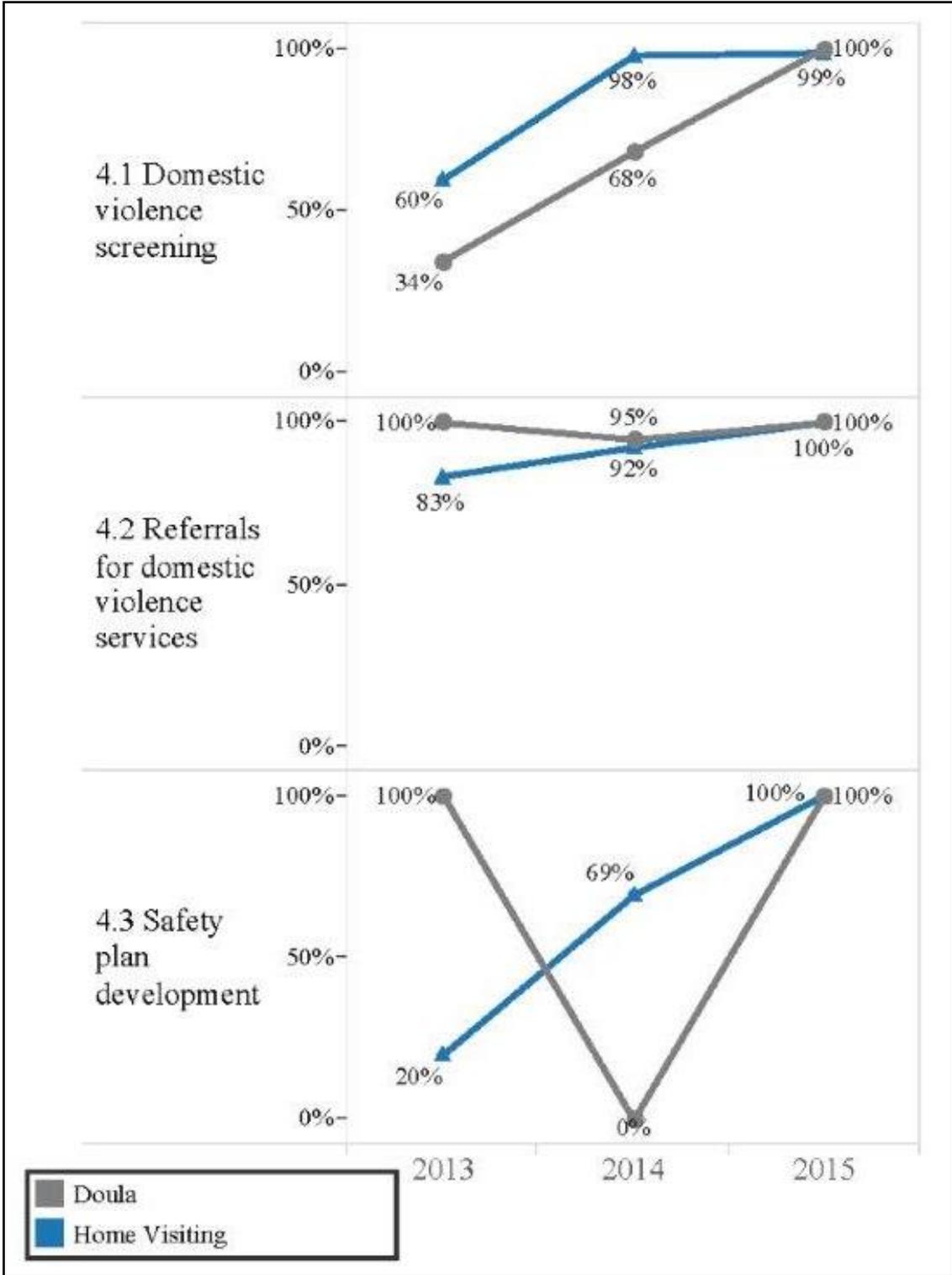


Figure 16. Preventing, Identifying, and Treating Domestic Violence

Benchmark 5: Family Economic Self-Sufficiency

The fifth PB (**Figure 17**) measures conditions related to family economic self-sufficiency.

Construct 5.1 measures whether income and benefits increase during a family's first year in home visiting. This is a particularly challenging construct to achieve, given that many women enrolled in home visiting programs—and all women enrolled in doula programs—are pregnant during their first year in home visiting and the United States does not guarantee any form of paid parental leave. Despite this challenge, home visiting and doula programs helped more families increase their income over each program year.

Construct 5.2 measures whether guardians achieve self-set educational goals during the time period set for these goals. Home visiting participants achieved their educational goals in higher numbers over each program year. Doula programs have seen a decrease from Year 2 to Year 4. This may reflect increased challenges faced by the younger population served by doula programs.

Construct 5.3 measures whether the primary guardian, all children, and any additional guardian residing in the home have insurance coverage. Family insurance coverage has remained quite high over time for doula participants. Family insurance coverage for home visiting participants, while it has increased from Years 2 to 4, remains slightly lower. This reflects the larger percent of undocumented families concentrated in two of the communities in which home visiting programs operate.

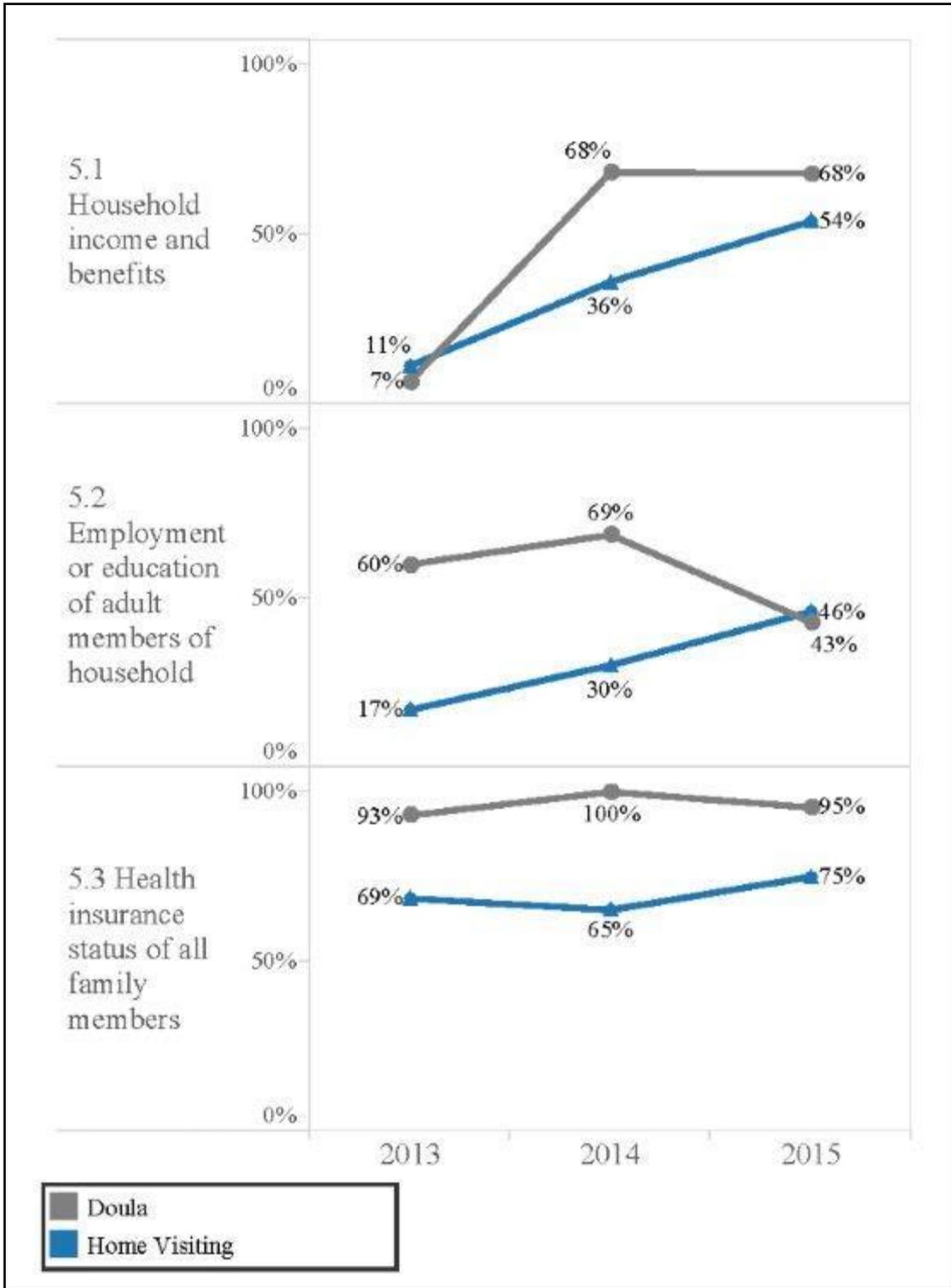


Figure 17. Family Economic Self-Sufficiency

Benchmark 6: Increasing Completion of Referrals to Needed Services

Benchmark 6 (**Figure 18**) measures to what extent families are assessed for needed services, are referred to services, and those referrals that are completed and closed out.

Four different assessments are included in this benchmark. The Ages and Stages Questionnaires (ASQ-3 and ASQ-SE) are used in MIECHV services to identify developmental delays in children at one year of age. The Edinburgh Postnatal Depression Scale is given to women at least once between their third trimester of pregnancy and two months postpartum, in order to identify depression. The Futures Without Violence assessment tool screens for domestic violence and is given to all enrolled women within the first year of program enrollment.

Construct 6.1 measures whether families have been screened with the appropriate assessments during their first year of enrollment. For the past two years, all families in home visiting and doula programs have received appropriate assessments, increasing slightly from already high numbers in Year 2.

Construct 6.2 measures whether families with positive screens – indicating need for additional services – receive referrals to appropriate community resources. Increasing numbers of home visiting participants have received referrals for positive screens from Years 2 to 4. Doula programs show more uneven results. While these results should be interpreted with caution due to small numbers, this does indicate a training need which will be addressed.

Construct 6.3 measures whether families who received referrals to community resources actually receive services. Results here have been uneven over time for both programs, reflecting the instability of small numbers, as well as the inherent challenges of addressing issues like depression, domestic violence, and developmental delay. Additional challenges have appeared in Year 4, with many community resources limiting hours, services, or closing completely as a result of state of Illinois funding constraints.

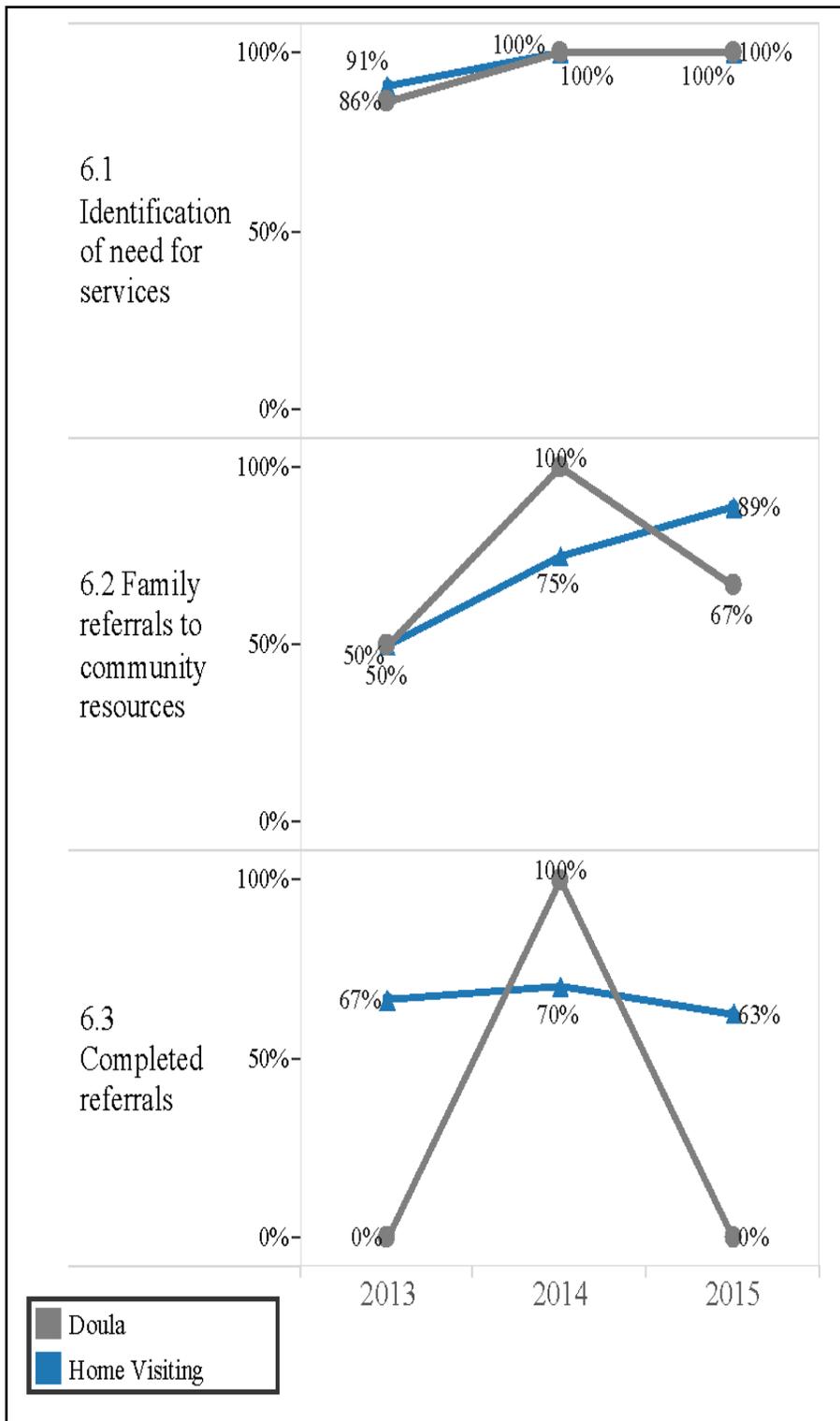


Figure 18. Increasing Completion of Referrals to Needed Services

III. Longitudinal Matched Participants: Follow-up

Background

The Illinois Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program, working with the Center for Prevention Research and Development (CPRD) at the University of Illinois, has been conducting an ongoing evaluation of performance benchmarks (PBs) and outcomes as part of the federal reporting requirements. Nationally, the Illinois MIECHV evaluation effort has been unique in terms of collecting and reporting PBs—not only cross-sectionally as presented above—but also tracking individual home visiting participants who remain in a home visiting program at one- and two--year follow-ups. This individualized data collection and tracking has allowed Illinois to gain a better understanding of the influence of home visiting programs on parent and child outcomes. Illinois' evaluation of immediate and intermediate outcomes provides both an understanding of how home visiting services are improving benchmarks in the expected direction, and most importantly, providing data for continuous quality improvement to improve professional practices.

The major evaluation goals for MIECHV are guided by a series of research questions that seek to assess the impact of high-quality home visiting programs on short- and long-term outcomes for families and children. Ongoing and compelling research has repeatedly demonstrated that families and children receiving high quality early childhood and family programs are more likely to have reduced maternal-child health problems, succeed in school, reduce problem behaviors, improve employment chances and achieve an overall better quality of life (Sweet & Appelbaum, 2004; Peacock, S., Konrad, S., Watson, E., Nickel, D., & Muhajarine, 2013; Olds, Kitzman, Knudtson, Anson, Smith, & Cole, 2014). Although the long-term effects of MIECHV programs are beyond the scope of the current evaluation, and this evaluation plan lacks a control group, MIECHV programs are geared toward targeting immediate and intermediate age-appropriate, developmental outcomes or milestones that have previously demonstrated the effectiveness of these model programs. Moreover, these short-term outcomes show that when families and children are on track to attain antecedent outcomes, this increases the likelihood that they will attain longer term impacts. This section reports the MIECHV immediate and intermediate outcomes over the past two years.

Longitudinal Data Collection Methods and Procedures

The evaluation team from the CPRD at the University of Illinois conducts in-home assessments in the six targeted MIECHV communities. The team includes five Field Data Collectors (FDCs), who live in or near the six target communities and have received extensive and ongoing training to administer MIECHV measures.

Once a family is enrolled in a MIECHV program, their name is provided to the FDCs, who work closely with that family's home visitor to coordinate a home visit and conduct a baseline assessment. The FDC and home visitor jointly schedule and visit the new family or return together on a follow-up assessment. The FDCs use well-tested and standardized measures that include: Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO), Home Observation for Measurement of the Environment (HOME), Knowledge of Infant Development Inventory (KIDI), and Parenting Stress Index (PSI); and also administer a Parent Satisfaction Survey (PSS). Each standardized measure captures one or more of the benchmarks that are required by HRSA.

A detailed description of the survey methodology, measures and procedures is provided elsewhere (CPRD, 2013a). These data collection and consent procedures have been approved by the Institutional Review Board at the University of Illinois at Urbana-Champaign, and participants receive an honorarium for their participation. After a caregiver has participated in a home visiting program for approximately one year, the FDC returns to visit the family to repeat the measures. The results of these assessments are analyzed over time, allowing for the examination of socio-demographic and program factors that may influence outcomes.

A critical part of ensuring high quality measurement tools is a series of psychometric analyses that are conducted several times a year checking measurement reliability and validity with the Illinois MIECHV population. The raw and standardized Cronbach alphas for the total measurement score and the subscale scores are provided below in **Table 1**. Overall, the total alphas range from a high of .93 for the Parenting Stress Index to a low of .79 for the KIDI, both of which are in acceptable ranges.

Table 1: Reliabilities (Cronbach’s Alpha) for MIECHV Baseline Assessments

Survey	Cronbach’s alpha	
	Raw	Standardized
HOME (n=724)	0.80	0.80
a) Responsivity	0.68	0.71
b) Acceptance	0.52	0.69
c) Organization	0.28	0.30
d) Learning Materials	0.69	0.69
e) Involvement	0.63	0.60
f) Variety	0.48	0.46
KIDI (n=977)	0.79	0.80
PICCOLO (n=637)	0.90	0.90
a) Affection	0.69	0.70
b) Responsiveness	0.68	0.69
c) Encouragement	0.78	0.78
d) Teaching	0.80	0.81
PSI (n=783)	0.93	0.94
a) Difficult Child	0.86	0.87
b) Parental Distress	0.87	0.88
c) Parent-Child Dysfunction	0.84	0.86

Participant Selection and Sample

All participants in the Illinois MIECHV home visiting programs are invited to participate in the evaluation. The results presented represent the participants that agreed to take part in the evaluation and who have remained in Illinois’ MIECHV home visiting programs for at least one year. The MIECHV evaluation team is also conducting the second-year follow-up assessment; however, the sample size is inadequate at this time. Another important consideration for understanding home visiting outcomes is to recognize that participant attrition may play a significant role in terms of selection bias. That is, we know that the Illinois MIECHV attrition rate varies significantly by program and community (CPRD, 2014b). Nonetheless, the participants who remained in the program report the following results.

Knowledge of Infant Development Inventory (KIDI)

The KIDI assesses parent knowledge and beliefs related to infant and child development that have demonstrated positive relationships with supportive parenting practices and child outcomes (MacPhee, 1981; Benasich, & Brooks-Gunn, 1996). Caregivers respond to a series of fifty-eight questions asking them to agree or disagree with each statement. High KIDI scores have been associated with improved parenting skills and child outcomes including student IQ (Benasich & Brooks-Gunn 1996). The results of the KIDI scores show statistically significant improvements for five of the six MIECHV communities and doula programs (see **Figure 19**). It is interesting to note that Elgin is the only community that did not show improvement on the KIDI, and in fact, it decreased slightly over the one-year time period. The evaluation team believes this modest decrease may be related to the large number of Elgin families who are Hispanic/Latino, and where English is a second language.

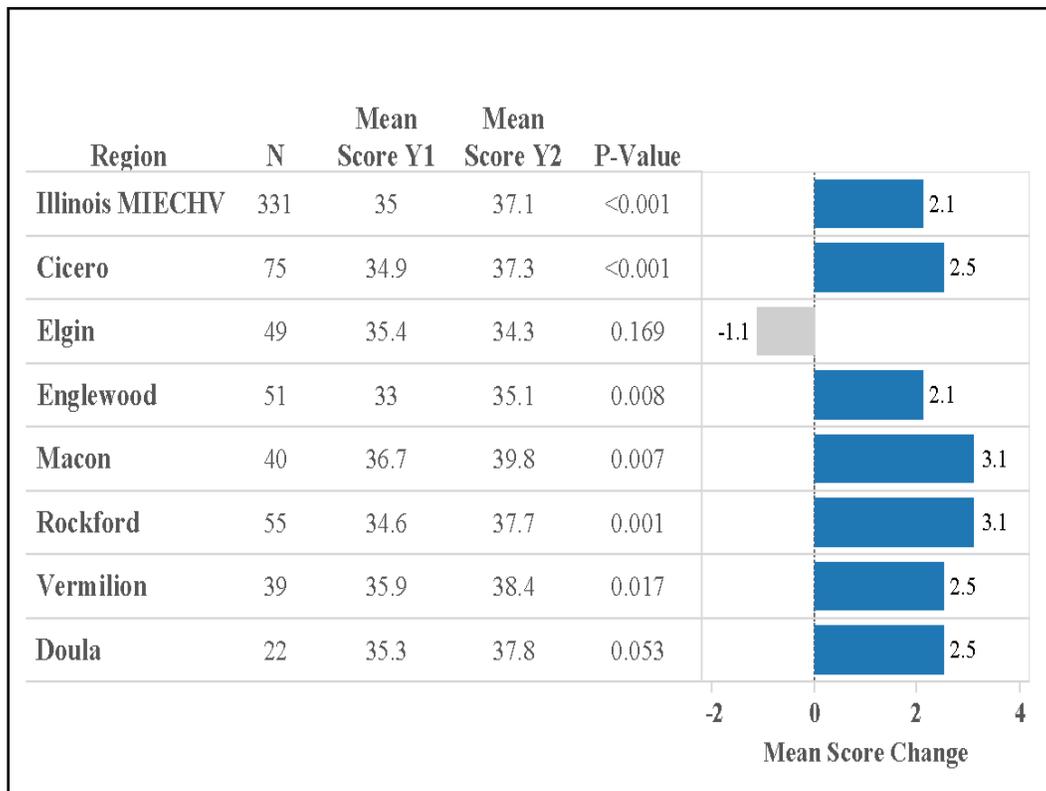


Figure 19. KIDI Score by Community (n=331)

KIDI Item Level Changes

A second way that CPRD examined the KIDI measure was to compare item level or single questions at one-year follow-up. The KIDI assessment is a single measure comprised of 58 questions on a wide variety of knowledge and child development topics. Each MIECHV site's responses to the KIDI measure are returned to the local implementing agency (LIA) as part of the CQI process, and quarterly field data collection specific CQI calls are completed with MIECHV staff from each site as a way to provide specific item level feedback and encourage discussion regarding improvement of caregiver knowledge and understanding of KIDI questions. This feedback also provides an opportunity for the CPRD CQI Specialist and home visitors to examine those items on the KIDI which they believe are critical safety and health issues that "must" be discussed and reinforced as part of home visits, as well as key parenting practices that promote cognitive and language development. Strategies for improving KIDI scores are reviewed and site staff brainstorm specific ways to address key items for improvement based on individual site scores and the needs of their particular participants. Creative strategies have included addressing topics at group events, in newsletters and with topic specific handouts for parents.

The CPRD Field Data Collectors have reported challenges with participants answering KIDI questions, in particular odd wording, length of the assessment, low participant literacy, and difficulties with Spanish translation.

Below, we provide the one-year follow-up KIDI measures, showing which items have improved, remained about the same, or decreased. Despite the large number of questions on the KIDI, the evaluation team also identified a number of critical items that caregivers should know, for example:

- "You must stay in the bathroom when your infant is in the bathtub."
(Q 8)
- The critical importance of "talking to a child" for cognitive and language development. (Q 12)
- The safe sleep recommendation of "placing a child on his/her back in a crib." (Q 19)
- "A common cause of accidents for toddlers is pulling something like a frying pan, a tablecloth, or a lamp down on top of them." (Q 36)

- If “Infants will avoid high places, like stairs, by 6 months of age.” (Q 58)
- It is not true that “Most children are ready to be toilet trained by one year of age.” (Q49)
- It is not accurate that: “One-year-olds know right from wrong”. (Q47)

These key topics are fundamental to the health and safety of the child, while other KIDI items relate to normative or typical child development and developmental expectations that have been found to increase positive parent and child outcomes as well as decrease risk of abuse and neglect (MacPhee, 1981; Winter, Morawska, & Sanders, 2012; September, Rich, & Roman, 2015). Most caregivers scored well on the KIDI critical health and safety topics, and continue to improve, but other KIDI item scores have decreased or shown little improvement over the one-year time period. These items are highlighted in red, and will be the focus of future CQI efforts.

A final note by MacPhee (1981), the KIDI developer, states that “knowledge of (child) development is most likely to change as a result of fairly intensive education on norms and principles, not as a result of more general parent education that focuses on child-rearing practices.” p. 23). With this in mind, CQI efforts will focus on the need for more intensive attention placed on developmental milestones and age-related changes in children’s characteristics and capacities.

Table 2. Statewide KIDI Assessment by Items: % Change in Correct Response, Baseline to 1-Year Follow-up (n=331)

Item	Baseline	Follow-up	Change
1. When toddlers are strongly attached (bonded) to their parents, they are more clingy and tend to stick close to mom or dad.	15.7%	18.2%	2.5%
2. A 2-year-old who is 2 or 3 months behind other 2-year-olds is retarded.	85.6%	93.7%	8.0%
3. Children often will keep using the wrong word for a while, even when they are told the right way to say it (like “feet not footses”).	74.2%	74.6%	0.4%
4. Babies should not be held when they cry because this will make them want to be held all the time.	70.0%	71.0%	1.0%
5. If a baby (less than a year) wants a snack, give it nuts, popcorn, or raisins.	90.9%	94.0%	3.0%
6. Babies do some things just to make trouble for their parents, like crying a long time or pooping in their diapers.	89.1%	93.6%	4.5%
7. If you punish children for doing something naughty, it’s okay to give them a piece of candy to stop the crying.	87.0%	91.8%	4.9%
8. You must stay in the bathroom when your infant is in the tub.	96.4%	98.5%	2.1%
9. Babies cannot see and hear at birth.	73.8%	78.1%	4.3%
10. Infants understand only words they can say.	73.7%	83.9%	10.2%
11. If children are shy or fussy in new situations, it means they have an emotional problem.	79.9%	85.4%	5.4%
12. Talking to a child about things he (she) is doing helps its mental development.	91.8%	93.6%	1.8%
13. A two-year-old who says “NO!” to everything and bosses you around is trying to get you upset.	80.1%	85.2%	5.1%

14. The way a child is brought up has little effect on how smart he (she) will be.	56.8%	57.9%	1.0%
15. Babies may cry for 20-30 minutes at a time, no matter how much you try to comfort them.	46.5%	46.2%	-0.3%
16. Once kids turn 3 or so, they become less defiant and negativistic— “No, I don’t want to!”	38.2%	40.5%	2.4%
17. A toddler who’s energetic—always on the go—needs a low-sugar diet or Ritalin.	55.3%	58.1%	2.7%
18. Babies have little effect on how parents care for them, at least until they get older.	62.4%	59.2%	-3.2%
19. When putting babies in the crib for sleep, place them on their back, not stomach.	89.7%	93.0%	3.3%
20. A 3-1/2-year-old boy who wets the bed has a problem that should be seen by a doctor.	59.0%	67.6%	8.6%
21. A brother or sister may start wetting the bed or thumb sucking when a new baby arrives in the family.	33.6%	41.8%	8.1%
22. New foods should be given to the infant one at a time, with 4-5 days between each one.	69.3%	78.4%	9.1%
23. The 2-year-old’s sense of time is different from an adult’s.	72.8%	72.8%	0.0%
24. Most premature babies end up being abused, neglected, or mentally retarded.	82.7%	83.7%	1.0%
25. If babies are fed cow’s milk, they need extra vitamins and iron.	24.0%	28.3%	4.3%
26. Some healthy babies spit out almost every new food until they get used to it.	61.7%	63.5%	1.8%
27. The baby’s personality or temperament is set by 6 months of age; it doesn’t change much after that.	56.8%	60.6%	3.8%
28. Some parents do not bond until their baby starts to smile and look at them.	15.8%	14.5%	-1.2%

29. The way the parent treats a baby in the first months of life determines whether the child will grow up to be well-adjusted or a moody misfit.	40.0%	47.3%	7.3%
30. Children learn all of their language by copying what they have heard adults say.	6.7%	6.1%	-0.6%
31. When a baby less than 12 months gets diarrhea, you should give it flat ginger ale or Pedialyte.	48.5%	54.9%	6.4%
32. Infants may stop paying attention to what is going on around them if there is too much noise or too many things to look at.	68.5%	76.4%	8.0%
33. Some normal kids do not enjoy being cuddled.	27.1%	29.7%	2.6%
34. If a baby has trouble pooping, give it warm milk.	33.8%	41.5%	7.7%
35. The more you soothe a crying baby by holding and talking to it, the more you spoil them.	73.3%	74.9%	1.7%
36. A common cause of accidents for toddlers is pulling something like a frying pan, a tablecloth, or a lamp down on top of them.	69.2%	77.3%	8.1%
37. Newborn babies recognize stories and music they heard before they were born.	78.2%	86.6%	8.4%
38. A good way to teach your child not to bite is to bite back.	84.8%	84.8%	-0.0%
39. Some days you need to discipline your child; other days you can ignore the same thing. It all depends on the mood you're in that day.	78.9%	81.3%	2.5%
40. Most babies can sit on the floor without falling over by 7 months.	68.2%	79.7%	11.5%
41. Six-month-olds will respond to someone differently if the person is happy or upset.	48.3%	59.4%	11.1%
42. Most 2-year-olds know the difference between make-believe and true stories on TV.	70.7%	76.0%	5.3%
43. Infants usually are walking by about 12 months of age.	79.3%	81.8%	2.5%

44. Eight-month-olds act differently with familiar people than with someone not seen before.	83.9%	80.8%	-3.1%
45. Babies are about 7 months old before they can reach for and grab things.	41.0%	34.0%	-7.0%
46. Two-year-olds are able to reason logically, much like an adult would.	63.7%	67.2%	3.5%
47. One-year-olds know right from wrong.	66.3%	68.1%	1.8%
48. Three-month-olds often will smile when they see an adult's face.	83.3%	77.9%	-5.5%
49. Most children are ready to be toilet trained by one year of age.	56.7%	69.2%	12.5%
50. Infants begin to respond to their name at 10 months.	39.3%	32.7%	-6.5%
51. Babies begin to laugh at things around 4 months.	67.6%	68.3%	0.7%
52. Six-month-olds know what "No" means.	57.5%	65.3%	7.8%
53. Four-month-olds lying on their stomach start to lift their heads.	14.9%	12.7%	-2.2%
54. Babbling ("a-bah-bah" or "bup-bup") begins around 5 months.	56.7%	66.2%	9.5%
55. Eighteen-month-olds often cooperate and share when they play together.	23.1%	28.0%	4.9%
56. Infants of 12 months can remember toys they have watched being hidden.	59.1%	66.1%	6.9%
57. Babies usually say their first real word at 6 months.	45.9%	49.2%	3.3%
58. Infants will avoid high places, like stairs, by 6 months of age.	48.6%	53.5%	4.9%

Home Observation for Measurement of the Environment (HOME)

The HOME survey is a widely used, validated measure for assessing parent-child interactions and environments for children ages 9 months to 4 years. The MIECHV project uses the Infant-Toddler version of the HOME (IT-HOME). The IT-HOME measure consists of six subscales: 1) Parental Responsivity, 2) Acceptance of Child, 3) Organization of the Environment, 4) Learning Materials, 5) Parental Involvement, and 6) Variety in Experience. The total HOME scale score has demonstrated strong psychometric properties and is associated with positive parent and child cognitive and social outcomes (Bradley & Caldwell, 1984; Caldwell & Bradley, 2003).

Figure 20 shows the Illinois MIECHV baseline (Y1) and one-year follow-up (Y2) outcomes by the total participants and the six targeted communities. First, it should be noted that baseline differences exist (30.5-38.6) that likely represent differences of participant populations and community demographics. For example, the doula families scored highest at baseline and one-year follow-up, but these increases were not statistically significant; this may be due to having less room to improve, also known as the “ceiling effect.” However, each of the other MIECHV communities demonstrates statistically significant outcomes, including the state total HOME score. Unfortunately, no national norms are available for comparison. However, a number of studies of high-risk populations have used the HOME with the Infant-Toddler Scale, and have reported an average of 30.9 (Bradley & Caldwell, 2003). This suggests that significant gains have been made over the one-year time period, while some of the variation may be attributable to the age of the child.

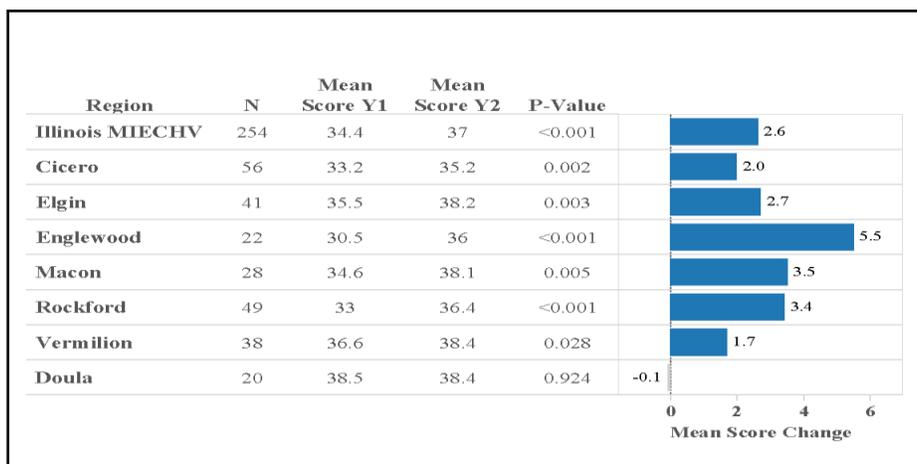


Figure 20. HOME Scores by Community (n=254)

Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO)

The Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO) is an observational tool designed to measure positive parenting behaviors as parents interact with their infants, toddlers and young children (Innocenti & Roggman, 2007). This assessment is conducted by the FDCs, who video record a ten-minute casual, unscripted parent-child interaction activity. Videos are returned to the University of Illinois for review, scoring, and analysis. The four domains that comprise the PICCOLO include:

1. Affection (warmth, physical closeness, and positive expressions towards the child);
2. Responsiveness (responding to child's cues, emotions, words, interests, and behaviors);
3. Encouragement (active support of child's exploration, effort, skills, initiative, curiosity, creativity, and play); and
4. Teaching (shared conversation and play, cognitive stimulation, explanations, and questions).

The PICCOLO scale has also been well validated, linking scale scores conducted in the first three years of life with positive improvements in both cognitive-language and social outcomes assessed at pre-kindergarten. These associations have been stable across multiple cultures, including Latino and African American (Roggman, Cook, Innocenti, 2013; Norman, & Christiansen, 2013).

PICCOLO results also show significant gains for the overall statewide MIECHV program score, and for each MIECHV community with the exception of Macon County (**Figure 21**). Similarly, the baseline scores range from 26.1 (Cicero) to 38.6 (Macon County), which may be part of the reason that Macon County was the only community that did not have a statistically significant change, in spite of its increase to 44.3. This again may be related to a “ceiling effect,” as the other five communities and doulas had lower baseline scores and increased almost twice as much as the Macon County score (5.7 vs. 10.8).

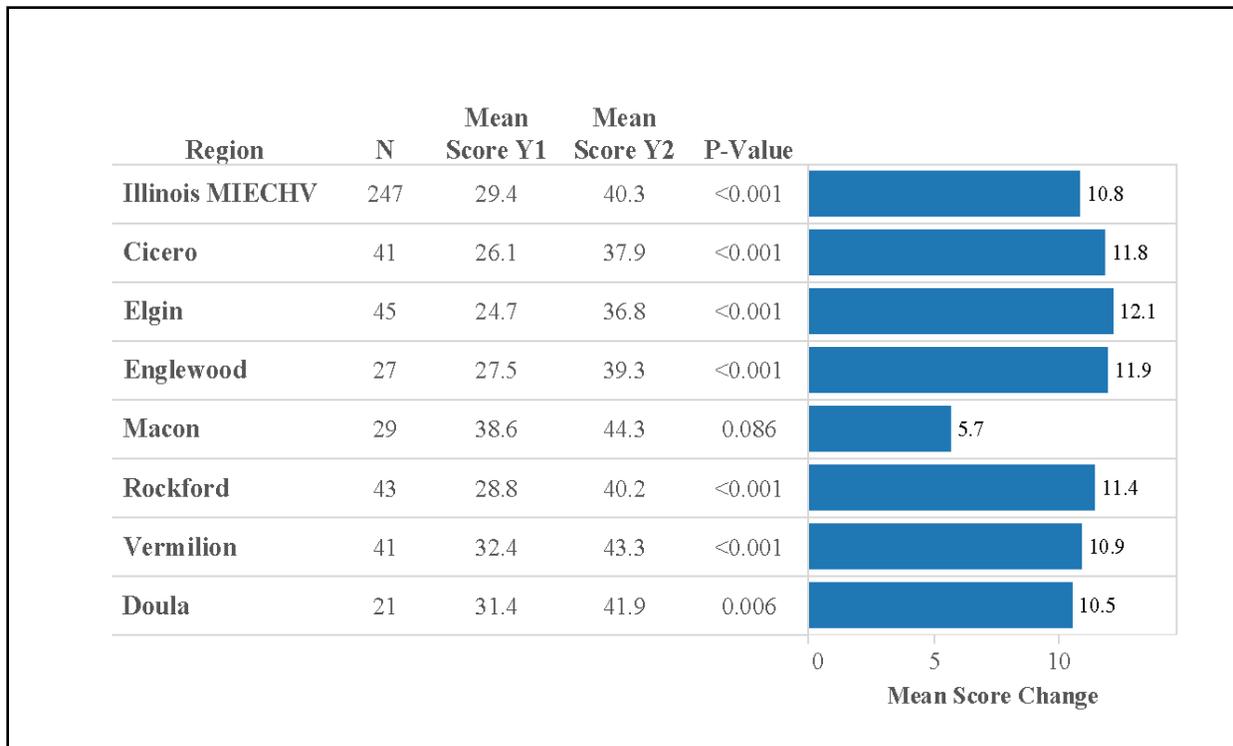


Figure 21: PICCOLO Scores by Community (n=247)

Since the MIECHV evaluation does not have a control group, and the evaluation team wanted to provide some context for understanding how Illinois PICCOLO scores relate to other studies, our analysis compared the MIECHV scores to reference scores by child’s age (Roggman, et al., 2013). **Figures 22** and **23** show MIECHV participants’ baseline and follow-up PICCOLO scores as well as reference means and Illinois benchmark target means. Based on the age at first video recording, MIECHV target children were grouped into three categories- less than one year, one to less than two years and two to three years. Follow-up videos were recorded approximately one year after the baseline data collection. In the absence of national norms or recommended reference range of PICCOLO scores for children of different ages, we considered mean total and domain scores from the PICCOLO user's guide (Roggman et al., 2013) as reference means, although there are limitations (noted below) with this approach. However, based on the initial results from baseline data which showed that the majority of Illinois MIECHV scored very low, benchmark targets were chosen as one standard deviation below these reference means.

In general, all mean domains and total PICCOLO scores improved significantly from baseline to follow-up for all of the three MIECHV target children age

groups. Mean total scores of all three age groups were lower at baseline and higher at follow-up when compared to reference means and Illinois benchmark targets (**Figure 23**). Most of the mean domain scores were lower than both reference means and Illinois benchmark targets, except mean affection and teaching scores for children aged less than one-year and mean encouragement and teaching scores for children aged two- to three-years, which were higher than Illinois benchmark targets at baseline (**Figure 22**). At follow-up, mean affection scores were higher than Illinois benchmark targets, but were slightly lower than the reference means. Mean responsiveness scores at follow-up were also slightly lower than reference means. While all mean domain scores increased from baseline to follow-up, encouragement and teaching had the largest gains and the improvements were more pronounced in all the age groups.

Any comparisons of Illinois MIECHV PICCOLO scores to those of the Early Head Start (EHS) sample (Roggman et al., 2013) should be interpreted cautiously, as unlike the means reported in the PICCOLO manual, where measurements were taken at fixed child ages of 14, 24 and 36 months, videos were recorded for MIECHV target children of all ages. Also, while PICCOLO scores of Illinois MIECHV parents have improved from baseline, it is not possible to entirely attribute these changes to home visiting services due to the lack of a control group.

CPRD's CQI team continues to work with home visitors to improve PICCOLO parenting practices, and subsequently scores, by working with each LIA. This includes quarterly CQI calls where site level PICCOLO reports and feedback at the item, domain and total score levels are shared. Individualized discussions about promoting school readiness, positive parenting practices and observing parent-child interactions provide opportunities to highlight what MIECHV participants are doing well to support their child's development, and explore strategies to address and improve specific PICCOLO items and overall assessment scores. A handout created by the PICCOLO developers called "29 Things Parents Do That Predict School Readiness" (Roggman, 2013) also was shared with each site. The handout lists the 29 PICCOLO items that are part of the assessment and make clear the specific behaviors home visitors can teach participants to encourage affection, responsiveness, encouragement and teaching during everyday interactions with their children.

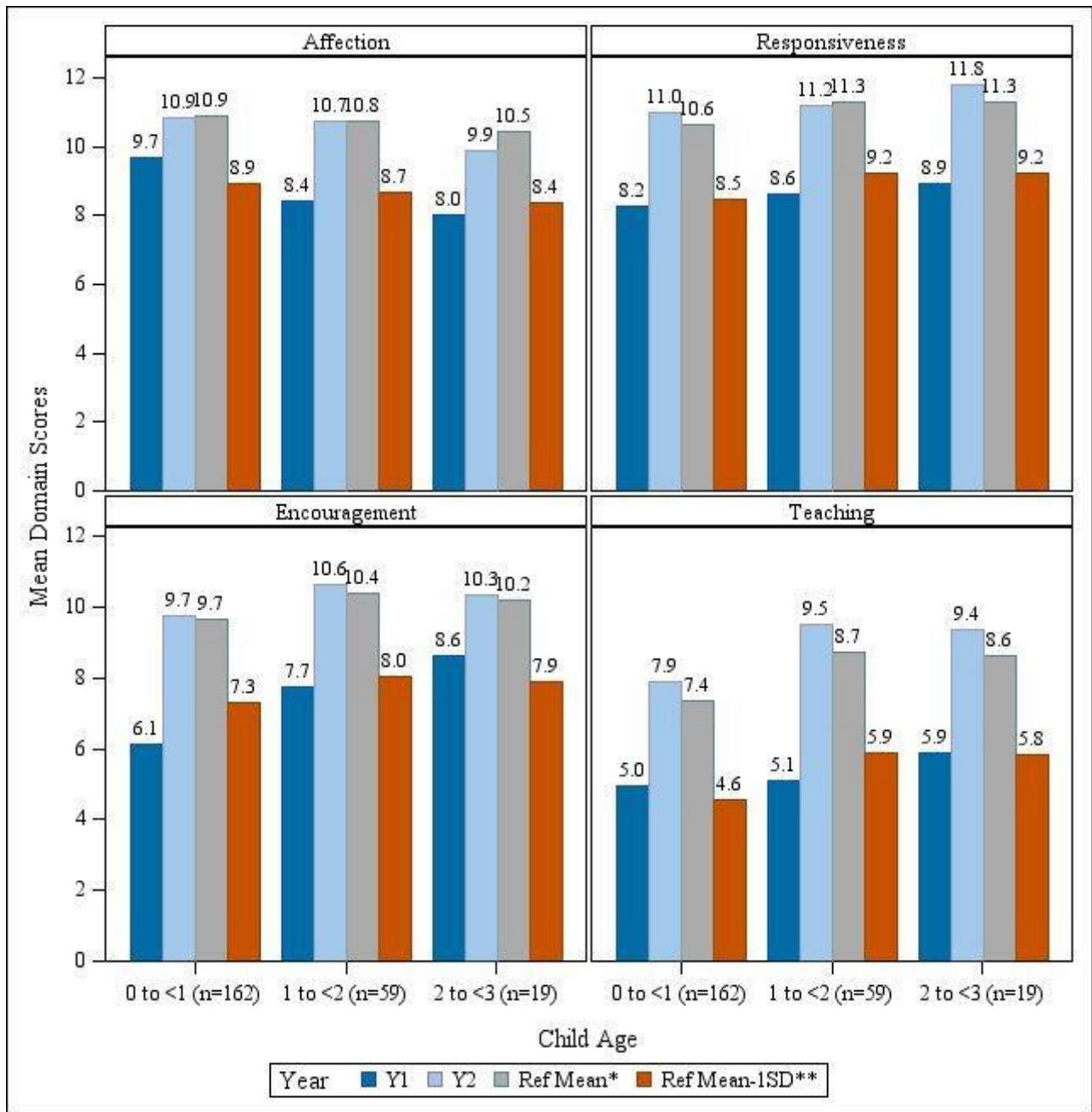


Figure 22: PICCOLO Mean Domain Scores by Child Age

* Scores for children aged 14, 24 and 36 months from PICCOLO user's guide were used as reference for MIECHV child age groups 0-<1, 1-<2 and 2-<3 years respectively

** Reference Mean-1 Standard Deviation

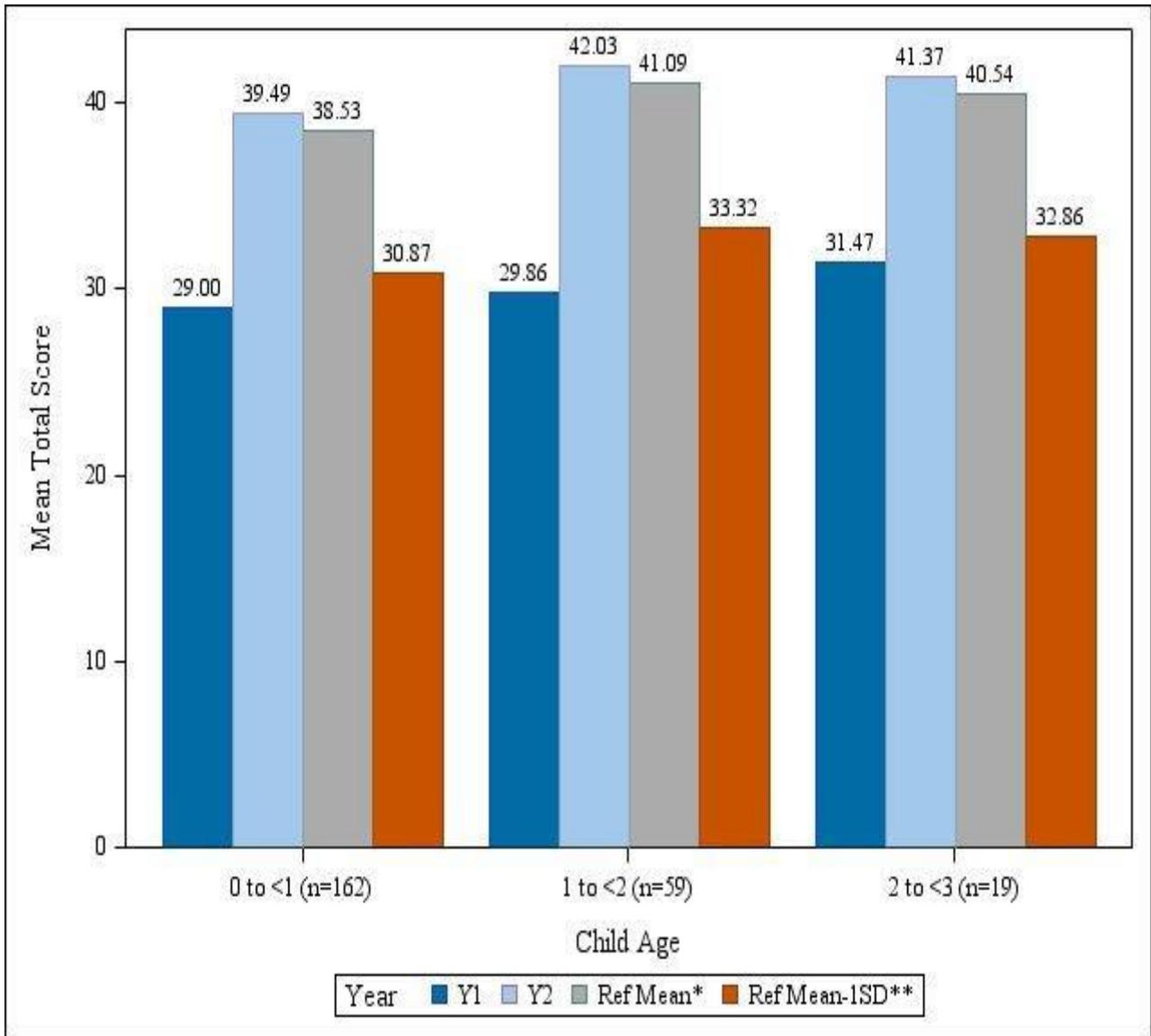


Figure 23: PICCOLO Mean Total Scores by Child Age

* Scores for children aged 14, 24 and 36 months from PICCOLO user's guide were used as reference for MIECHV child age groups 0-<1, 1-<2 and 2-<3 years respectively

** Reference Mean-1 Standard Deviation

Parenting Stress Index-Short Form (PSI-SF)

The PSI-SF assesses the types, frequency, and magnitude of maternal stress related to parent-child relationships and interactions (Abidin, 1995). The PSI-SF can be scored with three subscales and the total score. The three dimensions include:

1. Parental distress (emotional distress in the parenting role);
2. Parent-child dysfunctional interaction (problematic parent-child interactions); and
3. Difficult child (problematic child behavior or demands).

The PSI total scores are presented below in **Figure 24** with an eight point difference at baseline between the lowest (Elgin, 58.2) and highest (Cicero 66.4). Again, these baseline differences may be related to community and participant differences.

Four of the communities report decreases in parent stress, and only one community—Cicero—reported a statistically significant decrease. The large increase of nearly six points in the Englewood community is not really surprising, since we know their home visiting agencies serve very high-risk families; in fact, one of the MIECHV programs is located in an alcohol and drug treatment center.

Overall, the PSI scale has not demonstrated meaningful decreases in the last three years of the MIECHV project. That may be related to the measure or to the population served. On average, it does appear the Illinois MIECHV participants have significantly low PSI scores relative to the norms, which may suggest a baseline lower threshold for the Illinois MIECHV families. It may also indicate that those participants remaining in their home visiting program up to one year may be systematically different than those who do not remain in a MIECHV program for that one year. This measure requires further exploration to determine whether the Illinois sample significantly differs from other test samples and if the PSI measure is sensitive enough to capture changing parenting stress levels by child's age or in the total MIECHV population.

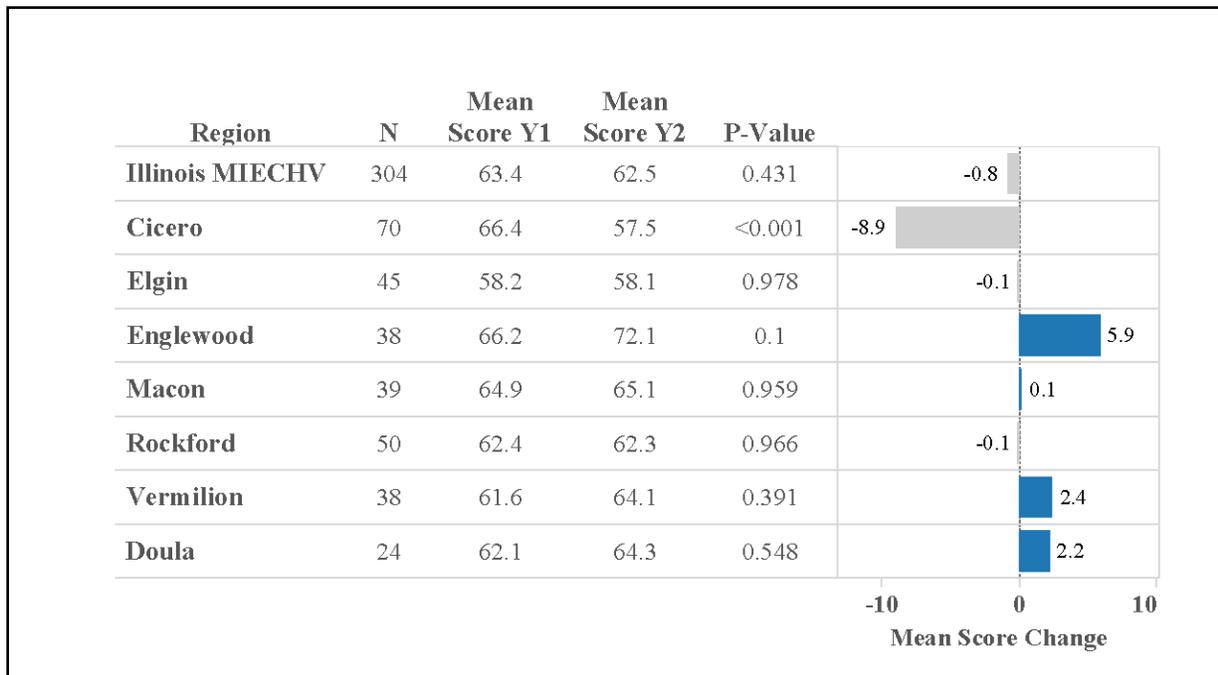


Figure 24. PSI Scores by Community (n=304)

The Adverse Childhood Experiences (ACE) Survey

Nearly 20 years of research has continued to demonstrate associations between child adversity, typically measured by Adverse Childhood Experiences (ACEs) and major physical, social-emotional, and behavioral problems, risky behaviors, developmental disruptions and greater healthcare utilization (Hillis, Anda, Dube, Felitti, Marchbanks, & Marks, 2004; Kalmakis & Chandler, 2015). Seminal epidemiological studies began in the late 1990s, associating the cumulative number of ACE scores with significant morbidity and mortality (Felitti, Anda, Norderberg, Williamson, Spitz, Edwards, Koss, et al., 1998). Although most ACE research is based on retrospective, self-report data, the consistency of the relationship, replication of results in various studies, a dose-response effect and the multiple physical and behavioral outcomes reported in systematic reviews demonstrate the potent epidemiological evidence for these associations (Kalmakis & Chandler, 2015). In fact, early childhood adversity may contribute more to major public health and medical problems such as heart disease, stroke, and diabetes than the well-known medical risk factors such as diet, exercise, cholesterol and hypertension (Dong, Giles, Felitti, Dube, Williams, Chapman, & Anda, 2004).

Figure 25 below shows the conceptual framework for how ACE exposure and experiences creates one or more pathways from social-emotional impairment to premature death, rooted in biological and neurological changes (CDC, 2010).



Figure 25. Conceptual Frame for ACE Impact on Life Outcomes (Bynum et al., 2010)

The Illinois Childhood Trauma Coalition, established in 2005, has provided both state and national leadership information and guidelines to understand the importance of childhood trauma and address the problem among Illinois families and systems. To that end, the Illinois MIECHV evaluation team added the Adverse Childhood Experiences (ACE) measure, beginning in January 2015, as a way to better understand the extent and magnitude to which Illinois MIECHV families experienced complex trauma. The ACE measure, while it provides a more in-depth understanding of the exposure and experiences related to relatively common complex trauma, probably does not capture all the possible trauma that children experience, and trauma such as divorce is almost normative. An expanding research literature has begun to better delineate different types of childhood trauma, and most importantly, what solutions or interventions exist to ameliorate the effects of such trauma on children and families (Garner, 2013; Bethell, Gombojav, Solloway, & Wissow, 2016).

CPRD's FDCs administered a 19-question Childhood Experiences Survey acquired from the researchers working with the state of Wisconsin (Mersky et al., 2013). It includes the 10 original ACE survey questions, and additional

questions related to poverty, death of a parent or sibling, prolonged absence of a parent, bullying, and violent crime victimization. The ACE survey was only administered to second-year MIECHV participants, who were at least 18 years of age and volunteered to participate, in accordance with the UIUC Institutional Review Board approved protocol. A detailed protocol is available from CPRD at the University of Illinois.

The following research questions guide this study:

1. What is the prevalence of ACEs for Illinois MIECHV participants?
2. How do ACEs differ by demographic characteristic?
3. How do different ACE types influence participant scores on the four MIECHV outcome surveys—HOME, KIDI, PICCOLO, and PSI?

We begin with basic descriptive information regarding Illinois' MIECHV ACE sample (see **Table 3**). Illinois MIECHV families show wide variations in the prevalence of different adverse childhood experiences. For example, 58% of respondents lived or are living in poverty and 54% grew up in single-parent families characterized by divorce, separation or absence of a parent. This likely means that over half of the MIECHV ACE respondents have lived in or are living in families that are both poor and have a single parent, creating enormous challenges and demands for healthy family and child development

MIECHV participant demographic characteristics reporting with higher ACE scores include Caucasian (41%), high school diploma (62%), and not married (68%). The next most highly reported ACEs include peer victimization (40%), substance abuse (31%), psychological abuse (30%), family members with mental illness (21%), and substance abuse (31%). The next series of ACEs report lower prevalence, but would be considered more severe in terms of traumatization: physical abuse (14%), sexual abuse (19%), domestic violence (17%) and death of a family member (19%). Lastly, it should be recognized that Illinois is clearly reaching the priority populations as defined by the MIECHV legislation.

How do Illinois MIECHV participants' ACE scores compare to those from a BRFSS ACE study?

The Center for Disease Control and Prevention (CDC) conducts an annual Behavioral Risk Factor Surveillance System (BRFSS) survey that provides national and statewide estimates of several health behaviors and chronic diseases. Bynum et al. (2010) analyzed BRFSS's ACE module data collected

from participants in five states. As a way to provide context to the Illinois MIECHV ACE study, the evaluation team compared the Illinois sample prevalence estimates to those obtained from the CDC's five state sample. The Illinois MIECHV ACEs survey had more questions on different types of ACEs (12) compared to the CDC's five state sample (8). Therefore, the CDC to MIECHV comparison was only made on the types of ACEs that could be exactly matched on both surveys. Prevalence of ACE types by demographics, including the four additional ACE types in MIECHV– poverty, peer victimization, parental divorce/separation/absence, death of a parent, caretaker, sibling and victim of violent crime are reported in **Table 3**. The comparison shows that prevalence of most ACE types in Illinois MIECHV participant sample closely match those of the BRFSS sample, with the exception of incarceration, which has a prevalence of 12% in Illinois MIECHV families compared to 7% in the BRFSS sample.

Comparisons between ACE the prevalence of demographic factors show the following differences:

1. Teen mothers report higher levels of poverty, peer victimization, and family incarceration.
2. Mothers aged 24-29 years reported almost twice the prevalence (28%) of sexual abuse compared to the youngest (15%) and oldest (15%) age groups.
3. African Americans reported the lowest prevalence for physical abuse, and mental illness.
4. Non-Hispanics reported highest levels of peer victimization, domestic violence, mental illness, substance abuse and parental divorce and separation.
5. Mothers who have a high school diploma reported higher levels of psychological abuse, peer victimization, incarceration and parental divorce or separation, compared to those who did not graduate from high school.
6. Married mothers generally reported lower ACE scores than other living arrangements.

Table 3. BRFSS and Illinois MIECHV Comparisons of ACEs (n=163)

	N	Poverty	Psychological Abuse	Physical Abuse	Sexual Abuse	Peer Victimization	Domestic Violence	Mental Illness	Substance Abuse	Incarcerated	Parental Divorce, Separation, or Absence	Death of Parent, Caregiver, or Sibling	Victim of Violent Crime
		%	%	%	%	%	%	%	%	%	%	%	%
BRFSS	16,755		27%	15%	17%		17%	22%	31%	7%			
Illinois MIECHV	163	58%	30%	14%	19%	40%	17%	21%	31%	12%	54%	19%	12%
Maternal Age at Enrollment													
15-19	37	65%	22%	11%	15%	30%	16%	22%	38%	19%	54%	16%	8%
20-23	45	53%	24%	11%	19%	33%	9%	31%	22%	16%	47%	23%	9%
24-29	39	59%	38%	18%	28%	46%	26%	26%	46%	13%	74%	23%	26%
>=30	42	57%	36%	15%	15%	50%	17%	5%	20%	2%	44%	12%	5%
Race													
Caucasian	67	60%	27%	16%	19%	43%	16%	33%	34%	15%	58%	10%	12%
African American	42	52%	33%	7%	10%	36%	15%	7%	24%	17%	61%	28%	12%
Other	54	61%	31%	15%	26%	39%	19%	17%	31%	6%	44%	22%	11%
Ethnicity													
Non-Hispanic	81	63%	35%	16%	19%	44%	21%	28%	36%	16%	63%	23%	15%
Hispanic	82	54%	26%	11%	19%	35%	12%	15%	26%	9%	46%	15%	9%
Education													
<HS Diploma	61	57%	23%	11%	19%	34%	20%	20%	33%	8%	44%	20%	10%
>=HS Diploma	102	59%	34%	15%	19%	43%	15%	22%	30%	15%	60%	18%	13%
Relationship Status													
Other	110	59%	30%	14%	17%	39%	18%	24%	33%	13%	59%	21%	14%
Married	53	57%	30%	13%	23%	42%	13%	15%	26%	11%	45%	13%	8%

Cumulative ACE Scores by Socio-demographic Characteristics

As mentioned earlier, research has found that ACE scores have a dose-response relationship with the accumulation of stress and trauma compounding over time resulting in poor health habits, behavioral health problems, and ultimately, morbidity and premature mortality (Felitti, et al., 1998; Hillis et al., 2004). That is, the cumulative influence of ACEs has been associated with an array of negative health behaviors, chronic diseases and death (Bellis, Lowey, Leckenby, Hughes, & Harrison, 2014). Emerging research has been accumulating evidence not only for the relationship between ACEs and chronic health conditions, but also on how trauma/ACEs can negatively influence children and youth in their academics, behaviors, and psychological distress (Wade et al., 2014; Kerker, et al., 2015). **Table 4** below shows the cumulative number of ACEs reported by MIECHV participants. Most studies report three or more ACEs, which are associated with increased risk for health and behavioral problems.

Another comparison of BRFSS and Illinois MIECHV ACE scores are the number of cumulative ACEs for both BRFSS and Illinois MIECHV samples. These results show a very close approximation for BRFSS (Bynum et al., 2010) and Illinois samples suggesting the samples are comparable. Various researchers have identified thresholds for negative outcomes at three or more ACEs, but it is also likely that threshold scores may depend to some degree which three ACEs were the experienced. Using CDC's definition of high at three or more ACEs, 28% of MIECHV families and children are at higher risk for a myriad of health behaviors and outcomes. This comparison is also in line with CDC's five state estimates.

Table 4. BRFSS Five State Study and Illinois MIECHV Comparison of Cumulative ACEs (n=163)

		Adverse Childhood Experiences (ACEs) (%)					
		0	1	2	3	4	>=5
	N	%	%	%	%	%	%
BRFSS	16,755	39.2	21.6	12.8	9.7	6.4	10.3
Illinois MIECHV Sample	163	36.8	19.6	15.3	11.7	6.8	9.8

Illinois' Cumulative ACE Scores by Socio-demographic Characteristics

Because Illinois MIECHV used an ACEs measure that had five additional childhood trauma constructs, the Illinois sample is likely different from the five state study (Bynum et al., 2010). **Table 5** below shows not only the number and aggregation of ACEs, but how these ACEs are distributed by socio-demographics.

When examining the number of ACEs by demographics, the following differences were revealed:

1. Mothers aged 24-29 years reported the highest number of ACEs (≥ 5) (41%), while teen mothers and early twenties report the next highest numbers- (30%) and 22% respectively. Caregivers over age 30 reported the lowest number of cumulative ACE scores (19%).
2. No major differences appears to exist by race or level of education
3. Non-Hispanics reported higher number ACEs scores compared Hispanics.
4. Married mothers reported fewer ACEs than non-married MIECHV participants.

Table 5. Comparison of Prevalence of Adverse Childhood Experiences (ACEs) Between Illinois MIECHV by Selected Demographics (n=163)

	N	Number of ACEs					
		0 %	1 %	2 %	3 %	4 %	>=5 %
Illinois MIECHV Total	163	12.9	17.2	17.2	12.3	12.9	27.6
Maternal Age at Enrollment							
15-19	37	13.5	21.6	13.5	10.8	10.8	29.7
20-23	45	13.3	20	20	6.7	17.8	22.2
24-29	39	10.3	7.7	10.3	23.1	7.7	41
>=30	42	14.3	19	23.8	9.5	14.3	19
Race							
Caucasian	67	11.9	16.4	14.9	13.4	13.4	29.9
African American	42	11.9	23.8	16.7	7.1	14.3	26.2
Other	54	14.8	13	20.4	14.8	11.1	25.9
Ethnicity							
Non-Hispanic	81	9.9	17.3	12.3	8.6	17.3	34.6
Hispanic	82	15.9	17.1	22	15.9	8.5	20.7
Education							
<HS Diploma	61	18	14.8	19.7	11.5	11.5	24.6
>=HS Diploma	102	9.8	18.6	15.7	12.7	13.7	29.4
Relationship Status							
Other	110	11.8	19.1	16.4	9.1	12.7	30.9
Married	53	15.1	13.2	18.9	18.9	13.2	20.8

Impact of Socio-demographic Factors and ACE Scores on MIECHV Outcomes

The next way that CPRD examined the ACE data was in relationship to the immediate and intermediate parent-child outcomes – HOME, PSI, KIDI and PICCOLO. Multivariate regression models were used to study the relationships between MIECHV outcomes and, and various ACE types, while adjusting for socio-demographic factors. Caution must be used in the interpretation of results at this time due a relatively modest sample size (N=163), and very low prevalence of certain types of ACEs.

For the socio-demographic factors, it appears that only Hispanics on average have lower KIDI scores compared to other measures, which may be the result of difficulties related to cultural and linguistic understanding. The KIDI has varying levels of cognitive complexity that range from basic safety and health

questions to more complex, developmental knowledge that may be culturally bound to middle class America.

With respect to ACEs, controlling for other variables in the regression model, MIECHV participants who reported high levels of psychological abuse had lower HOME, KIDI, PICCOLO scores, but statistically significant differences were observed only for the HOME. Maternal age at enrollment was found to be positively associated with mean total PICCOLO scores. MIECHV participants, who reported physical abuse, had significantly higher PSI scores. Significant positive associations were observed between HOME total scores, and ACE types- peer victimization and household substance abuse. Significant negative associations between PSI total scores and domestic violence are counterintuitive and should be further explored in detail through future analysis. ACE types such as poverty, sexual abuse, household mental illness, incarcerated household member, parental divorce/separation/absence, death of parent/caregiver/sibling, victim of violent crime were not significantly associated with any of the four MIECHV outcomes in the multiple regression models.

The results in **Table 6** show that the variance in MIECHV outcomes explained by these regression models (Coefficient of determination or R^2) ranges from to 26% (for the PICCOLO) to 56% (for the KIDI). As R^2 can be influenced by the number of predictors and sample size, Adjusted R^2 values, which account for such factors, are also reported and these values indicate that the percent of variance that can be explained actually ranges from 12% (for the PICCOLO) to 49% (for the KIDI). Therefore, types of adverse childhood experiences seem to explain variation in some MIECHV outcomes better than others. Future analyses will focus on identifying other predictors of MIECHV outcomes that can improve the fit of these models.

Table 6. Multivariate Regression Analyses for MIECHV Outcomes

	HOME	KIDI	PICCOLO	PSI
	B (SE)	B (SE)	B (SE)	B (SE)
Intercept	31.72 (3.09)***	16.41 (2.8)***	22.94 (4.29)***	32.73 (7.52)***
Maternal Age	<0.001 (0.05)	0.03 (0.07)	0.36 (0.14)*	-0.11 (0.2)
African American	-1.71 (1.12)	-1.27 (1.33)	-2.6 (2.63)	-2.22 (3.87)
Other	-1.57 (0.91)	1.8 (1.13)	-2.57 (2.27)	-3.55 (3.46)
Hispanic	-0.1 (0.93)	-3.28 (1.19)**	-0.85 (2.21)	-2.06 (3.55)
>=HS Diploma	1.2 (0.72)	0.15 (0.88)	-1.06 (1.75)	2.67 (2.66)
Married	1.15 (0.78)	-1.07 (0.98)	1.36 (1.91)	0.87 (2.97)
Baseline Score	0.19 (0.08)*	0.61 (0.06)***	0.19 (0.07)**	0.49 (0.08)***
Poverty	-0.75 (0.73)	-0.45 (0.91)	0.75 (1.77)	0.66 (2.73)
Psychological Abuse	-3.21 (0.94)***	-1.61 (1.12)	-2.09 (2.24)	-1.25 (3.28)
Peer Victimization	1.86 (0.79)*	0.51 (0.98)	0.53 (1.9)	2.01 (3.02)
Physical Abuse	1.47 (1.15)	2.15 (1.5)	-0.74 (2.94)	10.24 (4.38)*
Domestic Violence	-2.22 (1.1)*	-1 (1.49)	0.03 (2.97)	-12.39 (4.3)**
Sexual Abuse	-1.07 (1.04)	0.74 (1.31)	1.19 (2.91)	-2.01 (3.88)
Mental Illness	1.06 (1)	0.01 (1.27)	0.72 (2.39)	-6.16 (3.79)
Substance Abuse	2.12 (0.87)*	1.43 (1.13)	1.73 (2.16)	6.97 (3.23)*
Incarceration	-1.99 (1.31)	-0.93 (1.61)	-0.94 (3.25)	2.59 (4.72)
Divorce or Separation	-1.08 (0.7)	-0.2 (0.88)	3.33 (1.68)	-1.8 (2.65)
Death of Parent	-1.2 (0.91)	-0.32 (1.13)	2 (2.1)	2.56 (3.45)
Violent Crime	-0.39 (1.36)	1.94 (1.47)	-1.43 (3.28)	3.68 (4.4)
R²	0.37	0.56	0.26	0.36
Adjusted R²	0.25	0.49	0.12	0.26

Summary and Conclusions

Analysis of the ACE survey data collected from the Illinois MIECHV families, who participated in the home visiting programs for at least one year, provides

both interesting and important information. Overall, results show this select sample of MIECHV families' reported approximately the same prevalence for ACEs as in the CDC's five state study (Bynum et al., 2010). The most frequently reported ACEs for the MEICHV sample were poverty and parental divorce/separation or long absence, which was reported by over 50% of the sample. The only difference was that Illinois MIECHV participants reported almost twice the prevalence for incarceration of family members than in the BRFSS study. Demographic differences show that younger mothers (<30) had a greater number of ACEs, while Hispanics and married caregivers have reported fewer ACEs. No differences were found by race or level of education. Differences in MIECHV outcome scores by demographics and ACE types were also identified.

Consumer/Parent Satisfaction Survey

The Illinois MIECHV Consumer/Parent Satisfaction Survey (C/PSS) was adapted from the Healthy Families Illinois parent satisfaction survey. The C/PSS was designed to help program and home visiting staff understand and report MIECHV participants' satisfaction with their home visitor and home visiting services. This multi-dimensional measure assesses service quality, willingness to recommend home visiting services, perceptions of good treatment, and time spent on various child development topics.

Satisfaction has been shown to be a positive predictor of remaining in and completing home visiting programs, along with other factors such as the frequency and duration of visits, cultural competence, skills and experience of the home visitor, and positive rapport with the family (Barak, Spielberger, & Gitlow, 2014; Holland, et al., 2014; Damashek et al., 2011).

The C/PSS results for all Illinois MIECHV sites, administered by FDCs to active program participants at the 2015 one-year post enrollment follow-up visit, are shown in **Figure 26** below. Statewide results of 227 participants surveyed show high overall satisfaction with home visiting services as rated by service quality, perceived helpfulness, and willingness to recommend home visiting services to other families in need.

When asked how they would rate the quality of services received from their home visitors, MIECHV participants overwhelmingly rated the services as excellent (89%) or good (10%). All felt the services they received helped them, with 96% responding that the services helped "a great deal." Ninety-six percent would "definitely" recommend home visiting services to others, and all

participants reported they had been treated with respect and consideration. Participants reported that overall they were satisfied with the help received from their home visitor, and with the information received on child development and parenting skills. Visit content, as would be expected, included the home visitor talking about child health, development, and parenting. These positive C/PSS scores show that those who remained in the home visiting programs truly liked and benefited from them. This is likely due to home visitors establishing positive, supportive, and productive relationships with caregivers and their families.

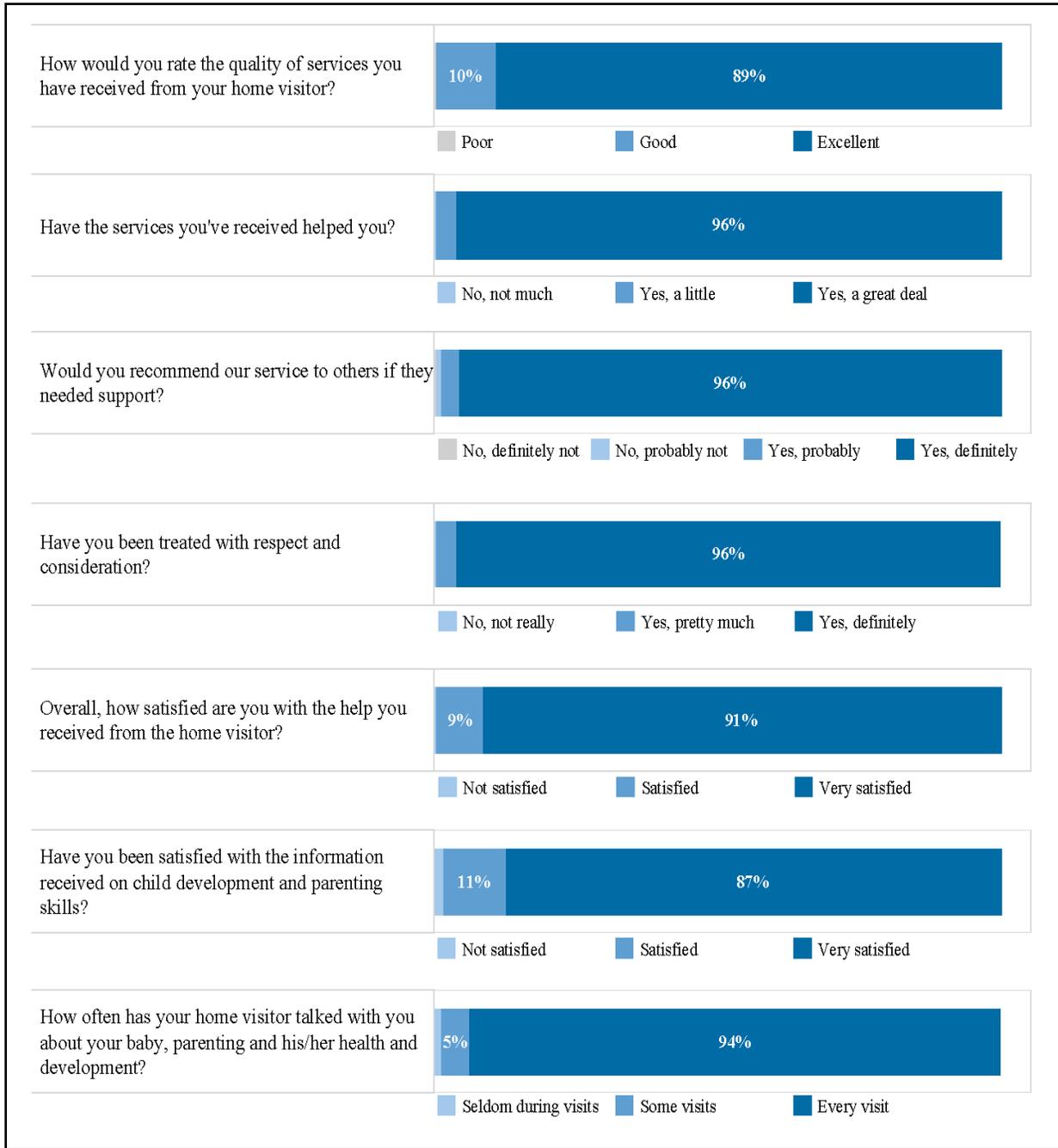


Figure 26. Parent Satisfaction Survey: All Sites

PSS Questions Regarding Quality, Helpfulness and Willingness to Recommend

Community comparisons of the PSS survey results show a positive picture of overall satisfaction, with minor variations in the six communities. As shown in **Figure 27** below, satisfaction with the quality of services (question 1) was high across sites, with the most ratings of “excellent” in Rockford (95%), Cicero and doula programs (93%). Elgin and Vermilion had slightly lower ratings in the excellent category (85% and 81% respectively), with one Elgin participant rating the services as “poor.” Impressively, 100% of participants in Cicero, Macon, and the doula programs responded that the services helped them “a great deal” (question 2), and only one participant (Elgin) responded “no, not much.”

Over 90% of participants in each community would “definitely recommend” home visiting services to others needing support, with only one participant each from Elgin, Englewood, and Rockford saying probably or definitely not.

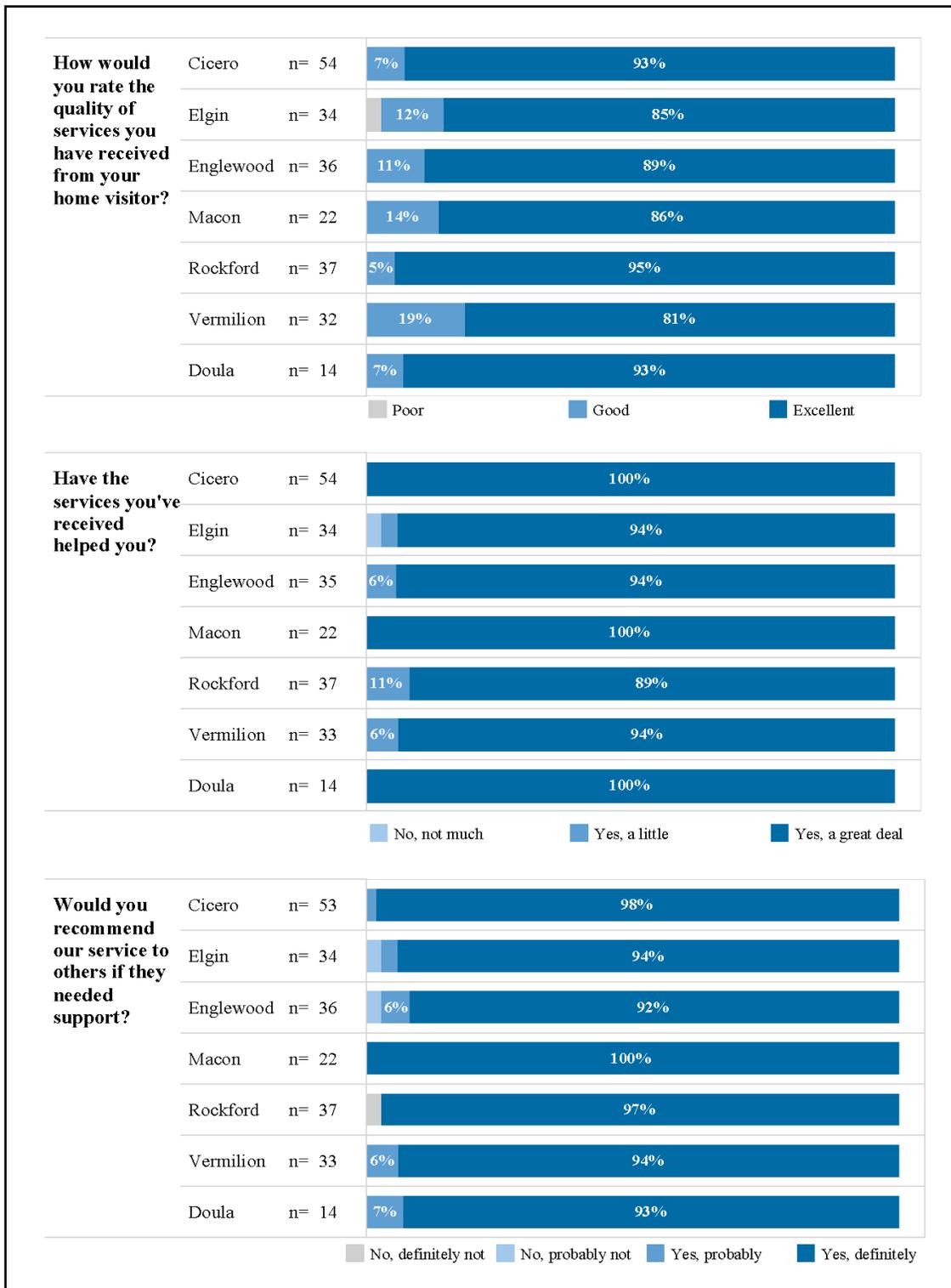


Figure 27. PSS Questions Regarding Quality, Helpfulness and Willingness to Recommend

PSS Questions Regarding Respect and Satisfaction

Figure 28 below shows community comparisons of responses to survey questions 4 and 7. When asked if they have been treated with respect and consideration (question 4), individual MIECHV community responses relate a high positive response, with 100% of the Rockford and doula sites choosing the highest rating.

The overall satisfaction with their home visitor (question 7) rating is again very high across communities, with doula participants showing the highest possible satisfaction, with 100% responding “very satisfied.” These survey results reflect positive relationships, ongoing engagement, and the supportive role the home visitors and home visiting programs play in the MIECHV participants’ everyday lives.

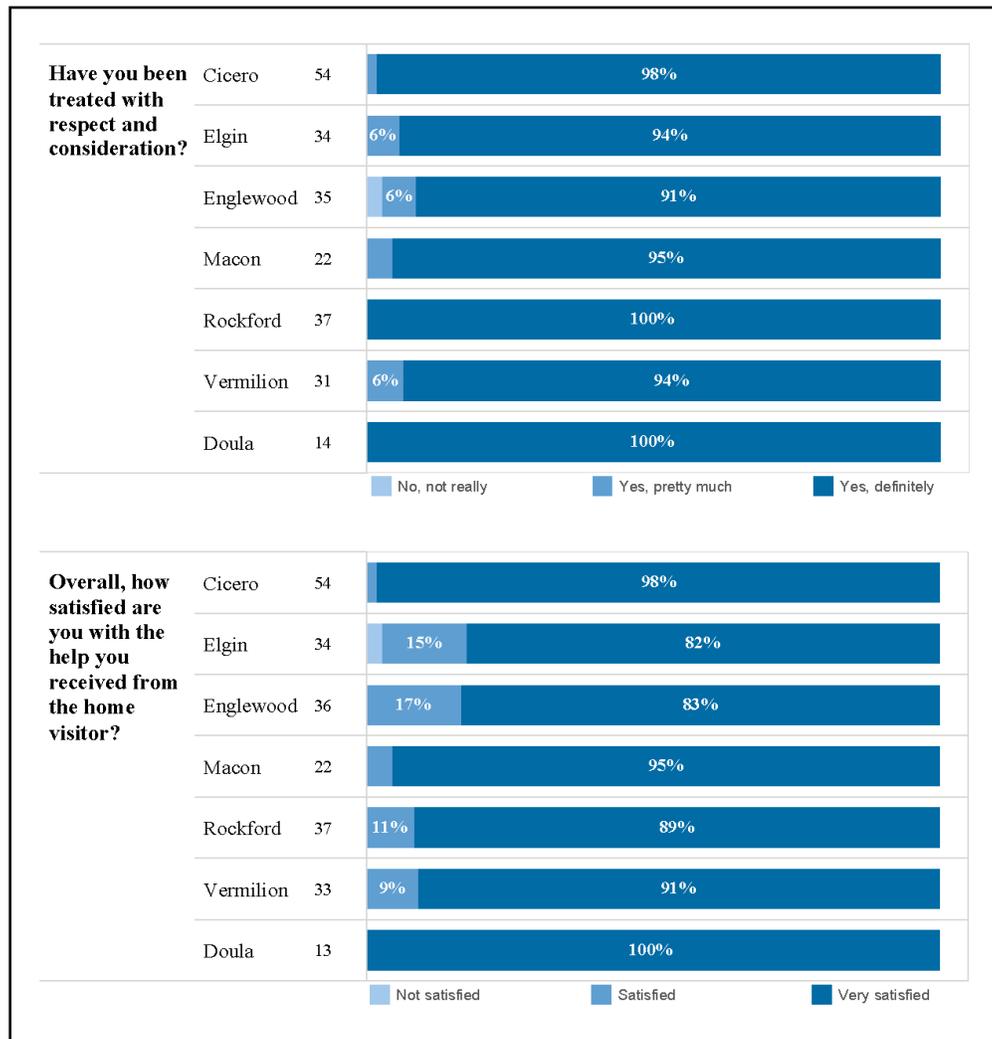


Figure 28. PSS Questions Regarding Respect and Satisfaction

PSS Questions Regarding Child Development Information

Final survey questions related to satisfaction with information received and child development topics discussed during home visits is presented in **Figure 29**. While all but three participants across sites reported being satisfied with the information received on child development and parenting skills (question 8), the highest ratings, with over 90% of participants reporting being “very satisfied,” were in the Cicero and Rockford communities and the doula programs. As would be expected from the nature of the services provided across models, participants overwhelmingly reported that their home visitor talked with them about their baby, parenting, and health and development (question 9) at every visit.

At the end of the PSS, participants were encouraged to “Please add suggestions regarding the program or your home visitor that could assist you better.” Of the 104 responses, the overwhelming majority related positive opinions, most commonly stating: “I love my home visitor,” “Everything is great,” and “No changes at all.” Among the suggestions made, several respondents wanted additional home visits or longer visits. Many noted weekly visits would be ideal rather than every other week. Other common suggestions included physical resources for their child and family. These included items such as diapers, car seats, baby clothes, and bus cards. Some also wanted more activities to do with their children and materials with more information on support services. Seven respondents also suggested more group play activities and trips.

It should be noted that the CPRD evaluation team also conducted a follow-up parent satisfaction telephone survey for home visiting participants who dropped out of the MIECHV programs reporting relatively high levels of satisfaction, but not as high as those who remained in MIECHV programs (CPRD, 2015). This will be repeated in 2016/

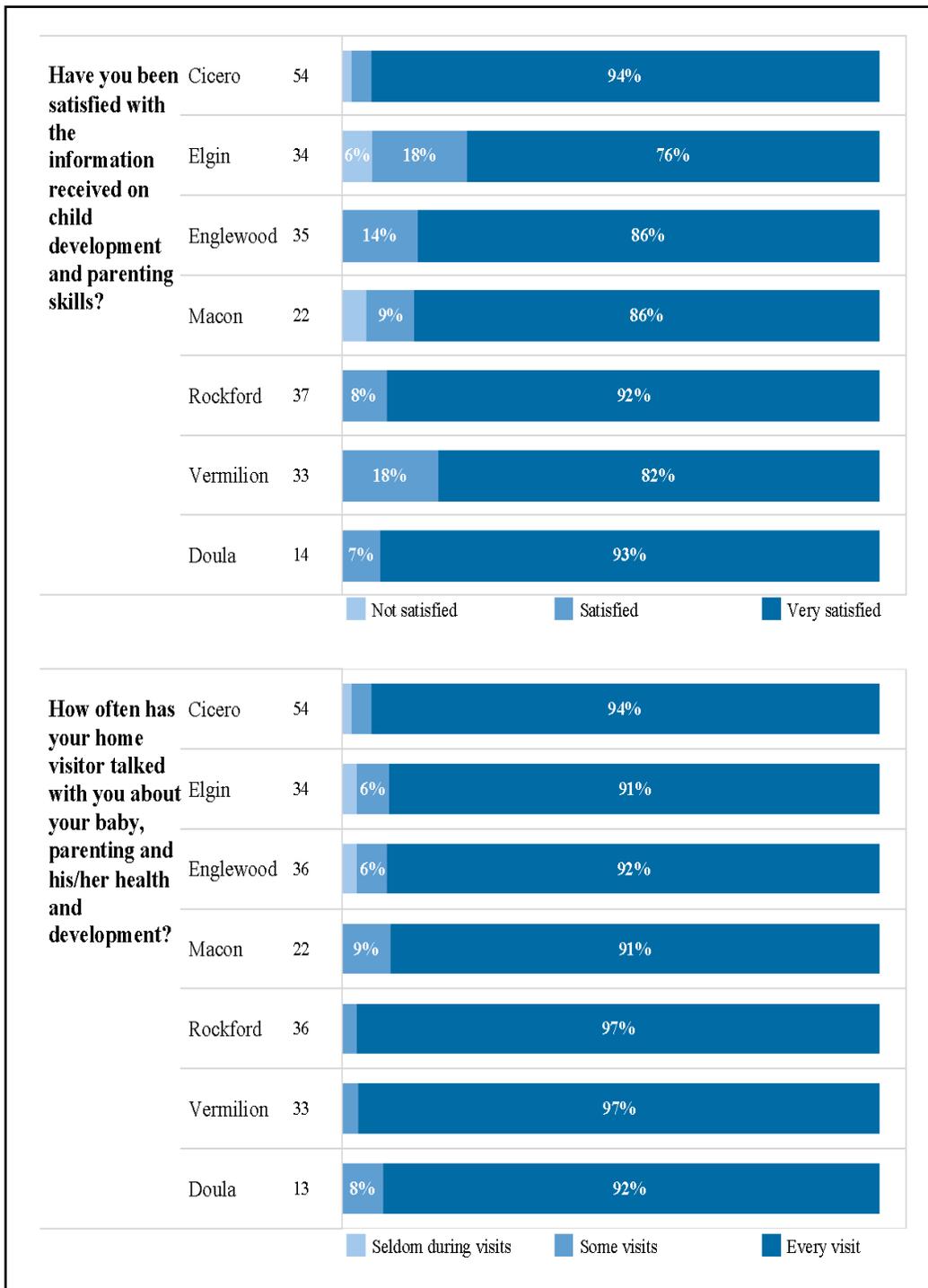


Figure 29. PSS Questions Regarding Child Development Information

2015 MIECHV Site Visits – A Qualitative Study

As a key part of the evaluation plan, CPRD staff has conducted a yearly qualitative study conducting site visits to the six MIECHV communities to meet with home visiting program site supervisors and home visitors, as well as shadow the FDCs' home visits. During May and June of 2015, CPRD staff arranged site visits to conduct structured group discussions, and a home visit with each FDC. Our goal has been to assess the successes and challenges that sites encounter during home visiting, CQI activities, and the field data collection process. Key findings from site visits are described in broad categories below:

Scheduling and data collection

- Overall, scheduling and data collection have continued in a positive way; FDCs have been able to work around home visitor/family schedules.
- Text messages and e-mails have been successfully used to confirm appointments.
- Scheduling is more challenging in summer.
- FDC turnover in one community created short-term scheduling issues.
- Data collection can be confusing due to home visitors working with multiple evaluation projects, including MIECHV, MIHOPE, and Mothers and Babies.
- Visit Tracker streamlining and upgrades to the systems have helped data entry, quality and accuracy.
- Data collection, while it can be overwhelming at times, does not appear to contribute to home visiting staff turnover.

Families' responses

- Parents continue to be receptive to FDCs, understand the importance of data collection in relation to funding, and appreciate gift cards for their participation.
- In-home video for the PICCOLO measures cause some concerns among a small number of participants; but the FDC pamphlet and background understanding of the goals and purposes appears to be helpful in these instances.
- Some participants need to have the purpose or meaning of a particular questions explained to them. Questions from the KIDI are

particularly challenging because many complex child developmental issues asked.

- Implementation of the ACE survey has generally not been a problem, and we have calculated approximately 6 refusals and no adverse reactions at this time.
- Domestic violence screening has generally gone well.
- The 4Ps and ASQ assessments may present particular challenges in implementation and interpretation.
- In some instances, the Edinburgh assessment may not be an appropriate depression screening tool because very few caregivers report at or above the threshold levels.

Benchmarks

- It can be difficult to track prenatal visits and accurately date them.
- There are ongoing issues with participants' use of the Emergency Room, due to appointment availability, doctor recommendations, and clinic hours.
- Breastfeeding maintenance is an ongoing challenge, but there are supportive programs and successes, including with doulas.
- Health insurance continues to be a problem for undocumented participants.

Safety concerns

- Safety concerns for home visitors include dogs, drugs and crime, smokers, and bedbugs.
- Precautions include making sure colleagues know where the home visitor is going and when she is scheduled to return. Home visitors always carry their IDs and phones.
- In addition, home visits should always be scheduled during daylight hours, with special attention to shorter days in winter.

Referral and caseload capacity

- Coordinated Intake (CI) has proved to be a reasonably efficient and effective method of maintaining home visiting caseloads in some communities, but challenges remain in other communities.
- Home visiting referrals can be fairly competitive among various programs.

IV. MIECHV Continuous Quality Improvement

Continuous quality improvement (CQI) is a vital component of Illinois' MIECHV initiative, providing a mechanism to generate meaningful commitments and gains from all levels of the program. For the purposes of programs in Illinois, CQI is the complete process of identifying, describing, and analyzing strengths and problems, and subsequently testing, implementing, and learning from and/or revising solutions. CQI is also the cornerstone for determining whether the program models are implemented in the way that they were designed and whether there is positive change in benchmark performance. The CQI component may be the most critical aspect of MIECHV as it identifies, tracks, and creates improvements and midcourse corrections for ensuring the best possible services are provided to Illinois children and families.

CPRD's full time Continuing Quality Improvement Specialist began in earnest in mid-FY 2013, and has been fully implementing CQI processes across all LIAs and at the state level through FY 2015.

Local Implementing Agency CQI Activities

The CQI Specialist conducts monthly technical assistance calls with each home visiting agency to determine progress, challenges, and problems, and to provide support in planning and implementing CQI activities. Additional webinars, benchmark-specific training calls, and other community-level supports are provided on an as-needed basis.

The mainstay of CQI activities is the development, implementation and evaluation of CQI Action Plans. Each agency develops plans several times a year. Plans are developed based on prior performance on the MIECHV benchmarks and aim to improve benchmark performance and overall program quality.

During this fiscal year, home visiting agencies developed CQI Action Plans addressing the following benchmarks, listed in **Table 7**:

Table 7. Targeted Constructs for CQI Plans: Year 3 to Year 4 Changes

Construct	# of Agencies	FY 14	FY 15	Change	Improvement?
Breastfeeding	7	22%	29%	+7%	Yes
Contraception	6	38%	61%	+23%	Yes
ASQs	5	87%	91%	+4%	Yes
Education	5	30%	46%	+16%	Yes
Child ED visits	4	21%	19%	-2%	Yes
Injury prevention	3	94%	96%	+2%	Yes
Well-child visits	2	88%	91%	+2%	Yes
Income & benefits	2	36%	54%	+18%	Yes
ASQ-SE	2	77%	87%	+10%	Yes
Prenatal care	1	59%	73%	+14%	Yes
Referral completion	1	70%	62%	-8%	No
Safety planning	1	69%	100%	+31%	Yes

Agencies improved in all but one of the areas to which they devoted attention through the CQI process.

CQI Activities with Coordinated Intake and Community Systems Development Programs

This year, the CQI team continued to conduct technical assistance calls with each region’s Coordinated Intake (CI) and Community Systems Development (CSD) teams, as well.

During this year, CI and CSD agencies focused on the following benchmarks:

- Increasing referrals from MIECHV priority populations, including teens, pregnant women, low income families, and families with a history of interactions with the child welfare system
- Increasing the number of agencies with single points of contact
- Increasing the number of signed Memoranda of Understanding

CI and CSD teams also met at a Learning Community where they were able to share prior CQI work. This opportunity allowed agencies to get a better sense of

successes and challenges around the state and to tailor their future work accordingly.

Additionally, Visit Tracker built a customized module that allows Coordinated Intake agencies to process referrals through the MIS system, rather than offline. This functionality still needs some additional customization but has improved the efficiency of referral processing and will lead to more robust data to be used in program evaluation and CQI activities.

The 2015 Home Visiting and Continuous Quality Improvement Survey Summary

In June 2013, the CPRD team conducted the third CQI readiness and capacity survey to assess the status of CQI at each site, determine staff experience with CQI, and identify perceived challenges to implementing a CQI process at their agency. Respondents expressed an understanding of the importance of CQI to program success, but reported having little knowledge of or experience with CQI. CPRD repeated follow up surveys in June 2014 and June 2015 to determine how the CQI staff and agency-based teams integrated and improved their CQI processes. The survey has been modified over time to address important issues such as home visitor salary, retention, and safety. A summary of the findings are provided below. The full report is available on the [CPRD website](#).

Home visiting staff attitudes and beliefs regarding CQI practices

A major part of the FY 2013—FY 2015 surveys was comprised of questions pertaining to home visitor knowledge, beliefs, norms and implementation of CQI practices. **Table 8** reports the frequency of attitudes, beliefs and experiences from FY 2013 to FY 2015, based on whether respondents agreed to a particular statement. These statements primarily relate to CQI, but also refer to multiple components of their organization, CQI team, participants and implementation of procedures.

Table 8. Respondent Agreement (agree/strongly agree) by Survey Item, FY 2013—FY 2015

	2013		2014		2015	
	n	%	n	%	n	%
Implementing CQI processes takes away from the quality of our program.	6	7%	12	16%	9	12%
Our team is committed to the CQI process.	51	62%	59	79%	66	90%
Our organization has a champion for the CQI process.	36	43%	38	48%	43	59%
We have integrated CQI into our program.	30	38%	65	83%	66	89%
We, as a team, analyze the root causes of problems before implementing any changes.	59	69%	58	73%	60	81%
In our program, I see fewer quality problems today than in the past.	36	44%	43	56%	50	68%
Our team has adequate time to conduct CQI procedures.	29	35%	40	51%	39	53%
Our team has high quality information (data) to conduct CQI process.	35	43%	50	64%	57	77%
Our program has strong partnerships with necessary community resources for home visiting families.	69	84%	63	82%	63	85%
We have had adequate training and technical assistance to implement the CQI process.	25	30%	54	69%	48	66%
We can see the benefits from our CQI process.	31	38%	53	67%	57	78%
Our supervisor is likely to support recommendations from the CQI team.	64	77%	64	81%	60	83%

Overall results show moderate to large improvements from 2013 to 2015 for ten of the twelve questions. Thus CQI team members report agreeing or strongly agreeing that they/I...

- Are committed to the CQI process (increased from 62% to 90%).
- Have a champion for the CQI process (increased from 43% to 59%).
- Have integrated CQI into their program (increased from 38% to 89%).
- Analyze root causes before implementing changes (increased from 69% to 81%).
- See fewer quality problems today than in the past (increased from 44% to 68%).
- Have adequate time to conduct CQI processes (increased from 35% to 53%).

- Have high quality data to conduct CQI (increased from 43% to 77%).
- Have had adequate training and TA to implement CQI (increased from 30% to 66%).
- See the benefits of the CQI process (increased from 38% to 78%).
- Have a supervisor who is likely to support recommendations from the CQI team (increased from 77% to 83%).

Interestingly, in 2013, 7% of respondents agreed that implementing CQI processes takes away from the quality of their programs. In 2014, 16% of respondents believed this and in 2015, 12% did. While these numbers are low, they are important, because the goal of the CQI process is to improve program quality. The 2013 survey was given as a baseline, prior to the implementation of CQI programming at the local implementing agencies, to be compared with answers in future years, when the CQI process was fully implemented. It is possible that the 2013 respondents were not familiar with what CQI would entail and that the reduction in agreement between 2014 and 2015 is more telling. This warrants additional investigation.

For some of these questions, the magnitude of increase between 2014 and 2015 diminished compared to 2013—2014. This is to be expected given the current mature state of CQI programming. Overall, results show that MIECHV staff understand the CQI process, appreciate its importance, and that significant gains have been made in almost every area of importance to CQI programming.

Home Visitor Safety

Due to the unique nature of home visiting, safety is a particular concern for home visitors and home visiting programs. MIECHV has targeted six high-risk communities in Illinois and, as a result, MIECHV home visitors may face additional safety challenges in their day-to-day work. To gain a better understanding of home visitor perceptions of risk and unsafe experiences, as well as how to better address safety concerns, a series of safety-related questions was added to the 2015 Home Visiting and CQI survey. All staff for whom the questions were relevant were asked to respond; most CI/CSD staff and supervisors indicated that many of these questions were not applicable to their positions.

Home Visitor Perceptions of Safety

Survey respondents were asked how concerned they were about a series of potential safety issues, shown in **Table 9**. Statewide, home visitors report high

levels of concern about potential threats in both the homes and neighborhoods in which they work. Almost three quarters of home visitors were concerned about driving, walking and encountering weapons or threats of violence in the neighborhoods where they work. For all potential safety issues, over half of survey respondents reported concern.

Table 9. Safety Concern (somewhat or very concerned) Statewide

	Concerned		Neither concerned nor unconcerned		Unconcerned		N/A	
	n	%	n	%	n	%	n	%
Encountering weapons or threats of violence in a neighborhood	55	74.3%	4	5.4%	7	9.5%	8	10.8%
Driving or walking in unsafe neighborhoods	53	71.6%	4	5.4%	11	14.9%	6	8.1%
Encountering dogs or other animals during a visit	27	68.9%	11	14.9%	5	6.8%	7	9.5%
Encountering weapons or threats of violence in a home	50	67.6%	9	12.2%	7	9.5%	8	10.8%
Going into a home for the first time	46	62.2%	13	17.6%	9	12.2%	6	8.1%
Encountering unknown people in a home	51	61.1%	16	22.2%	7	9.7%	5	6.9%
Experiencing threats related to gang activity	45	60.8%	14	18.9%	8	10.8%	7	9.5%
Experiencing robbery or theft while on the job	41	57.0%	12	16.7%	11	15.2%	8	11.1%

Table 10 breaks results down by community in order to get a better sense of how perceptions vary among the communities, which are geographically dispersed and socio-demographically diverse. Cicero, Englewood and Rockford-based home visitors report relatively high levels of concern consistent across the various types of threat, whereas Elgin-based home visitors are most concerned about encountering animals and not very concerned about other issues. Macon County home visitors are the most concerned about driving, walking and encountering weapons and violence in neighborhoods yet are not

very concerned about theft or robbery. Vermilion County home visitors are equally concerned about encountering weapons and violence in the neighborhoods and homes in which they work.

Table 10. MIECHV Staff Safety Concerns (somewhat or very concerned) by Community

	Cicero (n=12)	Elgin (n=11)	Englewood (n=14)	Macon (n=11)	Rockford (n=15)	Vermilion (n=11)
Driving or walking in unsafe neighborhoods	75%	36%	79%	91%	67%	82%
Going into a home for the first time	75%	27%	71%	82%	47%	73%
Encountering unknown people in a home	75%	36%	85%	55%	50%	64%
Encountering dogs/ animals during a visit	67%	73%	86%	55%	60%	73%
Encountering weapons or threats of violence in a home	67%	45%	79%	55%	67%	91%
Encountering weapons or threats of violence in a neighborhood	75%	55%	71%	91%	67%	91%
Experiencing robbery or theft while on the job	67%	36%	77%	27%	60%	70%
Experiencing threats related to gang activity	83%	27%	79%	45%	67%	55%

To get a better sense of how relevant job experience influences home visitor perception of safety, **Table 11** presents data by years of total related experience.

Table 11. MIECHV Staff Safety Concerns (somewhat or very concerned) by Experience

	<=1 year (n=16)	2-5 years (n=37)	>5 years (n=21)
Driving or walking in unsafe neighborhoods	69%	76%	67%
Going into a home for the first time	56%	65%	62%
Encountering unknown people in a home	50%	61%	70%
Encountering dogs or other animals during a visit	50%	73%	76%
Encountering weapons or threats of violence in a home	44%	81%	62%
Encountering weapons or threats of violence in a neighborhood	75%	81%	62%
Experiencing robbery or theft while on the job	50%	64%	50%
Experiencing threats related to gang activity	63%	59%	62%

New home visitors, with a year or less of experience, are most concerned about encountering weapons and gang activity in their neighborhoods, while those with two to five years of experience are equally concerned about encountering weapons in homes and neighborhoods. Those with the most experience are most concerned about encountering animals or strangers in the home during visits. While certain concerns—encountering animals or unknown people in a home—increase with home visitor experience, overall, concern appears to increase with experience and then level off either at a similar level (driving/walking in unsafe neighborhoods; experiencing robbery, theft of gang-related threats), a higher level (encountering weapons in a home) or a lower level (encountering weapons in a neighborhood).

Unsafe Experiences

While home visitors reported high levels of concern about safety, it is encouraging that they do not report high levels of unsafe experiences compared to their perceptions of risk. **Table 12** shows reported unsafe experiences by community.

Table 12. MIECHV Staff Unsafe Experiences by Community

	Cicero (n=12)	Elgin (n=11)	Englewood (n=14)	Macon (n=11)	Rockford (n=15)	Vermilion (n=11)
Been intimidated or harassed in a home	0%	0%	0%	9%	0%	18%
Been intimidated or harassed in a neighborhood	0%	9%	7%	27%	0%	9%
Had something stolen from your property while working	8%	0%	21%	0%	7%	0%
Been robbed or mugged while working	9%	0%	0%	0%	0%	0%
Heard gunshots while working	33%	9%	64%	9%	40%	18%
Witnessed violence to others	33%	0%	57%	18%	13%	18%
Experienced violence yourself	0%	0%	0%	0%	7%	0%

Across communities, home visitors report very little intimidation or harassment in homes and neighborhoods. While these experiences are especially concerning, home visitors also report experiencing very little theft, robbery or violence. Hearing gunshots while working and witnessing violence to others are the risks most often experienced by home visitors, and these are mostly concentrated in the Englewood community, although reported in all communities.

Table 13. MIECHV Staff Unsafe Experiences by Home Visitor Experience

	<=1 year (n=16)	2-5 years (n=37)	>5 years (n=21)
Been intimidated or harassed in a home	13%	3%	0%
Been intimidated or harassed in a neighborhood	12%	11%	0%
Had something stolen from your property while working	6%	3%	14%
Been robbed or mugged while working	0%	3%	0%
Heard gunshots while working	19%	30%	43%
Witnessed violence to others	31%	19%	29%
Experienced violence yourself	0%	3%	0%

Home visitors with a year or less of experience report highest levels of witnessing violence to others, while those with more experience report highest

levels of hearing gunshots while working. With more experience, home visitors report less intimidation in both the home (from 13% to 0%) and neighborhood (from 12% to 0%). These results are all to be expected, reflecting the experienced home visitors' abilities to establish rapport and trust, and build relationships with the families they serve.

Risk Reduction Strategies

To better understand the ways in which individual home visitors and home visiting agencies attempt to protect workers, the 2015 CQI and Home Visiting Survey included open-ended questions about risk-reduction strategies employed by both home visitors and home visiting agencies. These results have been categorized and a summary is presented below.

Individual Efforts to Reduce Risk

Home visitors most frequently reported leaving valuables behind while working to make themselves less susceptible to robbery (18 mentions), maintaining awareness of their surroundings (16 mentions), and attending available safety trainings (14 mentions). Based on survey responses, home visitor strategies can be broken down into three main themes:

- **Be prepared:** Home visitors keep their cell phones charged and ready.
- **Remain alert:** Home visitors observe their surroundings before exiting cars, look for exits, and trust their "gut instincts."
- **Manage the environment:** Home visitors schedule visits during daylight hours, park in accessible areas, lock their car doors, and meet at alternate locations.

Agency Efforts to Reduce Risk

Home visitors were also asked about their agencies' safety practices or policies, to gauge agency safety efforts, as well as home visitor knowledge of those safety efforts. Home visitors most frequently reported that their agencies held safety-related trainings or classes (17 mentions), encouraged the use of the buddy system (traveling in pairs) (14 mentions), and allowed home visitors to leave or cancel a visit for any reason (11 mentions).

It is interesting to note that while fourteen survey respondents mentioned that their agencies encouraged the use of the buddy system, only five mentioned using that strategy themselves. Additionally, four respondents reported that

their agencies did not have a safety policy or they were not sure. These two findings raise the questions of how well safety policies are communicated with staff and how empowered home visitors feel to follow safety procedures. As a follow up to this survey, MIECHV has increased the state-level focus on home visitor safety.

State Level CQI Activities

The MIECHV state CQI team is composed of representatives of Illinois' MIECHV and home visiting key stakeholders. Team members include the Office of Early Childhood Development team, the independent evaluation team from CPRD, as well as representatives from Chicago Public Schools, Illinois Head Start Association, Illinois State Board of Education, Illinois Department of Human Services, and the Ounce of Prevention Fund. The goal of the state team is to identify strengths and challenges in the MIECHV systems and advocate for policy-level change.

During meetings in FY 2015, the group:

- Developed a vision statement for Illinois home visiting;
- Continued work on data and benchmark alignment;
- Developed a matrix of Infant Mental Health Services (IMH) across IL and identified important gaps;
- Identified actions that can improve staff retention; and
- Evaluated a weekly visit intervention across MIECHV agencies.

This group also decided to take action as a result of the safety-related findings from the 2015 CQI survey. As a result of these findings, the team conducted a search of the literature, reached out to home visiting agencies and staff, and developed safety policies, as well as a set of best practices recommendations for home visitors, supervisors and agencies. The group presented findings to the Home Visiting Task Force and formed an ad hoc committee to continue work in this area. This work continues.

Next Steps for CQI Work

This upcoming year, HRSA will implement new benchmarks and revised data collection requirements. This provides the CQI team the opportunity to train and support home visiting staff, as well as develop CQI Action Plans focused on new topics.

V. Brief MIECHV Studies

A key part of the MIECHV evaluation is not only producing federal reports, conducting CQI activities, and disseminating information to key stakeholders, but also further exploring and examining the MIECHV data through a series of brief studies prompted by serendipity, conflicting or contradictory data, new research literature or emerging research questions. These questions may materialize from the participants, home visitors, policy stakeholders, state, and evaluation staff. In 2015, the evaluation team conducted a series of brief studies that included home visiting staff turnover, MIECHV Participant Exist Study, CQI home visiting, community systems development study, and several smaller data analysis addressing special requests. A synopsis of these studies is presented below and full access is available on [CPRD's website](#).

Home Visitor Staff Turnover

A major problem associated with a MIECHV-type home visiting workforce is the high level of professional staff turnover. The evaluation team has surveyed home visitors for the past two years to assess factors or reasons that they say contribute to staff either departing or remaining a home visitor at their agency. As described in prior year reports, Illinois MIECHV scaled up a major home visiting system in a relatively brief period of time. Most MIECHV home visitors reported that their current home visiting position was their first job in home visiting, which likely contributed to their uncertainty regarding the home visiting profession in relation to higher paid positions.

Since the cornerstone for home visiting services rests in the powerful relationship established between caregiver and home visitor, staff turnover creates major challenges that have serious unintended consequences,. This finding was identified and reinforced when CPRD's field data collection staff conducted telephone follow-up calls to caregivers who either dropped out or did not complete a program model. Many caregivers reported that the loss of their home visitor was the key factor given for dropping out (MIECHV Parent Dropout Analysis, 2014).

Table 14 shows the results of CPRD staff turnover for MIECHV at the state level for two full years of data. Overall, approximately 38% of home visitors have departed since the first full year of MIEHCV in 2013 (22%), while decreasing to 15% in 2014 (see **Table 14**). The full year 2015 staff turnover data has not been analyzed yet, but will be added to these results.

Table 14. MIECHV Staff Turnover Yearly and Total 2013-2014

	Total HVs		Total Exits		2013		2014	
	n	%	n	%	n	%	n	%
Illinois MIECHV (Totals)	95		36	38%	21	22%	15	15%

One final issue related to staff turnover is the challenge of calculating this rate due to inadequate data systems, lack of timely reporting, and the complexity of differentiating partial versus Full Time Equivalent (FTE). This issue has now been addressed with improvements on the Visit Tracker system, and the new HRSA requirements reporting quarterly staffing levels.

Illinois MIECHV Enrollments

Over the course of the Illinois MIECHV project, enrollments and exits have fluctuated in ways that can be seen as dynamic and erratic. **Figure 30** below shows a trend line for participants entering the MIECHV program in significant numbers beginning January 2012 through the end of 2015. The most important factors related to this figure is the cyclic pattern of entering and exiting programs around two monthly or quarterly time periods. For example, after the massive MIECHV start-up in the spring of 2012, the trend begins a cycle of high enrollment peaking around July with downward trend in the holiday season and again falloff in the summer months. It also shows how the exits, shown in red, are followed by increases, shown in green, suggesting fewer numbers of families enrolling in the summer months with increasing enrollments in the fall or at the beginning of the school year. These trends appear to become a pattern with matching decreases near the holiday seasons and summer months and with increasing enrollment in the new school and calendar years. This pattern is also likely influenced by MIECHV programs that operate in the school years (with reduced summer hours). To that end, home visiting enrollment and exiting patterns should be understood, anticipated and managed by the state and home visiting programs to address open caseloads, recruitment, and retention strategies. This may should include stepping up recruitment efforts entering summer and holiday seasons to ensure home visiting slots are being scheduled or filled as departures occur. It may also help to anticipate how home visiting programs serving school populations on a school calendar consider maintaining contact with home visiting families

during the summer months to increase the likelihood of families returning to the programs once the new school year begins.

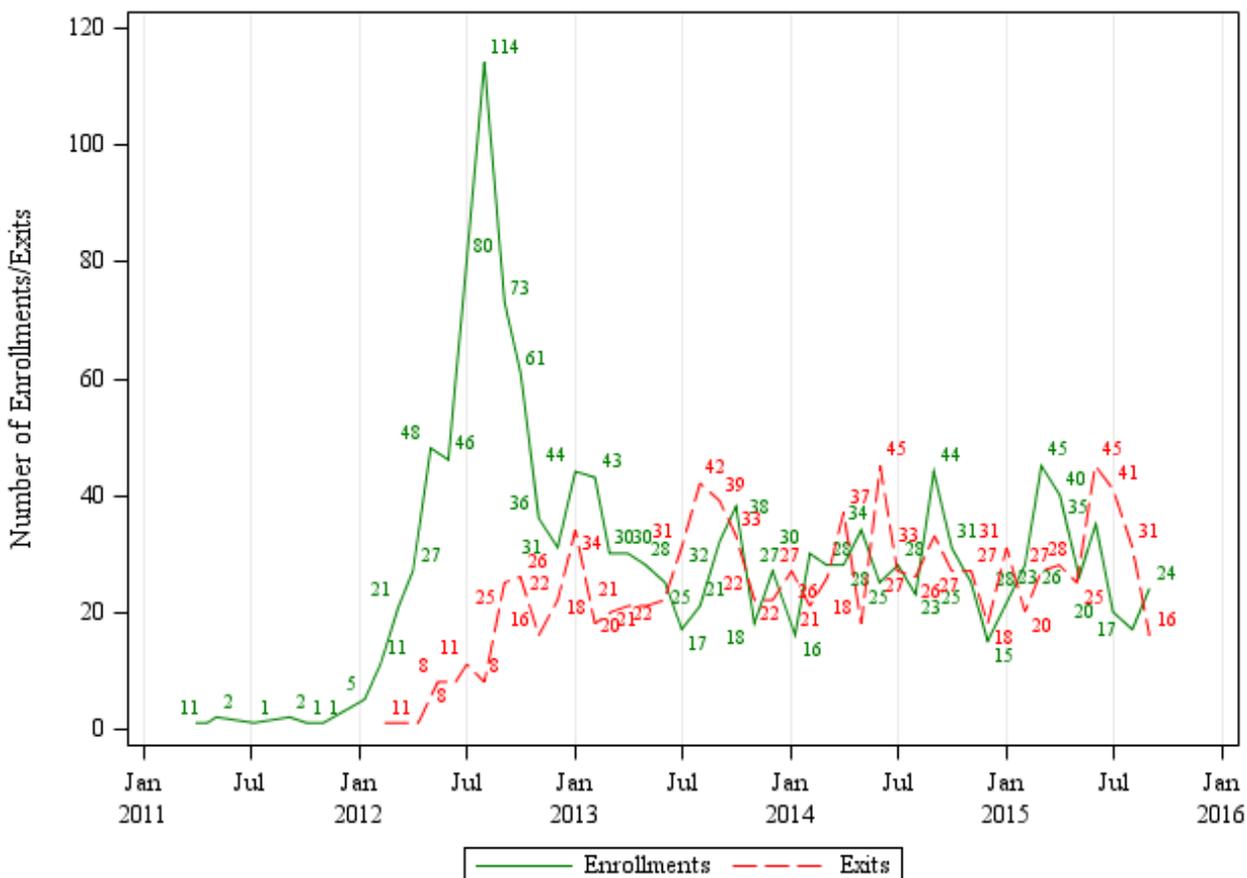


Figure 30. MIECHV Enrollments and Exits by Month

Socio-Demographic Factors of Exiting Families

The factors that contribute to a family participating in MIECHV programs until completion are complex and poorly understood (Daro, McCurdy, Falconnier & Stojanovic, 2003; Holland, et al., 2014). The MIECHV data allow us to track not only the entry and exits in to MIECHV programs, but also assess whether socio-demographic factors may play a role in remaining in the program.

Participant program completion rates varied considerably by model (2.6% to 36.8%), community (18.7% to 60.8%) and agency (0% to 100%). It should be noted that what constitutes program completion remains somewhat ambiguous in that program models have different criteria for completion, and program staff have differing interpretation of program completion. To that end, CPRD focused on using the home visitors’ report of program completion based on their submission to Visit Tracker. This reporting process requires further

understanding to continue to improve data quality. A descriptive analysis shows the crude percent comparisons between caregivers who exited and completed the programs (see **Table 15**).

Table 15. Socio-Demographic Characteristics of Participants Who Exited the Program

		Total Exits	Completed program	
		N	n	%
Overall		1054	343	32.5%
Maternal Age	Mean (SD)	25.5 (7.2)	28.5 (8.3)	
Race	Caucasian	331	102	30.8%
	Minority	715	239	33.4%
Ethnicity	Non-Hispanic	707	174	24.6%
	Hispanic	347	169	48.7%
Education	Less than HS diploma	445	153	34.4%
	HS diploma or above	560	186	33.2%
Relationship Status	Not Married	774	205	26.5%
	Married	273	138	50.5%
Insurance	No	167	93	55.7%
	Yes	844	244	28.9%
Pregnant at Enrollment	No	666	264	39.6%
	Yes	388	79	20.4%
First Child	No	634	231	36.4%
	Yes	420	112	26.7%
WIC Participant	No	263	105	39.9%
	Yes	738	231	31.3%
History of Abuse	No	925	285	30.8%
	Yes	129	58	45.0%
Low Achievement	No	827	241	29.1%
	Yes	227	102	44.9%
Disabled Child	No	902	258	28.6%
	Yes	152	85	55.9%

With over 1,050 reporting, the number of exited participants who completed the program was 343, or 33% percent. Based on the comparative groups, participants who completed the program were most likely to be married (51%), Hispanic (49%), and have a disabled child (56%). Those most likely to complete a home visiting program were uninsured (56%), not participating in WIC/SNAP (40%), not pregnant (40%), or pregnant for the first time (36%).

A multi-variate analysis of the program completion data provides a description of factors and characteristics that appear to be related to remaining in the program until the home visitor reported completion. Multilevel logistic regression models were run in STATA 14 to understand factors influencing

program completion of Illinois MIECHV participants (level 1) nested within 20 non doula agencies (level 2). Descriptive statistics reported in **Table 15** show that among the 1,054 Illinois MIECHV participants who exited during 2012-2015 fiscal years, 343 (32.5%) completed the program and 711 (67.5%) dropped out before completion.

Those who completed the program had a higher mean age at enrollment. Those who were more likely to have completed the program can be characterized as: non-Caucasian, Hispanic, married, uninsured, less than high-school educated, having a history of abuse or neglect, or interactions with the child welfare system as a child or as an adult, having low achievement, and having a disabled child. Lower completion rates were observed in participants who were pregnant at enrollment, first-time parents, and WIC participants.

Multilevel logistic regression models results are also reported in **Table 16**. Intraclass correlation (ICC) obtained from an unconditional model was 51%, which indicates that Illinois MIECHV agencies differed considerably in completion rates. After adjusting for other variables in the regression model, MIECHV participants who were older, not pregnant at enrollment, have a history of abuse, have low achievement, and have a disabled child had higher odds of completing the MIECHV program. This suggests the families with high needs (abuse, disabled child, low achievement) are likely to remain in home visiting programs.

Table 16. Multilevel Logistic Regression Model for Program Completion

	Odds Ratio	95% CI		P-value
		LL	UL	
Maternal Age	1.06	1.04	1.09	<0.001
Minority	0.97	0.65	1.46	0.892
Hispanic Ethnicity	1.17	0.65	2.10	0.605
Less than HS Education	0.73	0.50	1.04	0.085
Not Married	0.73	0.48	1.09	0.122
No Insurance	1.31	0.81	2.13	0.27
Pregnant at Enrollment	0.38	0.24	0.63	<0.001
First Child	1.03	0.68	1.55	0.896
WIC participant	0.89	0.61	1.30	0.545
History of Abuse	1.78	1.10	2.89	0.019
Low Achievement	2.31	1.50	3.53	<0.001
Disabled Child	1.62	1.04	2.53	0.032

Community Systems Development Survey Results

The MIECHV evaluation team was asked to conduct a brief evaluation of the Community Systems Development Networks (CSDN) that exist in each of the six MIECHV communities. CSD Networks are comprised of members from community programs and services that provide planning, activities, and strategies to improve coordination and collaboration between community support and early childhood services.

All CSD staff and network members were invited to participate and were contacted via email to introduce them to the goals and purposes of the CSD evaluation, and to alert them to the forthcoming CSDN online survey. An electronic link was sent to staff and network members that assured them of confidentiality, anonymity, and voluntary participation. The first page of the survey provided an informed consent statement, describing the goals and purposes of the evaluation, its voluntary and confidential nature, and the option to participate or not.

The CSD assessment was developed by CPRD staff based on a number of research-based literature studies and prior projects. The major constructs measured by the CSD survey were system formalization, resource availability, collaborative interaction, group cohesion, and perceived outcomes.

The CSD survey addressed the following research questions:

1. Who participates in the CSDs, and what organizations do they represent?
2. What are the characteristics of the CSDs and how well formalized are their practices?
3. How engaged are the CSD members and what levels of cohesion and satisfaction do they report?
4. What do CSD members perceive as barriers to the success of their collaborative?
5. How do CSD members view the levels of collaboration and perceived effectiveness of their CSD?
6. Do the CSD staff and supervisors view the CSD characteristics and processes differently than the general membership?

Results of the CSD Survey

The CSD survey was sent to all participants based on network membership lists received from the CSD coordinator in each community. Unfortunately, two of the six MIECHV communities did not participate in the CSD survey due to the changes in leadership and direction of their collaborative. Survey participants were asked to identify themselves as a supervisor, project coordinator or network member to send them to the appropriate version of the survey. The survey required approximately 10-15 minutes to complete. The link was available for four weeks after the survey was opened. Follow up contact included a reminder, survey link and thanks for participating in the survey. A chance to win a drawing of a \$25 Amazon gift card was provided as an incentive. The CSD survey was conducted in November and December 2015. The survey was sent to 164 participants with an overall response rate of 52%, and the response rates for each community ranged from 19% to 77%. The response rates are shown in **Table 17** below.

Table 17. CSD Sites, Sample and Responses

Community	Contacts Provided	Responses	Response Rate	# of Staff Responding	# of Members Responding
Southside	106	20	19%	6	14
Macon	34	15	44%	1	14
Rockford	13	10	77%	2	8
Vermilion	11	8	73%	3	5

Interrelationships Between Collaborative Constructs

A robust research literature has found and demonstrated that effective collaboratives or networks are comprised of multiple characteristics which increase the likelihood of attaining proposed goals. Characteristics that have been found to contribute to a high performing collaborative include formalization, cohesion, satisfaction, collaboration, leading to reported outcomes. (Butterfoss, Goodman, Wandersman, 1993; Butterfoss, Goodman & Wandersman, 1996; Hays, Hays, DeVille & Mulhall 2000).

By contrast, collaboratives that report higher levels of barriers are inversely related to aforementioned constructs. These six constructs served as the primary measures to understand the collaborative functioning, process and outcomes. **Figure 31** below shows the aggregate relationships or associations among the six constructs—formalization, cohesion, satisfaction, collaboration,

and outcomes. The correlation table shows both the positive and negative relationship between the six constructs and in the expected direction. This indicates that the constructs have reasonable level of validity (measuring what they are supposed to be measuring) since the variables are positively and negatively associated as predicted by theory and practice.

The legend below shows the strength of the relationships ranging from strong positive to strong negative correlation. Cells with two pluses and two minus are most highly associated, while a 0 means no relationship. Formalization was strongly associated with cohesion and collaboration, which strengthens their importance as key factors. By contrast, survey respondents report barriers as inversely or negatively associated with formalization and satisfaction and strongly negatively associated with cohesion. These relationships may help communities guide and direct the development, functioning, and sustainability of MIECHV collaboratives in the future.

	Formalization	Cohesion	Satisfaction	Collaboration	Barriers	Outcomes
Formalization	1					
Cohesion	++	1				
Satisfaction	+	++	1			
Collaboration	++	++	+	1		
Barriers	-	--	-	0	1	
Outcomes	+	+	++	+	0	1

- Strongly negatively correlated (<-.40)
- Negatively correlated (-.20-.30)
- 0 No relationship (-.19-.19)
- + Positive correlated (.20-.39)
- ++ Strongly positively correlated (>.40)

Figure 31. Correlation between collaborative factors

CSD Organizational Characteristics by Construct

Another helpful way to understand the relationship among the six evidence-based collaborative factors is to disaggregate and compare the individual community scores to each other and the state averages. The four participating communities and a total average or aggregate of the CSD constructs are shown in **Table 18**. Based on the CSD survey results, the most formalized collaboratives were the City of Rockford and Vermilion County and the least formalized was Macon County. Macon County respondents also reported the

lowest levels of cohesion, satisfaction, and collaboration, and highest number of perceived barriers, while Vermilion County reported the lowest level of perceived outcomes. Again, these results can provide MIECHV communities information and direction for improving their capacity to be effective and collaborative processes and outcomes.

Table 18. Community MIECHV CSD Scores on Network Factors

	Formalization Range: 0-1 1=more formal	Cohesion Range: 1-5 5=more cohesion	Satisfaction Range: 1-5 5=more satisfied	Collaboration Range: 1-5 5=more collaboration	Barriers Range: 1-4 4=more barriers	Outcomes Range: 1-3 3=more outcomes
Southside	0.4	3.6	3.6	2.8	2.3	2.4
Macon	0.2	2.8	3.3	2.0	2.5	2.3
Rockford	0.6	3.6	3.7	3.2	2.1	2.4
Vermilion	0.5	3.4	3.1	3.1	2.3	1.9
Total	0.4	3.4	3.4	2.7	2.3	2.3

Comparing CSD Staff Attitude and Beliefs Versus CSD Member Responses

The next set of questions examined differences, if any, between how the CSD (funded) staff perceived their collaborative compared to their volunteer members. That is, were there differences between MIECHV supported leadership and general membership on the various constructs? Overall, perceived differences were moderate in terms of construct scores, but on average, the program staff viewed their collaborative as more formalized, cohesive and collaborative and reported fewer barriers and better outcomes. These differences likely reflect the greater familiarity of the project staff with the large number of activities the collaborative works on or accomplishments, creating a positivity bias compared to the CSD volunteer members (Mezulis, Abramson, Hyde, & Hankin. 2004).

Narrative Responses to Open-Ended Questions

The final questions asked survey participants about their view of success and challenges related to working with their CSD. CSD participants' reported successes included improved communication (awareness, marketing), resource sharing (training, MOUs), and most importantly, recruiting and enrolling families into home visiting programs.

The challenges of the CSDs relate to the sense that many communities already had an existing early childhood collaborative, and the CSD was duplicating existing community efforts. Several respondents mentioned that their CSDs did not follow through on issues, did not address MIECHV priority populations, and lacked leadership. One person mentioned that a challenge for their collaborative was the low number and quality of referrals, and too much focus on MOUs.

These quantitative and qualitative data provide evidence that the MIECHV CSDs are relatively uneven in their capacity, functionality and effectiveness. Moreover, the overall results of the CSD survey also suggest a major review of what is and is not working in the MIECHV communities with respect to CSD work, and a fuller exploration of how community context matters, and how a framework or blueprint can be created for guiding and directing various CSD efforts. It is clear that some MIECHV communities are performing better than others; and only by ensuring highly qualified staff who receive ongoing training and professional development can they be successful. Finally, the evaluation team would also recommend establishing meaningful benchmarks for CSDs and their partners to help provide focus and direction for these complex organizations.

VI. Conclusions and Recommendations

Illinois has now completed three full years of implementing MIECHV programs in priority communities. Over that time, MIECHV has continued to scale up, refine its home visiting infrastructure, and formalize policies and procedures—all ultimately leading to improved outcomes and performance benchmarks (PBs). Illinois MIECHV work has occurred in one of the most difficult and contentious times in Illinois political history. Over the past two years, Illinois has been deeply immersed in political turmoil with budget crisis after budget crisis leading to unstable and unsustainable state government services. Many health and human service providers have reduced services and several agencies have closed part or all of their operations. State funded agencies and resources have an important role contributing to the success of home visiting services for capacity, access and referrals; but these fitful periods reduce community programs and services to an almost catatonic state of functioning. In that context, the following conclusions and recommendations are made:

Performance Benchmarks

MIECHV programs continue to improve health insurance coverage for participant families. The greatest challenges for accessing health insurance are presented by communities in which significant numbers of undocumented families reside.

Despite important improvements in many MIECHV benchmarks, several indicators still need continued focus and attention. For example, home visiting benchmarks for prenatal visit completion (73%), breastfeeding (32%), parent knowledge of child development (32%), and completed referrals (63%) each have significant opportunities to improve their reach.

The advent of the new HRSA benchmarks will require redesign of the Visit Tracker system, with both adaptations and refinements to improve data entry and reduce errors.

The upcoming HRSA benchmark revisions will require multiple levels of training, technical assistance and technology changes. Home visitors will be required to collect parent-child interaction and home environment measures, implement new data entry procedures, and additional quality measures regarding staff and participant turnover.

The loss of subsidized childcare services by many Illinois families makes it extremely difficult for disadvantaged families to gain access to educational and

employment services, since childcare allows them the opportunity to participate in these services.

To improve the quality of home visiting services and data collected by MIECHV home visitors, formalized quality assurance processes and policies need to be developed in line with the updated benchmarks and data entry into Visit Tracker in order to ensure required data is complete and accurate.

Coordinated Intake and Community Systems Development

MIECHV should consider integrating most or all of the ACEs survey questions into the coordinated intake process, which could then be used to assess baseline family risk and target community resources.

A full review of the Community Systems Development and Coordinated Intake services is needed in order to update the rapidly changing community services, and determine how to fill the gaps left by discontinuing CSD activities and supports.

Home visitors and Coordinated Intake workers continue to be challenged by limited options for referrals from home visiting programs to community-based services, and by tracking referrals and outcomes. New challenges have emerged as the Illinois financial crisis has required many social services agencies to scale back.

Continuous Quality Improvement

Illinois MIECHV Continuous Quality Improvement efforts at the agency level continue to demonstrate significant improvements in PBs and related home visiting service quality. MIECHV sites have begun to commit to program improvements through agency support, willingness to engage in the CQI process, and a better understanding of benchmarks requirements.

The statewide CQI team remains active and successful in addressing statewide policies and problems, despite membership changes as a result of the political transition in the governor's office. Work continues on monitoring state funding issues, safety policies and education, cost-per slot estimates, caseload census, benchmark revisions, MIECHV's eight-week intensive weekly visit policy, and Infant Mental Health services.

Home Visiting Services

The evaluation team will continue to examine data to understand the MIECHV “weekly visit” policy initiated in Fall 2014 to ensure that families receive eight home visits in the first two months after the baby is born if the guardian enrolls while pregnant, and the first two months after enrollment if the guardian enrolls while not pregnant.

Data Collection and Tracking

MIECHV needs to continue to track entry and exits into home visiting programs to better understand trends or patterns that influence participation, dropouts and completion.

The evaluation team will need to redesign and re-calculate the new PBs to ensure they are collected, calculated and reported based on the operational definitions.

Home Visitors

Overall, the home visiting turnover rate appears to have slowed and stabilized. However, Illinois’ budget crisis has made LIAs’ hesitant to hire new staff, because other state-funded home visiting program staff are now furloughed or have reduced schedules. Although the Illinois fiscal crisis significantly contributes to problems related to Illinois home visiting and community services, it is essential that MIECHV continues to address staff turnover, rapid replacement of departed staff, and the development of a new staff tracking system.

Illinois MIECHV intends to expand both home visiting and doula services to several other Illinois communities. This ramping up process provides a great opportunity to use lessons learned in relation to organizational management, staff hiring, caregiver engagement, training and technical assistance, using the Visit Tracker system, survey administration and other home visiting processes and procedures.

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The LIAs, OECD, CPRD and other state agencies now have fairly well-established protocols and procedures for accessing, collecting, cleaning, validating, analyzing and submitting the MIECHV PBs to HRSA. As Illinois moves toward adopting a revised set of benchmarks, and toward using home visitors to collect the HOME data, some challenges will likely arise, but high-

quality training and monitoring will ensure these data can be collected and reported reliability.

As mentioned earlier, the MIECHV funding application for federal fiscal year 2017-2019 includes expansion of MIECHV home visiting services into six additional high-risk communities: in the Mid-central Illinois cluster McLean, Piatt and DeWitt Counties, Peoria County, Stephenson/Jo Daviess Counties, the Austin and Lawndale communities in Chicago, DeKalb County, and Kankakee County. This expansion will also include three new MIECHV doula sites: Aurora Family Focus, DeKalb County Children's Home + Aid, and Stephenson County Health Department. While support is being continued to existing state-funded home visiting programs, this expansion aims to increase the level of readiness/capacity of service providers in additional high-need communities to implement high quality home visiting programs. The newly selected MIECHV communities are small to moderate size cities, as well as significant rural areas that are not well served by Illinois home visiting programs.

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Appendices

Appendix 1: MIECHV 2014-2015 Timeline

October 2014

- Deborah Kemmerer's last day as CQI Specialist (October 10)

November 2014

- Stacey McKeever started CQI Specialist position (November 3)
- PICCOLO Scoring Team Quarterly meeting held (November 10)
- State CQI meeting held (November 20)

December 2014

- Year 3 DGIS report submitted (December 1)
- PICCOLO team training held (December 4)
- Quarterly FDC meeting and training held (December 5)
- CPRD presented to DHS Nurses in Bloomington (December 8)

January 2015

- IRB approval of ACES Childhood Experiences survey received
- Peter Mulhall presented to Home Visiting Task Force Exec. Committee (January 27)

February 2015

- FDCs began administering Childhood Experiences survey (February 2)
- Peter Mulhall presented to Early Learning Council (February 23)
- Futures Without Violence: Mary Anne Wilson attended train the trainers meeting in Chicago (February 17-19)
- Peter Mulhall presented at MIECHV Webinar – Beyond Reporting: Making the Most of Your Data held (February 24)
- Statewide CQI meeting held (February 26)
- Look Through Their Eyes Webinar conducted (February 27)

March 2015

- Annual Report submitted
- Community and site-level outcome data (KIDI, PSI and HOME survey results) shared with sites on monthly CQI calls
- PICCOLO Scoring Team Quarterly meeting held (March 19)

May 2015

- Peter Mulhall attended HVRN meeting in Washington, DC (May 6)
- Peter Mulhall, Stacey McKeever, and Mary Anne Wilson attended HV PEW Home Visiting Summit in Washington, DC (May 7-8)
- Lance Till co-facilitated MIECHV-ECCS Region IV-V Meeting planning committee call (May 11)

- Peter Mulhall, Stacey McKeever, and Mary Anne Wilson conducted focus group interview at East Central IL Community Action MIECHV HV and CI/CSD site in Vermilion County (May 20)
- HV CQI survey sent to sites (May 26)
- Peter Mulhall presented at Society for Prevention Research in Washington, DC (May 27)
- Stacey McKeever and Mary Anne Wilson conducted focus group interview at Decatur Public Schools in Macon County (May 29)

June 2015

- Statewide CQI meeting held (June 4)
- PICCOLO Scoring Team Quarterly meeting held (June11)
- Quarterly FDC meeting and training held (June 12)
- Peter Mulhall, Stacey McKeever, and Mary Anne Wilson conducted focus group interview at Children’s Center of Cicero-Berwyn in Cicero (June 17)
- Stacey McKeever and Mary Anne Wilson conducted focus group interview at Henry Booth House in Chicago (June 18)
- Peter Mulhall and Bala Mutyala presented at Early Childhood Research-Policy Forum in Naperville (June 25)
- Stacey McKeever and Mary Anne Wilson conducted focus group interview at La Voz Latina in Rockford (June 25)
- Stacey McKeever and Mary Anne Wilson conducted focus group interview at VNA in Elgin (June 26)

July 2015

- MIECHV removed Kane County Health Department Nurse Family Partnership HV Program from all work
- MIECHV added three new doula sites

August 2015

- PICCOLO Scoring Team phone training held (August 19)
- Peter Mulhall attended HRSA Region IV/V Grantee Meeting in Atlanta (August 11-13)
- MIECHV State CQI meeting held (August 20)

September 2015

- PICCOLO Scoring Team Quarterly meeting held (September 10)
- Quarterly FDC meeting and training held (September 11)

October 2015

- Prepared, linked and submitted PB data to HRSA

Appendix 2: Illinois MIECHV Products

The products listed below can be linked to at the [CPRD website](#):

- a. [2015 Illinois MIECHV Infographic](#)
- b. [History of Illinois MIECHV Infographic](#)
- c. [2015 Illinois MIECHV Benchmark Glossary for Doulas](#)
- d. [2015 Illinois MIECHV Benchmark Glossary for Home Visitors](#)
- e. [2015 CQI Home Visiting Survey Report](#)
- f. [Current Research on Home Visiting Programs – Literature Review](#)
- g. [Home Visit Mandate Report, August 2015](#)
- h. [MIECHV Brief Study Report – 2015 Community Site Visits and Focus Groups](#)
- i. [Safety Best Practices for Home Visiting Agencies, for Supervisors, and for Home Visitors](#)
- j. [Illinois MIECHV Benchmark Summary 2013-2015](#)
- k. [PICCOLO handout “29 Things Parents Do That Predict School Readiness”](#)