Maternal, Infant and Early Childhood Home Visiting (MIECHV) Program
Competitive Grant D89MC23147 Final Report

I. EXECUTIVE SUMMARY

Program Summary: Indiana's MIECHV program is co-led by the Indiana State Department of Health (ISDH) and the Indiana Department of Child Services (DCS). Indiana's MIECHV Program vision is to improve health and development outcomes for children and families who are at risk through achievement of the following goals: 1) Provide appropriate home visiting services to women, their infants and families who are low-income and high-risk; 2) Develop a system of statewide coordinated home visiting services that provide appropriate, targeted, and unduplicated services and locally coordinated referrals; 3) Coordinate necessary services outside of home visiting programs to address needs of participants.

Purpose & Rationale In 2011, Indiana proposed a MIECHV Competitive project to expand two existing, evidence-based home visiting programs: Healthy Families Indiana (HFI) and Nurse-Family Partnership (NFP). The expansion allowed an additional 1,730 families to enter into a home visiting program in high-risk areas of Indiana as identified in the September 2010 Indiana Needs Assessment for the MIECHV Program: Elkhart, Grant, Lake, LaPorte, Marion, Scott, and St. Joseph Counties. In order to address needs of families beyond the scope of home visiting, HFI expanded the service array by offering a mental health consultation enhancement, and NFP implemented the Goodwill Guides program. Both HFI and NFP pair families—particularly low-income, single-parent families—with trained home visitors who provide parenting information, resources and support during a woman's pregnancy and throughout a child's first few years. These models have been shown to make a difference in a child's health, development, and ability to learn - such as health care, developmental services for children, early education, parenting skills, child abuse prevention, and nutrition education or assistance.

Table #1: Summary of Home Visiting Services Provided: October 1, 2011 – September 30, 2016

Families Served between September 30th, 2011 and September 30, 2016 with MIECHV **Competitive** Funding

At-risk Community	MIECHV Site / Local Implementing Agency (LIA)	Home Visiting Model	# of New Families Erolled during last Reporting Period 10/1/2015 - 09/30/2016	# of Continuing Families as of 09/30/2016	Total Families Served 10/1/2011 - 09/30/2016	Maximum MIECHV Competitive-funded Caseload (Family Slots) as of 9/30/2016	Estimated Cost Per Family Per Year* as of 9/30/2016
Elkhart County	Child And Parent Services	HFI	81	75	513	110	$ 4,821.24
Grant County	Family Service Society	HFI	40	40	215	55	$ 5,095.20
Lake County	Mental Health America, Lake County	HFI	172	112	562	131	$ 5,299.20
LaPorte County	Dunebrook	HFI	51	52	309	68	$ 5,280.00
Marion County	Goodwill Industries	NFP	326	283	1174	400	$ 7,715.00
	Healthnet	HFI	136	105	615	150	$ 5,326.80
	Health and Hospital (Eskenazi)	HFI	126	53	697	120	$ 4,863.60
	Health and Hospital (Marion Co Health Department)	HFI	170	83	747	144	$ 4,863.60
Scott County	New Hope Services	HFI	7	7	38	15	$ 5,095.20
St. Joseph County	Family & Children's Center	HFI	81	45	312	65	$ 5,095.20
		Totals	**1190**	**855**	**5182**	**1258**	

***Cost per Family*:** HFI uses a Unit Rate to reimburse local HFI providers for home visiting services provided to families. Unit rates are established for each Local Implementing Agency (LIA) by DCS, using a variety of data such as the proportion of families at each level of service, including Creative Outreach[1]; salaries and benefits for staff, office supplies, equipment, travel, professional development, community outreach expenses, and annual Healthy Families America (HFA) affiliation fee. Unit rates do not include costs for the centralized Quality Assurance services, data system or evaluation services, which are provided by contracted providers of DCS. A Unit Rate is paid to each provider each month for each family that received appropriate service for level assigned, defined by the model and includes length and frequency of visits and documentation completion. The estimated cost per family slot for each year is calculated multiplying the monthly unit rate times 12 months. In 2014, DCS conducted a review of the unit rate system used to reimburse providers for families served. This review identified the need for unit rates to be increased to cover expenses as described above. HFI sites serving MIECHV funded families received a 4% to 13% increase of unit rates during the availability period of this Competitive funding. Estimated annual cost per family slot for HFI sites serving MIECHV funded families as of 9/30/2016 ranged from $4,821.24-$5,326.80 per year. NFP's cost per family was calculated as $7,715. This was calculated by the total amount expended divided by the number of families served during each reporting period of the project. Calculated cost per family per budget year ranged from $19,192 in YEAR 1 to $5,067 in YEAR 4/5. Costs were higher in the YEAR 1 due to initial implementation and building of caseloads. This cost leveled off in YEAR 4/5.

Infrastructure Building & Other Activities Indiana began this Competitive project with the infrastructure in place to support the expansion of home visiting services described and the enhancements of the HFI mental health consultation and the Goodwill Guides program.

Enhancement to Evidence-Based Models Indiana implemented the Mental Health Consultation enhancement to HFI – providing additional supports to home visitors and high-risk families via licensed clinicians – and the Goodwill Guides enhancement to NFP – creating additional support to nurse home visitors (NHV) in connecting families to community services.

Evaluation Summary:

Study Design

The broad goal of the external evaluation is to collect, organize, and study data to examine the Indiana MIECHV project objectives. The external evaluation is comprised 3 sub-studies:

- Study #1: Evaluation of Interagency Collaboration and Referral Coordination at the State and Program/Agency Level (referred to herein as "Interagency Collaboration") – a complementary mixed methods evaluation that used a grounded theory approach to generate an explanation or theory of interagency collaboration.
- Study #2: Evaluation of HFI Mental Health Consultation Program Model Enhancement (referred to herein as "Mental Health Consultation") – an impact study, using propensity score matching to compare mental health outcomes between funded sites receiving mental health consultation and comparison sites.
- Study #3: Evaluation of NFP Goodwill Guides Model Enhancement (referred to herein as "Goodwill Guides") – a process evaluation to describe and examine NFP processes and progress toward established goals vis-à-vis the integration of the Goodwill Guides supports.

---

[1] HFA Best Practice Standards, Effective July 1, 2014 – December 31, 2017 3-3-B states "The site places families on creative outreach, as defined by their policy and procedures, and continues creative outreach for at least three months, only concluding creative outreach services prior to three months when families have (re)engaged in services, refused services or moved from the area."

Each of these studies was driven by the project's theory of change. MIECHV grants allowed HFI to increase the number of families served and create NFP as a service option for unmet need in Indiana. The theory of change for the Indiana MIECHV evaluation was that these two programs complement each other and improved collaboration at state and agency levels, in addition to coordination between HFI and NFP, would lead to more families receiving services. As a result, more families are served appropriately based on need. Families not eligible for either program service model are becoming more identifiable, allowing recognition of service gaps. Within each program, families in need of additional services are being served via model enhancements. This continues to lead to better maternal and child health outcomes as indicated in the Indiana MICHEV project goals.

Population Assessed – The entire population of MIECHV funded families receiving home visiting services contributed to FY11 Evaluation, as well as state and local staff and stakeholders.

Major Findings / Limitations / Implications / Lessons Learned

Interagency Collaboration: Findings clearly demonstrated that collaboration between and within the state and program levels, as measured by the IACAS and corroborated by stakeholder interviews, had increased substantially from baseline (2014) to follow-up (2015) and were perceived to be most effective in supporting the MIECHV project objectives that were specific to implementation, expansion, and enhancement of HFI and NFP programs to provide appropriate home visiting services to a greater number of families (FY11 Project Objective 1). There is less evidence to support progress towards the development of a system of coordinated services statewide of existing and newly developed home visiting programs (FY11 Project Objective 2). Findings from the *Home Visitor Program Referral Survey* suggest that while home visitors report a range of available community resources, the effectiveness of these services, as well as ease of information sharing between the respective home visiting programs and community providers is perceived by home visitors as problematic among specific types of services. These findings reflect the perception of home visitors rather than actual rates of referrals and/or actual service provision. Recommendations for continued evaluation include a comprehensive referral coordination study at the program level that examines referral protocols with outside agencies across the various service areas and across multiple program sites to identify and address identified gaps in referrals processes, as well as service access barriers. Data sources were a limitation for this study. All data were derived from self-reported measures or interviews conducted primarily with project stakeholders, thus cannot be construed as completely objective or free from bias. Similarly, the IACAS, though a validated tool for assessing interagency collaboration, was specifically designed for use among direct child-serving agencies focused on children's mental health. Project stakeholders expressed that it was difficult to contextualize some of the individual items because the tool does not address collaborations across state agencies sharing responsibility for administering such programs.

Mental Health Consultation: MIECHV funded families who had concerns at intake in family health were more likely to show no concern at 12 months than the families in sites not receiving mental health consultation. This result is notable, given the family health subscale on the North Carolina Family Assessment Scale (NCFAS) includes a specific measure of mental health. Home visitors receiving mental health consultation were more likely to remain in their role as home visitors, even after controlling for years of experience and quarterly caseloads, than home visitors who did not receive consultation. Overall results suggest that the FY11 mental health consultation model did not result in improved outcomes for MIECHV funded mothers when compared to non-MIECHV funded mothers. A notable limitation includes the use of existing

program measures as outcome measures in order to reduce the burden of added data collection on home visitors. The HFPI, though validated as an appropriate tool for research and evaluation, indicates several subscales that may not be appropriately sensitive to detect change (Krysik & LeCroy, 2012). and the authors of the NCFAS report that its subscales were designed for the "purposes of service planning" rather than research (Kirk, 2012). A lack of significant findings related to perception of enhanced supports reported by home visitors receiving mental health consultation when compared to home visitors who did not, suggest that the model did not fully address the needs of home visitors. In light of emerging research regarding programmatic mental health consultation, recommendations include a greater focus on staff and program outcomes because they are the targeted outcomes of program-focused consultation and theorized to be predictors of positive changes regarding mental health challenges. Linking shorter term outcomes achieved through mental health consultation including changes in staff- and program-level outcomes to child- and family-level outcomes is recommended as the focus for continued longitudinal evaluation. Future recommendations for continued evaluation include examining the quality of the consultant-consultee relationship and the effects of consultant qualifications.

Goodwill Guides: To examine the integration of Goodwill Guide Consultants into home visiting services provided by NFP, this evaluation used document analysis, semi-structured interviews, focus groups and surveys from NHVs and Goodwill Guides to provide a broad, but rich description of the service provision that results from the integration of Guides into NFP home visiting activities and to allow for triangulation of results. A formative evaluation design provided relevant and meaningful information for the improvement, modification, or management of the newly implemented program (Patton, 1985), employing complimentary mixed-methods to include specific quantitative measures to clarify or support the results from qualitative inquiry (McMillan & Schumacher, 2001). NFP NHVs and nurse supervisors perceived the effectiveness and support of the Goodwill Guide Consultants to be enhancements to NFP service provision. However, these results are limited to cross-sectional survey, focus group, and interview group data measuring *perceptions* of effectiveness only; thus, it is important for continuing evaluation of the Guide Consultant model to measure effectiveness and impact of the Guide Consultant services on family outcome measures.

II. INTRODUCTION AND BACKGROUND

Competitive Grant Goal and Objectives

The goal of Indiana's FY11 D89 Competitive Expansion Grant was to improve health and development outcomes for Hoosier children and families who are at risk by expanding two evidence-based home visiting programs (NFP and HFI) to address: maternal and infant health, child development and school readiness, family economic self-sufficiency, improvements in coordination and referrals for other community resources, reduction in Emergency Department (ED) visits, and child abuse, neglect, and maltreatment. To achieve this, Indiana aimed to complete the following objectives:

1. By FY 2014, expand HFI programming to serve a greater number of families in Elkhart, Grant, Lake, LaPorte, Marion, Scott, and St. Joseph counties and NFP to serve more families in Marion County; totaling an additional 1,730 families who are low-income and high-risk.
   - Indiana served 5,216 competitive funded families through 9/30/2016, of which 1,822 were served by 6/30/2014.
2. By FY 2014, inform all organizations in Indiana [that currently serve as a referral source for home visiting programs] regarding referral coordination and expansion of services in order to

provide appropriate, targeted, and unduplicated services to all children, mothers, and families who are high-risk throughout Indiana.

- Indiana reported 23 formal Memorandum of Understanding (MOU[2]) agreements during YEAR 5[3] reporting – an increase from 9 MOU agreements in YEAR 1. Indiana reported informal sharing (Benchmark 6.5) with 666 agencies beyond the LIAs funded in this grant during YEAR 5 reporting – an increase from 393 agencies in YEAR 1. Informal sharing relationships are defined as regular communication and/or sharing of information that occurs at least quarterly with LIAs.

3. By FY 2014, increase number of referrals [to agencies that provide wraparound services to home visiting programs] by 50% to ensure coordination of services outside of home visiting programs that address needs of participants; services may include mental health, primary care, dental health, children with special needs, substance use, child injury prevention, child abuse/ neglect/ maltreatment, school readiness, employment training and adult education programs.
   - Indiana consistently referred more than 99% of households (that identified with a need) to appropriate and available community resources.
   - Indiana consistently illustrated that more than 75% of referrals resulted in confirmed receipt of service (Benchmark 6.3).

Workplan The following main activities were proposed to achieve the objectives above.

<u>*Statewide Activities*</u>

✓ Indiana achieved the start-up of Indiana Home Visiting Advisory Board (INHVAB)
   - Indiana began developing the INHVAB as an extension of the state team (formerly referred to as the Leadership Collaborative) in April 2013. During 2014, representatives from NFP and HFI local sites were added to address Continuous Quality Improvement (CQI), evaluation, and performance measure oversight.
   - In 2015, Indiana worked with the Technical Assistance Coordinating Center (TACC) to expand INHVAB to include agency input beyond those serving MIECHV funded families, and develop a more defined purpose and concrete goals. The revised goal of INHVAB is to coordinate, promote and define Home Visiting efforts in Indiana and to utilize data to assess need, identify service gaps, maximize resources and inform policy to improve health and developmental outcomes for Hoosier families and children. INHVAB membership includes: ISDH, DCS, Indiana Department of Corrections (DOC), Department of Workforce Development (DWD), and multiple divisions of the Family and Social Services Administration (FSSA) including the Office of Early Childhood and Out of School Learning (OECOSL), Division of Mental Health and Addiction (DMHA), Department of Family Resources (DFR) and Office of Medicaid Policy and Planning (OMPP).
     - Definition of Home Visiting Programs for Indiana was adopted in January 2016, as "evidence-based programs that partner with pregnant women and families with children age birth to five to provide voluntary, individualized services. Home visits can be part of many types of programs; however, this definition is limited to evidence-based programs that focus primarily on home visiting. More specifically,

---

[2] Indiana only counts formal MOUs, which are legal documents. Many LIAs do not employ legal contracts for referrals due to the expense of such agreements, which could be spent on services for families.

[3] Services provided October 1 to September 30 by reporting year: YEAR 1: 2011-2012, YEAR 2: 2012-2013, YEAR 3: 2013-2014, YEAR 4: 2014-2015, YEAR 5: 2015-2016

this definition focused on home visiting programs that have research supporting their efficacy in achieving at least one of the following: optimizing health outcomes for mother and child; supporting families in raising physically, socially and emotionally healthy children; preventing child abuse; and helping families to build resiliency so that they can cope with adverse childhood experiences. Examples of such programs include NFP, HFI, Early Head Start (EHS), and Parents as Teachers (PAT). Home visiting services take place in a setting that is natural and comfortable for the family, such as the home, child care program, or library. Areas of support within home visiting may include: positive parenting, child development, maternal and child health, access to resources and social supports, and family economic self-sufficiency."

- ✓ Within the next year, Indiana will comprehensively analyze communities to determine most high-risk from original counties identified as at-risk.
  - While Indiana did not achieve a revised Needs Assessment during this project period, as part of the FY16 X10 award, Indiana will complete a revised Needs Assessment that will look at original factors that identified counties at-risk as well as additional factors that were identified by members of the INHVAB to be important to home visiting and collaborative partners. Indiana anticipates the revised Needs Assessment to be completed in the first half of 2017.
- ✓ As part of the evaluation, surveyed at-risk communities to determine input on what the community feels it needs and its capacity to support the need.
- ✓ Home visitors were able to identify providers for each of the indicated service areas and rated their ability to share information with providers as "adequate" or "good." Program referral and community services provider surveys evidence that access to and communication with providers varies greatly between specified service areas and across site-specific locations.
- ✓ Met quarterly to exchange information regarding relevant Early Childhood Comprehensive Systems (ECCS), home visiting, efforts of other committees and organizations.
- ✓ Communication facilitated among co-lead agencies and other agencies, collaborations, organizations, committees by attending meetings and discussing ideas.
- ✓ Quarterly collected reports from MIECHV sites regarding implementation and data
  - Quarterly benchmark analysis has been a cornerstone of Indiana MIECHV activities.
- ✓ Map current spending of evidence-based and promising practice home visiting programs throughout the state (including geographic location, fiscal contributions, funding sources).
  - In 2014, the Indiana Early Learning Advisory Committee (ELAC) Funding Streams workgroup began to identify the different funding sources in Indiana that support early learning[4] including evidence-based home visiting services, early intervention services, and early care and education programs. http://www.elacindiana.org/resources/

HFI Activities

- ✓ DCS successfully worked with nine (9) local agencies to contract for expanded HFI services, including setting a budget and hiring additional staff.
- ✓ Throughout the project period, new staff were appropriately trained to deliver service as outlined in HFA standards for accreditation.
- ✓ HFI connected families systematically, prenatally or at birth, with appropriate linkages to

[4] ELAC defines early childhood as the period from birth to age five, although ELAC also recognizes the importance of quality prenatal care in early childhood outcomes.

home visiting services, along with other information and referrals; fostering nurturing, parent-child relationships. Each family was connected to at least one additional community service through referral; many received multiple referrals resulting in receipt of service.

- ✓ Increased referrals to HFI providers in targeted communities/counties of Elkhart, Grant, Marion, and St. Joseph were realized during the project period.
- ✓ Assessed new families for services, enhancing family functioning by reducing risk and building protection factors.
- ✓ HFI services were provided to 4014 additional high-risk families in selected counties/communities during this project period.
- ✓ Through contracted services with the database provider in conjunction with DCS Prevention staff, all HFI staff received training and on-going support specific to data collection and input.
- ✓ Indiana successfully collected data from HFI LIAs, and analyzed and reported data collected.
- ✓ Enhancement of Mental Health Consultation services provided in seven counties.
    - The original enhancement model included three mental health clinicians to be hired and supervised under the HFI Quality Assurance and Training Director. Clinicians (LSW/LMFT/LMHC) would oversee high risk cases through case review and clinical supervisions with each staff and be available to do face to face assessments, recommend interventions, and accompany and role model for staff. Clinicians would support staff in dealing with suicide threats, post-partum depression, depression, personality disorders, severe mental health issues, addictions, and domestic violence. Clinicians would also focus on the social/emotional development of the child and address infant mental health issues and provide on-going clinical training for all HFI sites serving MIECHV funded families. The clinical enhancement model complied with accreditation standards and was approved by HFA.
    - Ultimately, the centralized service enhancement as described above was implemented with a single licensed clinician overseeing three Advanced Family Support Specialists (AFSS) who worked directly with staff at LIAs. Due to excessive travel and other constraints related to centralized implementation, Indiana elected to revise the enhancement – with approval from HRSA – to a localized model that would allow for licensed clinicians from communities served to be available to provide more locally and culturally relevant direct service.
    - As clinicians support home visitors in a very similar manner as model supervisors – providing support to home visitors regarding specific MIECHV funded families – this service is really a direct service to families, and not administrative (as originally conceived in the FY11 grant application). The revised model of mental health consultation includes the same services to families as originally conceived, with LIAs providing oversight of clinicians. LIAs are contractually required to provide via licensed clinician the following mental health consultation services.

Table #2: Mental Health Consultation Services

o Review all newly enrolled MIECHV-funded families
o Identify families who would benefit from mental health consultation
o Monthly review of each identified family for purpose of developing appropriate intervention plan.
o Work with supervisors and home visitor staff to identify priority of families
o Provide monthly individual consultation to home visitors serving MIECHV-funded families
o As needed, clinician may accompany home visitor on family home visit
o Monitor and identify trends related to mental health concerns

o Conduct training (minimum bi-monthly)
o Provide monthly reflective consultation with each home visitor serving MIECHV-funded families.
o Consultation with home visitors to be documented in supervision records;
o Provide service documentation to program management and Department of Child Services (DCS)
o Participation in evaluation of mental health consultation services
o Provide above described services locally within the offices of the Healthy Families Indiana agency except for home visits or training.
o Enter documentation as appropriate and requested in statewide data system
o Seek and maintain Endorsement from the Indiana Association for Infant and Toddler Mental Health.

NFP-IN Activities

- ✓ Extended availability and scale of NFP to reach eligible families in all of Marion County who elects to receive the service.
- ✓ Developed a countywide referral system by which NFP clients and NHVs s are able to receive the most effective referral links to meet their targeted needs based upon geographic area, level of need, and eligibility of service.
- ✓ Hired 2 additional teams consisting of 16 NHVs and 2 supervisors to develop NFP infrastructure in Marion County.
- ✓ Received referrals for 1200 eligible first-time, low-income mothers within Marion County.
- ✓ Enrolled over 500 new home visiting clients within Marion County.
- ✓ Connected participants of home visiting services with holistic, whole-family services provided by Goodwill through the Goodwill Guides model
- ✓ Completed all evaluation requirements determined by the national organization and all outcome measures identified in Updated State Plan.
- ✓ Participated in rigorous evaluation steps established via an outside evaluator.

Purpose and Rationale

Problem: (At the time of the FY11 Competitive Expansion Grant application.)

- In 2011, 68.1% of Indiana women received prenatal care in the first trimester compared to 73.7% nationally.[5]
- 16.6% of women in Indiana reported smoking during pregnancy in 2011 compared to the national Healthy People 20/20 goal of 1.4%. The Indiana Medicaid population who report smoking during pregnancy is consistently around 30%.[6]
- Statistics from 2011 show that the rate for low birth weight among black babies was 13.3% as compared to a rate of 7.4% for white babies.[7]
- Indiana's breastfeeding rates in 2011 indicated 74% of moms initiated breastfeeding and 57.8% of black mothers initiated breastfeeding compared to the total national initiation percent of 76.9%.[8]
- The latest infant mortality data in Indiana (2011) shows a rate of 7.7 per 1,000. This was 7.5 per 1000 in 2010, and 7.8 per 1000 in 2009.[9]
- There are racial disparities in the Indiana infant mortality rate. Indiana shows improved black

[5] ISDH, MCH Epidemiology Division [April 4, 2014]; United States Original Source: Centers for Disease Control and Prevention National Center for Health Statistics

[6] ISDH, MCH Epidemiology Division [October 3, 2013]; Healthy People 20/20; Maternal, Infant, and Child Health Objectives; www.healthypeople.gov/2020.

[7] ISDH, MCH Epidemiology Division, August 8 2013.

[8] ISDH, Epidemiology Resource Center, Data Analysis Team, August 8, 2013; 2013 United States Breastfeeding Report Card National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition, Physical Activity, and Obesity

[9] ISDH, MCH Epidemiology Division [August 12, 2013] United States Original Source: Centers for Disease Control and Prevention National Center for Health Statistics Indiana Original Source: ISDH, PHPC, ERC, Data Analysis Team

infant mortality rates from 18.1 in 2006 to 12.3 per 1,000 in 2011; however this number is still well above the 2011 white infant mortality rate of 6.9 per 1,000 live births.[10]

- 43% of infant deaths for infants 29 days to 6 months (N=169) in Indiana in 2011 are attributed to Sudden Infant Death Syndrome (SIDS) and/or Sudden Unexplained Infant Death Syndrome (SUIDS).[11]
- Indiana's suffocation rate for infants is worse than the national average. In 2011, Indiana's rate was 22.7 compared to the national rate of 12.1 per 100,000 live births. Again, significant disparities exist with a black infant's suffocation rate of 59.7 per 100,000 in 2010.[12]
- In SFY 2011 (July 1, 2010-June 30, 2011) 40 child fatalities were substantiated for abuse and neglect. In the case of abuse, 48% of those children were under the age of 1; in the case of neglect, 38% of those children were under the age of 1.[13]
- 29% of Indiana children under 18 live in households with incomes less than 100% of the federal poverty guideline which is slightly higher than the national percentage of 27%.[14]

Intervention: Indiana successfully expanded HFI and NFP in identified priority, high-risk areas.

- Prenatal care is a significant point of attention of home visiting services for pregnant moms. Home visitors educate moms on the benefits of prenatal care, as it reduces instances of pre-term birth and low birth rate babies and increases health outcomes for moms and babies.
- Home visitors educate families on dangers of smoking during pregnancy and secondhand smoke
- Home visitors educate moms on benefits of breastfeeding.
- Indiana is focused on reducing infant mortality and child maltreatment. Home visitors educate families about car seat installation, SIDS/Back to Sleep/Safe Sleep/Co-Sleeping, shaken baby, blunt force trauma, Post-Partum Depression, who to leave your child with, and fire – all within 1 month of birth or consent, if consented after birth of child. Families are educated about water temperature, poison, water safety, and other child safety topics.
- Home visitors address areas of family self-sufficiency. Families receive referrals to employment, housing, and education related services as well as mental health, physical health, and domestic violence related services as need is identified.

Benefits to Date: Indiana created a data collection and benchmark plan (approved early 2012) in order to measure federal legislatively mandated benchmarks across both programs. Highlighted outcomes with Competitive funded families in Indiana include:

- Average week of entry into prenatal care for moms enrolled by 28 weeks gestation during YEAR 5 reporting period was 8.56, improved from 9.6 in YEAR 1.
- Of moms enrolled by 28 weeks gestation who reported smoking, Indiana reported that 61.54% quit smoking during their pregnancy in YEAR 5, improved from 44.4% in YEAR 1.
- 89.66% of moms enrolled by 28 weeks gestation indicated they had initiated breastfeeding during YEAR 5 reporting, which is an improvement over prior years' reporting.
- Consistently more than 95% of moms were screened for maternal depressive symptoms during reporting YEARs 2-5, a sustained improvement from 77.1% in YEAR 1.
- Consistently more than 97.5% of families were provided information or training around prevention of child injuries throughout the project period.

[10] ISDH ERC, Data Analysis Team, 2013
[11] ISDH, MCH Epidemiology Division [January 17, 2014].
[12] ISDH, MCH Epidemiology Division [February 21, 2013] United States Original: Centers for Disease Control and Prevention National Center for Health Statistics Indiana Original Source: Indiana State Department of Health, PHPC, ERC, Data Analysis Team
[13] DCS Annual Child Fatality Report for State Fiscal Year 2011.
[14] Source: Kaiser State Health Facts, Poverty Rate by Age, Retrieved from: http://kff.org/other/state-indicator/poverty-rate-by-age/?state=IN

- Less than 1% of children enrolled at 12 months had a substantiated report of abuse and/or neglect during YEAR 5 reporting.
- Of those women who were identified for the presence of domestic violence, 84.85% were referred to outside, relevant domestic violence services during YEAR 5 reporting, an improvement from 48.2% in YEAR 1.
- During YEAR 5 reporting, 48.42% of Competitive funded families with less than 12 years of education increased their educational attainment by one year post enrollment, up from 30.6% in YEAR 2 (noting that this was not measured in YEAR 1, making YEAR 2 the baseline.)
- Consistently, more than 92% of households were identified for need of additional services at the first home visit during the project period
- Throughout the project period, consistently more than 99% of Competitive households who were identified for need of additional services received a referral to an available community resource within 6 months and more than 75% of those referred confirmed receipt of services by one year post-partum

Priority Elements

While the core priority element Indiana elected to address with FY11 Competitive funds was to support effective implementation and expansion of evidence-based home visiting programs with fidelity to the models, Indiana determined that all priority elements could be addressed by the expansion of current home visiting programs.

Priority Element 1: To support improvements in maternal, child, and family health

- Indiana illustrated support for improvements in maternal, child, and family health through various YEAR 5 outcomes reported for the Benchmark plan for families receiving Competitive funded home visiting services as identified above in *Benefits to Date* and:
  - 67% of women enrolled at 6 months postpartum received well woman care.
  - Only 9% of women who were enrolled at 12 months postpartum experienced subsequent pregnancies within 12 months of the birth of target child
  - Target children average 5.73 well-child visits within 12 months post-partum
  - 95.41% of women and children have health insurance

Priority Element 2: Supporting effective implementation and expansion of evidence-based home visiting programs with fidelity to the evidence-based model.

- HFI and NFP have successfully expanded home visiting services in proposed communities.
- HFI is accredited by HFA which serves as a resource for model specific questions.
- NFP in Indiana was consistently compliant with model elements as tracked by NSO's Program Fidelity report.

Priority Element 3: To support development of statewide or multi-site home visiting programs.

- Indiana convened INHVAB as further described in ***Workplan***/*Statewide Activities* above.

Priority Element 4: To support the development of comprehensive early childhood systems that span the prenatal-through-age-eight continuum.

- HFI and NFP provide access to high quality programs supporting professional workforce by providing evidence-based programs to pregnant women / families with infants and children.
- MIECHV work and state team members support various early childhood systems activities.

Priority Element 5: To reach high-risk and hard-to-engage populations

- HFI families must score above 40 on the Parent Survey / Family Stress Checklist (formerly referred to as Kempe Family Stress Checklist) or score 25 or above with specific additional risk factors in order to be offered services.
- Indiana's home visiting Competitive funded enrollees illustrated the following high-risk

characteristics during YEAR 5 reporting: 1564 enrollees were single and never married; 400 of pregnant women enrollees were 21 years of age and younger; 633 of female enrollees had less than a high school diploma; 1120 enrollees reported unemployment; 169 enrollees reported history of substance abuse/indicated need for substance abuse treatment.

Priority Element 6: To support a family-centered approach to home visiting

- HFI supports engaging fathers through home visiting as an integral part of the family being served. In some instances, families are served when the primary parent (Adult 1) is the father of the baby, these families may include single parent households or families where the mother of the baby is unable to be the primary caregiver. HFI sites must attend home visitors training around "Father Engagement".
- NFP implemented the Goodwill Guides program as a support service.

Priority Element 7: To reach families in rural (or frontier) areas

- HFI served Competitive funded families in rural areas at three LIAs: *Family Service Society* in Grant County, *Child and Parent Services (CAPS)* in Elkhart County, and *New Hope Services* in Scott County.

Priority Element 8: To support fiscal leveraging strategies to enhance program sustainability

- HFI has been provided home visiting services in Indiana for more than 20 years and is supported through federal Temporary Assistance for Needy Families (TANF) funds and state funds along with other funding secured by local implementing agencies. Once MIECHV dollars are no longer available, services for families remaining in home visiting will be rolled into alternate funding streams to assure that families seamlessly receive support for the life of their need and/or eligibility. LIAs strive to maintain home visitor consistency with families so that transition of funding does not impact the home visitor/family relationship or impede progress toward program completion. Positive outcomes from MIECHV projects creates additional incentives for entities to fund home visiting services and bring higher awareness of the benefits of home visiting for at-risk Hoosier families.
- Goodwill Industries of Central Indiana has received private foundation to support sustaining NFP past the life of the MIECHV program. Goodwill established their Community Advisory Board (CAB) with diverse partners committed to identifying and securing diverse funding for NFP. The Sustainability and Expansion Committee of the CAB was established to serve as liaison for philanthropic opportunities, support partnerships with health systems to pursue additional funding and community benefit funds and to continuously make connections with other resources to collaboratively pursue funding.

Target Populations

HFI and NFP-IN have similar referral sources and methods for identifying participants through physicians, clinics, WIC, high schools, social service agencies, and self-referrals. While referral sources may be similar, due to target populations of specific programs, referrals were based on client eligibility and status, as well as agency agreements in place with either HFI or NFP.

HFI Methods for Screening / Identifying / Referring Families: HFI must initiate services either prenatally (no earlier than the 6th month of pregnancy) or at birth of the target child (no later than Target Child's birthdate + 3 months), with priority given to postnatal families. Prior to Assessment, a family must screen positive on an *Eight Item Screen* that measures risks based on the following: Single marital status, Inadequate income/no information/income from disability, Unstable housing, Education under 12 years, History of/ current substance abuse, History of/current psychiatric care, Marital or family problems, History of/current depression. If the family screens negatively, home visiting services will not be offered, however appropriate

referrals to community resources will be provided.

An eligible family must also be within an income eligibility of 250% of federal poverty line or less and at least one family member must have a social security number. Additionally, the primary caregiver must score 40 and above on the *Parent Survey / Family Stress Checklist* that measures risk based on the following: Parent beaten or deprived as child, Parent with criminal/mental illness/substance abuse, Parent suspected of abuse in the past, Low self-esteem/social isolation/depression/no lifelines, Multiple crises/stresses, Violent temper outburst, Rigid and unrealistic expectations of child, Harsh punishment of child, Child difficult and/or provocative as perceived by parents, Child unwanted, Child at risk for poor bonding. Priority will be given to families that score at least 25 on the *Parent Survey / Family Stress Checklist* and also have any of the following: Safety concerns expressed by hospital staff, Mother or father low functioning, Teen parent with no support system, Active untreated mental illness, Active alcohol/drug abuse, Active interpersonal violence reported, Scores of 10 or above or 3 on question #10 on the Early Postpartum Depression Scale, Target child born at 36 weeks of gestation or less, Target child diagnosed with significant developmental delays at birth, and Family assessment worker witnesses physical punishment of child(ren) at visit.

NFP-IN Methods for Screening / Identifying / Referring Families: Since NFP-IN expanded its scope to all areas of Marion County, it utilized existing mechanisms that were in place for referrals to NFP, as well as coordinated referrals with other existing home visiting programs. NFP-IN had specific criteria for identifying and screening clients that involve only enrolling mothers who are first time, low-income, and are identified before their third trimester of pregnancy. After being identified as eligible, numerous screening mechanisms took place in order to assess the client's needs. High-risk NFP clients were identified by referral through community agencies such as schools, clinics, and grassroots neighborhood organizations. Education to referral partners on the program's eligibility (first time mom, enrollment at or prior to 28 weeks gestation) as well as the program's goals to reach high-risk and low-income clients was an early priority.

Community Context Table #3 provides context around communities served as identified in the needs assessment, based on data at the time of application for this Competitive MIECHV project.

Table #3: Community Context

Table #3: Community Context
Community 1: ***Grant County*** is a rural county in east central Indiana with few resources. Family Service Society serves this entire county using the HFI model to address their poverty level of 26.5%, unemployment rate of 23%, and 34% of pregnant women receiving late or no prenatal care.
Community 2: ***LaPorte County*** is a northern Indiana county with several mid-size towns. Dunebrook serves this entire county using the HFI model to address their poverty level of 19%, unemployment rate of 22.6%, and 32.9% of pregnant women receiving late or no prenatal care.
Community 3: ***Elkhart County*** is a rural northern Indiana county. CAPS serves this entire county using the HFI model to address their poverty level of 18%, unemployment rate of 16.1% and 48.2% of pregnant women receiving late or no prenatal care.
Community 4: ***St. Joseph County***, served by Family & Children's Center using the HFI model, is located in northwestern Indiana. 40% of the population live in South Bend, a city with extremely high-risk families identified in inner-city zip codes where child abuse rates range from 1.10% to 4%.
Community 5: ***Scott County*** is a southern rural Indiana county with limited community resources where of the 346 live births in 2007, 45% were Medicaid eligible and the child abuse rate was extremely high (4%). Over 25% of Scott County's population under 18 years of age live in poverty, with over half the elementary school students receiving free or reduced school lunch. New Hope Services serves this entire county using the HFI model.
Community 6: ***Lake County***, served by Mental Health America of Lake County using the HFI model, is located in northwestern Indiana and is home to large urban cities like Gary, East Chicago, and Crowne Pointe. 20% of the county population lives in Gary with extremely high-risk families identified in inner-city zip codes of East

Chicago and Gary.
Community 7: ***Marion County***, located in the center of Indiana, is the home of the capital city of Indianapolis, and is Indiana's largest county by population. About 25% of Marion County's population is under the age of 18. The median household income of the county in 2009 was $41,201 while the Indiana's median household income was $45,427. About 9% of the births in Marion County were of low birth weight (LBW), while 11.3% of infants were born LBW in the four contiguous counties identified in the Updated State Plan. Zip-code 46214 has the highest percentage LBW children. On average, more substantiated reports of child abuse and neglect occurred in these four zip-codes than in the entire county (189 and 113 respectively). The HFI model is provided throughout the county via 4 implementing agencies, 3 of which are supported through MIECHV Competitive dollars: Healthnet, Health and Hospital Corporation (Eskenazi), and Health and Hospital Corporation (Marion County Health Department). The NFP model is provided throughout this county by Goodwill.

Home Visiting Models – HFI and NFP

Healthy Families HFA is an evidence-based, nationally recognized home visiting program model designed to work with overburdened families who are at-risk for child abuse and neglect and other adverse childhood experiences. It is the primary home visiting model designed to work with families who may have histories of trauma, intimate partner violence, and mental health and/or substance abuse issues. HFA services are offered voluntarily, intensively and over the long-term (3 to 5 years after the birth of the baby). (http://www.healthyfamiliesamerica.org) HFA is one of the models chosen by the Department of Health and Human Services' Home Visiting Evidence of Effectiveness. HFA has a strong research base which includes randomized control trials and well-designed quasi-experimental research. In 2006, HFA was named "proven program" by RAND Corporation based on research conducted on the Healthy Families New York programs. The Office of Juvenile Justice and Delinquency Prevention (OJJDP) has rated HFA as Effective. HFA evaluation results (http://www.healthyfamiliesamerica.org/research-articles) from more than 20 states, including 12 randomized control trials, demonstrate positive outcomes in all six domains required by the federal MIECHV program: Reduced child maltreatment; Improved child health, including increased birth weight; Improved parent-child interaction; Improved school readiness and adjustment in 1st grade; Improved family self-sufficiency; and, Improved coordination of services and referrals.

The HFI program – accredited as a state-wide centrally administered system following the HFA model - has provided services to Hoosiers since 1994. This accreditation (most recently achieved in 2013) signifies that not only do local service delivery sites meet standards for accreditation; the state-wide system provides centrally administered Quality Assurance and Technical Assistance at a level that results in a high degree of fidelity to the national model.

Nurse-Family Partnership NFP is an evidence-based community health program that helps transform the lives of vulnerable, low-income mothers pregnant with their first children. Built upon the pioneering work of Professor David Olds, NFP's model is based on more than 30 years of evidence from randomized, controlled trials that prove it works.

Beginning in the early 1970s, Dr. Olds initiated development of a nurse home visitation program that targeted first-time mothers and their children. Over the next three decades, he and his colleagues continued to test the program in three separate, randomized, controlled trials with three different populations in Elmira, NY, Memphis, TN., and Denver, CO. The trials were designed to study the effects of the NFP model on maternal and child health, and child development, by comparing the short- and long-term outcomes of mothers and children enrolled in the NFP program to those of a control group not participating in the program.

Today, Olds and his team continue to study the model's long-term effects and lead research to continuously improve the NFP program model. Since 1979, more than 14 follow-up studies have

been completed across the three trials, tracking program participants' outcomes. The implementation of longitudinal studies enables NFP to measure the short- and long-term outcomes of the program. Trial outcomes demonstrate that NFP delivers its three primary goals of better pregnancy outcomes, improved child health and development and increased economic self-sufficiency—making a measurable impact on the lives of children, families and the communities in which they live.

Meaningful Support and Collaboration with Key Stakeholders

Most often, families that participate in home visiting services have other needs that are better addressed through other community resources. Additionally, education regarding available resources requires an ongoing commitment to regular communication with local communities and staying informed regarding state-level initiatives. Examples of meaningful support and collaboration vital for the proposed activities within this Competitive project follow:

Early Learning Advisory Committee (ELAC)*:* ELAC was established in 2013 by the Indiana General Assembly to assess availability, affordability, and quality of early childhood programs statewide and to make best practice recommendations for interventions to improve and expand early childhood education. ELAC is working to ensure children ages birth to 8 years and their families have access to affordable, high quality early education programs that keep children healthy, safe and learning. Members of the MIECHV team actively participate in the various workgroups of ELAC.

Early Childhood Comprehensive System (ECCS): Since 2003, Indiana's ECCS grant has been awarded to ISDH/MCH and provided impetus for much needed collaboration of statewide early childhood organizations to come together. Indiana utilized the ECCS model very successfully to help build a state infrastructure that better meets needs of infants and toddlers with social-emotional challenges and in 2016, was awarded an ECCS Impact competitive award.

Project LAUNCH (Linking Actions for Unmet Needs in Children's Health)*:* In 2012, ISDH MCH with co-lead DMHA, was awarded Project LAUNCH bringing together key stakeholders including State and Local child-serving agencies and parents to create the State Young Child Wellness Council (YCWC). The YCWC developed a vision that states: Indiana Project LAUNCH envisions a State where all individuals responsible for the care and development of children before birth to age 8 years are supported to promote optimal social and emotional wellness in all children leading to healthier families and safer communities. Indiana Project LAUNCH is tasked with piloting initiatives that focus on family strengthening and parent skills training, screening and assessment, integration of behavioral health into primary care settings, mental health consultation, and enhancing home visiting. Home visiting programs are being enhanced through building competency of those providing home visiting services. Trainings in Motivational Interviewing, Trauma-Informed Care Approaches, Mental Health First Aid, and the Georgetown Model of Mental Health Consultation have been provided to a variety of home visitors in the Southeastern region including HFI, First Steps, and Head Start. A mental health consultation initiative (distinct from the model used within MIECHV) will serve as a support to home visitors, children and their families.

Happy Babies Brain Trust (HBBT): The Indiana HBBT workgroup was formed in 2014 with support of W.K. Kellogg Foundation and Zero to Three to raise awareness of infants and toddlers in Indiana. OECOSL is the lead agency for Indiana's Infant Toddler Advisory Group, HBBT, a collaborative group of individuals from public and private agencies from throughout Indiana, including representatives from DCS and ISDH State MIECHV Teams. The advisory group

worked to promote awareness of the need for good health, strong families, and positive learning experiences for infants and toddlers; coordinate infant toddler efforts across state agencies, associations and organizations. One priority was to focus on early childhood messaging on key infant toddler issues through an issue brief titled "Getting Ready for School Starts at Birth," released November 2015, which included 7 overarching recommendations, including expanding evidence based home visiting.

Indiana Commission on Improving the Status of Children (CISC): CISC was established under a law signed by Governor Pence on April 30, 2013. This 18-member Commission consists of leadership from all three branches of government including the Director of DCS and ISDH Commissioner. CISC is charged with studying and evaluating services for vulnerable youth, promoting information sharing and best practices, and reviewing and making recommendations concerning pending legislation. This broad-based state commission studies and evaluates state agency policy and practice as well as proposes legislation that affects the well-being and best interests of children in Indiana. The enhancement and expansion of our statewide home visiting programs aligns well with this multi-tiered, action-oriented, outcome-expected approach.

Indiana Children's Mental Health Initiative (CMHI): The CMHI is collaboration between DCS and DMHA and local Community Mental Health Centers (CMHCs) and other providers who serve as access sites to ensure children are served in the most appropriate system to meet their needs. At the local level, partnerships between DCS Prevention providers, including HFI and local access sites are beginning to develop as the CMHI project spreads throughout the state and the benefits of collaboration efforts are realized.

DFR, TANF and Supplemental Nutrition Assistance Program (SNAP): DFR is responsible for establishing eligibility for Medicaid, SNAP, and TANF to support families by emphasizing self-sufficiency and personal responsibility. TANF provides a number of services to low income families. In addition, DCS has an MOU with DFR to utilize a portion of the state's TANF allotment for the provision of HFI services further demonstrating the state's collaborative approach to supporting home visiting efforts.

Indiana Head Start State Collaboration Office (IHSSCO): IHSSCO partners with Early Childhood stakeholders to provide coordination across early childhood programs. Representatives from ISDH MCH and DCS Prevention Programs are members of the Multi-Agency Advisory Council. The mission of this council is to build early childhood systems to enhance access to comprehensive services and support for children throughout the state. The IHSSCO provided annual financial support to DCS Prevention Programs for the bi-annual Institute for Strengthening Families conferences which provides high quality training opportunities at a low cost to providers serving families across the state. The financial support from the Collaboration Office allows for significant attendance from Head Start and Early Head Start Program staff and further demonstrates the state's priority to support the development of all high-quality home visiting programs available to Indiana families.

Healthy Start: The Indianapolis Healthy Start Program offers education, referral and support services to pregnant women and their families in an effort to eliminate the disparities in birth outcomes and improve infant mortality. In January 2016, the new ISDH/MCH Director and Director of Women, Children and Adolescent Health programs began meeting with the Indianapolis Healthy Start Program Director to enhance collaboration efforts moving forward. The MIECHV State team has subsequently been invited to join the Indianapolis Healthy Babies Consortium which is led by Healthy Start.

Indiana Perinatal Quality Improvement Collaborative (IPQIC): The mission of IPQIC is to improve maternal and perinatal outcomes in Indiana through a collaborative effort with the use of evidence-based methods. The Governing Council of IPQIC is co-chaired by the ISDH Commissioner and the President of the Indiana Hospital Association, and is comprised of members across various hospital, medical, state and community health departments and social services organizations from both the state and community levels including key members of State MIECHV Team.

Early Intervention Program, Part C of the Individuals with Disabilities Education Act (IDEA): At the state level, FSSA's Bureau of Child Developmental Services administers First Steps, a family-centered, locally-based, coordinated system that provides early intervention services to infants and young children with disabilities or who are developmentally vulnerable. At the state level, First Steps is advised by the Interagency Coordinating Council (ICC), a federally mandated group that assists and advises the state's program of early intervention services for infants and toddlers with disabilities and their families. It is a Governor-appointed council that includes membership of all pertinent state agencies/departments, service providers, and family consumers and includes the Prevention Program Manager (CBCAP Lead). Many First Steps providers regularly participate in training opportunities available through The Institute for Strengthening Families. Referral coordination occurs at the state level through a data exchange between DCS for child welfare clients and First Steps. At the local level, many HFI and NFP providers have developed reciprocal referral relationships with their local First Steps offices as part of outreach efforts to support families of children with disabilities.

The Institute for Strengthening Families: The Institute for Strengthening Families is administered by DCS Prevention Team and offers a unique opportunity to bring together a wide array of providers serving families and parents across multiple systems for high quality, affordable training and promotion of the vast array of services available to assist in all of our efforts to improve the lives of children and families in Indiana. http://www.theinstituteforfamilies.org/ Many members of the Institute Planning Committee represent collaborative partners listed in this report.

Resolution of Challenges

Data: Aggregating data across two distinct models with established yet disparate data collection systems was a sizable challenge. Indiana utilized its third party evaluator to objectively aggregate data for state level reporting. Quarterly data reviews were developed to identify challenges with data prior to federal reporting and improve issues around missing data.

Staff Turnover: during YEAR 4 the ISDH MCH team sustained almost complete turnover which impacted team morale and continuity of planned activities. New leadership with extensive experience managing and leading program and project implementation on large scales, the new MCH Director and new Director of Programs continue to take active steps to ensure "right fit", that right people are in right positions at right time. Directors worked diligently to foster a nurturing, team environment within ISDH MCH to ensure all team members are appropriately supported to carry out assigned duties and ensure success of all planned activities. DCS MIECHV team members also experienced significant turn over during YEAR 5, including a new Deputy Director of Child Welfare Services, and two (2) Prevention Program Managers. Newer team members continue to work hard to minimize impact of change on MIECHV funded services and sustain working relationships within the Indiana MIECHV team. Locally, staff turnover was a challenge many home visiting sites experienced. Throughout most of project period, long sustaining Program Managers for HFI sites addressed challenges through practical

staff recruitment, additional training and collaborative communication with other HFI sites experiencing similar barriers to staff retention. New and experienced Program Managers have successfully rebuilt staff as needs arise to meet service capacities and needs of families served.

WIC Referrals: Within the project period, HFI sites were affected by a reduction in Women, Infants, and Children (WIC) referrals (previously a major referral source) due to direction the state WIC office received from United States Department of Agriculture (USDA) that resulted in changes in how referrals were shared between local WIC and HFI sites. In response, a centralized referral process was developed at the state level which initially resulted in a 30-60 day delay in HFI sites receiving referral information, creating significant impact on local HFI site's ability to engage referred families in services within eligibility guidelines. HFI sites have addressed this barrier by expanding the development of collaborations with local service providers, finding ways to creatively reach families that would benefit from home visiting, and leverage community support to further assist HFI clients. In 2015, an MOU was executed between DCS HFI and ISDH WIC outlining agreements to electronically share appropriate referral information on a weekly basis that will assist families in getting connected to both HFI and WIC, as well as establishing regular reporting of referrals that result in HFI and WIC enrollment. This change (beginning late 2016) is expected to increase referrals that result in program enrollment and continued participation in services for HFI and WIC.

New Implementation: Since NFP was new to Indiana, challenges included; building a referral base and educating community partners about differentiation between NFP home visiting and what already existed in the community, as well as ensuring partners understood enrollment criteria to produce quality referrals. Nurse recruitment and retention remained high and were able to recruit high quality BSN and Masters-prepared nurses including representation from minority populations. Expanded partnerships with St. Vincent Health and Community Health Network were developed and a partnership between the county safety-net hospital (Eskenazi) became strong. Eskenazi refers every first-time mother to NFP, and NFP nurse leadership is participated in quality improvement groups in the hospital.

Capacity: During YEAR 4, NFP experienced some challenge with maintaining full capacity as a result from participation in MIHOPE Strong Start (participation required qualified families to be randomized out of receiving services). Prior to this time, NFP had experienced success in its Indiana implementation including "viral" marketing to community groups that produced self-referral rates three times that of the national NFP self-referral rates. NFP of Indiana was recognized at a 2014 NSO board of director's meeting as one of the top sites in the nation for achieving and maintaining close to full caseload. NFP achieved increased enrollment at the completion of the MIHOPE Strong Start commitment.

New Database: In September 2015, Indiana's NFP LIA implemented an electronic medical record system. Indiana is one of the first few implementation sites to pilot the use of electronic data collection. The implementation of a new system created some minor challenges prior to the YEAR 4 MIECHV DGIS submission. Goodwill's implementation of Disease Management Coordination Network (DMCN), an electric medical record system to improve the quality of service offered to NFP clients. DMCN will increase the ability of service providers, both NFP and others, to provide holistic care by creating interoperability and other key data systems and partners. In order to streamline data transfer between these data systems, Indiana continues to work closely with NSO and Goodwill to develop processes and procedures to meet MIECHV benchmark reporting requirements.

Strategies to Enhance Sustainability

DCS and ISDH work with multiple state agencies to ensure adequate resources will be identified to sustain MIECHV project activities after the grant period. DCS has contributed to this effort with continued support of HFI, which has been utilized by Indiana since 1994. DCS intends to continue state and federal funded support of HFI. This commitment and established infrastructure for HFI in local Indiana communities has allowed DCS to use funds to serve additional high risk children and families. DCS recognizes the important role that prevention services, such as HFI, play in preventing child abuse and neglect. As such, HFI will remain a priority for funding. In addition, HFI agency leaders meet regularly to monitor funding opportunities and brainstorm ways to increase support for the program.

In 2015, Goodwill received Title V funding to expand NFP services into Lake County. Goodwill is partnered with IU Health to identify philanthropic funding to expand NFP services into Tippecanoe and White counties. Goodwill has also added NHV staff to increase the number of families served in Marion County.

III. MAINTENANCE OF EFFORT CHART Non-Federal Expenditures

FY Prior to Report Submission (Actual)	Current FY (Estimated)
Actual prior FY non-Federal funds, including in-kind, expended for activities proposed in D89MC23147.	Estimated current FY non-Federal funds, including in-kind, designated for activities proposed in D89MC23147.
SFY 2016 (Actual)	SFY 2017 (Estimated)
Amount: $ 2,692,369.97	Amount: $ 2,692,369.97

IV. EVALUATION DESIGN

The broad goal of the external evaluation was to collect, organize, and study data to examine the extent to which the Indiana MIECHV program achieved its project vision.

The external evaluation of this grant was conducted by Indiana University, School of Education, referred to as “IU" herein. Allison Howland[15], Ph.D., with the Collaborative Research Initiative (CRI), housed in the Center for Research on Learning and Technology (CRLT) was the Principal Investigator. Dr. Howland served as a co-principal investigator of the Community Mental Health Incorporated project in Southeastern Indiana, a federally funded, 6-year longitudinal evaluation of a rural system of care and is currently the lead evaluator of IN MIECHV FY15 evaluation and IN Project LAUNCH. Dr. Howland is an expert in longitudinal data analysis and mix-methods evaluation research, as well as process evaluation within a community participatory framework.

Each of resulting sub-studies were designed via a collaborative participatory framework that included researchers, state and program stakeholders, and HRSA evaluation technical assistance representatives to meet the federal guidelines for study rigor, driven by the project’s theory of change. The IN theory of change hypothesized that HFI and NFP would complement each other and that improved collaboration between the state agencies that administer these programs (ISDH and DCS) and the two programs would lead to more families receiving targeted services. Additional hypotheses included home visitors’ perception of increased supports for effective service provision to mothers and their families as a result of program enhancements though programmatic mental health consultation within HFI and to NFP via the Goodwill Guides. Increased supports for effective service provision, was in turn hypothesized to lead to better

[15] The application listed Jeffrey Anderson, Ph.D. Allison Howland, Ph.D., his co-evaluator assumed the role of principle evaluator upon Dr. Anderson’s departure from the MIECHV evaluation in Indiana March 2015.

maternal and child health outcome. These hypotheses articulated through the project's theory of change were examined by the final resulting sub-studies:

Interagency Collaboration: an explanation or theory of interagency collaboration between and across IN MIECHV state, program, and site levels

Mental Health Consultation: comparison of mental health outcomes between sites receiving mental health consultation and sites not receiving mental health consultation.

Goodwill Guides: progress toward established goals vis-à-vis the integration of the Goodwill Guides supports.

Appendix B summarizes ***Organizations responsible for collection and reporting evaluation data*** (primarily IU), ***Population(s) targeted in the evaluation*** (participants), and ***Data Collection Methods and Schedule,*** with a detailed timeline in Appendix C. ***Evaluation Framework & Logic Model*** and ***Immediate, Intermediate & Long Term Outcomes*** are illustrated in Appendix D. Appendix A provides a detailed description of all study ***Measures and Instruments*** including psychometric properties.

Cost of Evaluation The total evaluation budget was $699,000.00. The collaborative nature of this entire project illustrated Indiana's theory of NFP and HFI targeted services as complementary to reach more families when MIECHV funds were collaboratively administered across state agencies. The cost of evaluation, administration of sub-studies and evaluation advisory board were all organized around the single principle of evaluating the collaborative and complementary efforts of the project, therefore costs and budgets were not attributed to individual sub-studies.

Salaries	$	370,598
Fringe Benefits	$	100,550
Travel	$	14,100
Other Costs (Supplies and Expenses)	$	150,207
Total Direct Costs	**$**	**635,454**
Other Administrative	*$*	*63,545*
TOTAL EVALUATION BUDGET	**$**	**699,000**

Interagency Collaboration: ***Evaluation Questions and Rationale***

Research Question #1: *To what extent are collaborative relationships at the state level developing or strengthening over time such that governance, oversight, and technical support are provided to support progress toward meeting Indiana's MIECHV project objectives?*
Research Question #2: *To what extent are collaborative relationships, at the program level (HFI and NFP) developing or strengthening over time in order to meet specified state project objectives, including referral coordination.*
Research Question #3: *To what extent are collaborative relationships among other home visiting programs, as well as with other outside child and family service providers, strengthening over time in order to meet specified state project objective related to outside referral coordination?*
Research Question #4: *What are the specific contextual factors identified as barriers or contributors to collaboration at the state and program/agency levels, as well as to coordination with outside child and family serving agencies?*

Evaluation Design The Interagency Collaboration study examined the extent to which collaboration and development of linkages are occurring at both state (ISDH and DCS) and program/agency (HFI and NFP) level, including additional child-serving agencies that provide services to support participating mothers and families. This study sought to add to the home visitation knowledge base of how effective collaboration, coordination and formation of networks contribute to effective adoption, implementation, and sustainment of home visiting programs as well as explore barriers and achievements that result from interagency collaboration. The study design used a grounded theory approach, as well as mixed-methods to allow for

triangulation of qualitative and quantitative data from multiple and varied data sources. This design is well-suited for examining inter-agency collaboration as a process over time, including the development of a theory of this process that articulates an explanation of contributors or barriers to collaboration.

Sample Size/Sampling Plan The study sample included identified administrative stakeholders at the state level (N=8), program agency level and site level (N=4); all home visitors from HFI (N=176) and NFP (N=24); Goodwill Guides (N=3); and administrative representatives from outside community agencies that receive referrals from NFP and HFI (N~250). Purposive and exhaustive sampling techniques were used to identify key stakeholders at the state, program agency, and program site level. As an additional check for completeness and accuracy, respondents were asked who else should be interviewed for the study each year. Respondents were asked to participate in a survey related to referral coordination with other community agencies that provide services to families participating in HFI or NFP home visiting programs.

Analysis Plan Study design and data analysis included complementary mixed-method study design to allow qualitative measures to elaborate, enhance, and/or illustrate results from a quantitative measure (McMillan & Schumacher, 2001). IU used *Interagency Collaboration Activities Scale* (IACAS; Greenbaum & Dedrick, 2012*)* and semi-structured interviews adapted from the *MIHOPE State Administrator Baseline and 12 Month Interview.* The IACAS yielded total collaboration scores, as well as subscale scores that were analyzed descriptively, to illustrate the extent to which collaborative relationships between state, program, and site level agencies improved. Given the variation in respondents at time one and time two administration of the IACAS, paired sample t-tests were not feasible due to the likelihood of estimation error when testing for statistical significance.

Interview data were analyzed qualitatively using a grounded theory approach (Corbin & Strauss, 2007) to generate an explanation or theory of interagency collaboration. Data were organized initially by level (state, program, and site) and were analyzed in stages consistent with an interpretive approach (Charmaz, 2006). At each stage, data were coded independently by at least 2 researchers to ensure consistency of data interpretation. Analyses were facilitated by NVIVO, which permitted data across key stakeholders and programs to be summarized and aggregated by those indicators or factors for cross-program and cross-level analysis.

To understand how referrals are made to outside agencies, home visitors serving MIECHV funded families were surveyed annually using the *IN MIECHV Program Referral Survey* and data were analyzed descriptively reporting frequency data to identify the community agencies HFI and NFP refer to most frequently within the various service areas (i.e. prenatal health, mental health, early child development intervention, etc.) as well as ease of access and effectiveness of services provided by indicated agencies. Though the survey included information related to rates of referrals received, this particular data point (rates of referral) yielded significant "missing data" from agencies and did not support analysis and were not reported.

Mental Health Consultation: ***Evaluation Questions and Rationale***

Research questions
Research question #1: *To what extent do MIECHV funded families in HFI sites receiving mental health consultation services experience increased improvement over time and better overall outcomes as measured by the Healthy Families Parenting Inventory (HFPI) and the North Carolina Family Assessment Scale (NCFAS) when compared to families in sites not receiving mental health consultation?*
Research question #2: *To what extent does enrollment in sites receiving mental health consultation vs. sites not receiving mental health consultation predict mother's initial mental health status and change in mental health*

outcomes over time, specifically reduced depressive symptomatology based on the Edinburgh Postnatal Depression Scale (EPDS) and the Center for Epidemiologic Studies Depression Scale (CES-D)?
Research question #3: *To what extent do mothers in sites receiving mental health consultation demonstrate increased engagement in HFI service provision as indicated by completed home visits when compared to mothers in sites not receiving mental health consultation?*
Research question #4: *To what extent does working in a site receiving mental health consultation vs. a site not receiving mental health consultation predict home visitors' perceived skill /effectiveness and reduced stress in providing mental health supports to families?*
Research question #5: *Are there identifiable patterns related to rates of staff retention over time in sites receiving mental health consultation and sites not receiving mental health consultation?*

Evaluation Design The Mental Health Consultation study used propensity score matching provided by Datatude, Inc. (http://www.datatudeinc.com/) to compare mental health outcomes between IN HFI MIECHV funded families receiving mental health consultation and IN HFI families that were not MIECHV funded and did not receive mental health consultation to determine direct and indirect effects of HFI mental health consultation program enhancement on broader program goals, with emphasis on outcomes for mothers, their young children, and their families (Patton, 1985). Using quantitative data analyses, this study used matched comparison groups to examine differential effects of mental health consultation on specific maternal mental health outcomes, mother and child physical health and well-being, child development, and family stability and functioning. Families from sites receiving mental health consultation services were matched to families from comparison sites that did not receive mental health consultation as part of their HFI program services. The use of propensity matching was well-suited for an impact study when random assignment to treatment is not possible, as it was developed specifically for the purpose of estimating causal effects from observational data (Rosenbaum and Rubin, 1983).

Demographic information, retention data, and data reflecting the number of completed home visits, as well as data from several formal measures conducted and collected by HFI were analyzed. This study utilized de-identified HFI administrative data related to home visiting staff retention and collected survey data from home visitors in sites serving MIECHV-funded families and comparison sites to gather perceived skill development and levels of support used to address stress and mental health issues of enrolled families.

Sample Size/Sampling and Analysis Plan including power analysis The total number of newly enrolled MIECHV families during YEAR 1 was 2170, the population size for this study. Based on conservative estimates (Watson, 2001) 50% was the degree of variability assumed for all dependent variables in this study. Additionally, accounting for likelihood of missing data, as well as rates of attrition, this study adopted a retention rate of 60%, based on an attrition rate of approximately 40% at 12 months. The power analysis was conducted yielding an estimated sample size of 543. There were seven hundred fifty (750) mothers in sites receiving mental health consultation selected from benchmark quarter 1 year 4 (2015) data, using the criteria of being enrolled in the program while 12 months postpartum and enrolled in the program for at least one year. Two thousand, four hundred and twenty-four (2424) mothers in IN HFI sites that did not receive mental health consultation services were used for potential matching to the 750 mothers in sites receiving mental health consultation. Variables used for constructing propensity scores (e.g. matching treatment and comparison families) are listed in Table #4.

Table #4: Variables for Propensity Score Matching

Name	Type
Mother's primary language	Category (English, Other, Spanish, Unknown)

Mother's ethnic identification	Category (African, Anglo/American, Hispanic/Latino, other)
Mother's education level (Less than High School, High School Graduate / GED, Some College, Unknown)	Category (8 the grade or less or some high school, GED or high school graduate, some college or certificate program, four year college or higher)
Child's birth status	Binary (first birth, other than first birth)
Parent with Criminal/Mental Illness/Substance Abuse	Ordinal (Normal, Mild, Severe)
Mother's history of mental illness	Binary (positive, negative)
Mother's history of criminality (Positive, Negative)	Binary (positive, negative)
Mother's history of substance abuse	Binary (positive, negative)
Initial Status on EPDS	Continuous
Mother's age	Continuous
Number prenatal home visits	Continuous

There were three steps in propensity score matching: First, calculate propensity scores (or probability that a family would live in a county served by a site receiving mental health consultation) using logistic regression analysis with variables presented above as covariates. Second, match the groups based on obtained propensity scores. Third, analyze treatments using the matched sample. When more than one family in sites not receiving mental health consultation were matched to a family receiving mental health consultation, matched families not receiving mental health consultation were randomly selected.

Using the Healthy Families Parenting Inventory, a 3 (Subscale scores of HFPI collected at 3 months, 6 months, and 12 months) × 2 (MIECHV funded or non-MIECHV funded) mixed-model repeated measure analysis of variance was conducted for post-matching analysis. Authors of the NCFAS advocated chi-square analyses for examining change given the NCFAS is structured as a categorical variable (Kirk, 2012). Similarly, the EPDS is designed as a depression screen, rather than an assessment of depressive symptomatology. Thus, chi-square analyses were also employed using established "cut-scores" to establish whether moms were presenting as potentially clinically depressed. To allow for consistent comparison and visualization, we employed a similar analytic approach using the HFPI.

Using the cutoff scores for showing concern in each of the nine subscales for the HFPI at infancy 3 months and at infancy 12 months, families were divided into four exclusive subgroups for each subscale: (a) families who maintained concern at two time points, (b) families who showed concern at infancy 3 months but showed no concern at infancy 12 months, (c) families who maintained no concern at two time points, and (d) families who showed no concern at infancy 3 months and showed concern at infancy 12 months. A 4 × 2 chi-square analysis was performed on each of the subscale to compare the four subgroups to sites receiving mental health consultation services sites not receiving mental health consultation with two 2 × 2 follow up chi-square analyses performed if significant due to receiving mental health consultation.

The North Carolina Family Assessment Scale for General Services (NCFAS-G) was used to examine family functioning. A 4 × 2 chi-square analysis was performed on each subscale to compare four subgroups (i.e., maintained concern, improved in an area, maintained no concern, and showed subsequent area of concern) to sites (receiving mental health consultation services and not receiving mental health consultation) with two 2 × 2 follow up chi-square analyses performed if significant due to receiving mental health consultation. To control the error rate caused by performing multiple tests, the research team controlled the inflated false discovery rate proposed by Benjamini and Hochberg (1995) at .05.

The Edinburgh Postnatal Depression Scale (EPDS) was used to examine maternal depression.

The evaluation team initially aimed to use EPDS and CES-D together to compare depression trajectory over time between MIECHV-funded families at sites receiving mental health consultation and those families in sites not receiving mental health consultation. Because families in sites not receiving mental health consultation were not assessed using the CES-D, the CES-D was not further examined. A score of 10 was used as a cutoff for depression. Using the binary score for maternal depression for the scores obtained at infancy 6 weeks, and at infancy 6 months, families were divided into four separate groups for each subscale. These four groups were: (a) mothers who showed depressive symptoms at two time points, (b) mothers who showed depressive symptom at intake and did not show depressive symptoms at infancy 6 months, (c) mothers who did not show depressive symptoms at two time points, and (d) mothers who did not show depressive symptoms at intake and showed depressive symptoms at 6 months. A 4 × 2 chi-square analysis was performed to compare the four groups to sites receiving mental health consultation services and sites not receiving mental health consultation with two 2 × 2 follow up chi-square analyses performed if significant due to receiving mental health consultation.

The IU evaluation team was provided completed home visits and "expected" home visits for matched MIECHV moms and comparison moms only. Though provided completed home visits quarterly for MIECHV families for benchmark analyses, these were not available quarterly (e.g. over-time) for comparison moms. Ideally researchers had planned to compare retention rates of all MIECHV moms and all comparison moms (including those who may have dropped out prior to 12 months). Additionally, the initial analysis plan included examination of completed home visits over-time using depression as a predictor of engagement. Again, because the CES-D was not used as a depression screen to follow the EPDS in comparison sites, this did not allow for a meaningful over-time analysis. Percent of completed home visits (i.e., number of completed home visits/number of expected home visits) was used to measure the family engagement. An independent samples *t* test was performed to compare the percent of completed home visits between MIECHV funded families in sites receiving mental health consultation and families in sites not receiving mental health consultation. In the fall of 2013 and 2015, HFI home visitors were administered the *IN MIECHV survey for HFI Home Visitors* to examine and compare perceptions of home visitors working in sites receiving mental health consultation and sites not receiving mental health consultation regarding training and supports across the multiple home visiting activities they perform, in particular training and support related to mental health activities. ***Power analysis*** yielded a required sample size of 208 to detect statistical significance.

Table #5: Total survey responses from MIECHV funded and non-funded home visitors

	Home visitors serving MIECHV funded families			Home visitors **not** serving MIECHV funded families		
	Invited	**Responded**	**Response Rate**	**Invited**	**Responded**	**Response Rate**
Baseline (2013)	92	70	76%	317	186	58%
Compare (2015)	91	61	67%	316	177	56%

Table #6: Total survey responses for Non-funded home visitors in funded and non-funded sites

	Home visitors not serving MIECHV funded families working in HFI site receiving mental health consultation			Home visitors not serving MIECHV funded families working in HFI site not receiving mental health consultation		
	Invited	**Responded**	**Response Rate**	**Invited**	**Responded**	**Response Rate**
Baseline (2013)	67	63	94%	250	123	49%
Compare (2015)	71	45	63%	245	132	53%

Survey responses were analyzed using Fisher's exact tests of equality between two proportions,

combining (1) responses of “strongly agree” and “agree” into “agree” and (2) responses of “strongly disagree” and “disagree” into “disagree.” Three Fisher’s exact tests were conducted for each question to test if the proportion of one group who replied “agree” was equal to the proportion of the other group who replied “agree.” (FDR; Benjamini and Hochberg, 1995). Additional analyses were conducted using log linear models to examine the tendency for agreement on mental health related survey items as home visitors varied from respondents who did not serve MIECHV funded families in sites not receiving mental health consultation (serving no MIECHV funded families), respondents who did not serve MIECHV funded families in sites receiving mental health consultation, to respondents serving MIECHV funded families in sites receiving mental health consultation.

Lastly, IU and MIECHV stakeholders theorized that mental health clinician supports to home visitor staff would positively influence staff retention rates in sites receiving mental health consultation. Administrative data on staff retention rates for home visitors were examined using Cox regression survival analysis to compare rates of staff retention over time in sites receiving mental health consultation and sites not receiving mental health consultation on home visitors employed as of July 1, 2013 to December 31, 2014.

Goodwill Guides: ***Evaluation Questions and Rationale***

Research Questions
Research Question #1: *How was the Guide Consultant model for NFP conceived?*
Research Question #2: *What are the critical components of the Guide Consultant model?*
Research Question #3: *How do nurse home visitors utilize Guide Consultants to support NFP goals?*
Research Question #4: *How do nurse home visitors perceive the services provided by Guide Consultants as promoting positive family outcomes?*

Evaluation Design /Analysis Plan

This study has been revised due to fundamental programmatic changes made by Goodwill/NFP. The previous iteration of this study examined the Goodwill Guide enhancement to the NFP model, which included direct client interaction by the Guides. The enhancement has changed to reflect the emerging and priority needs of the NFP program. Most notably, consultation to nurses in support of clients only (NFP expectant/new moms) replaced direct services to moms and/or extended family member. The initial study of the Goodwill Guides enhancement to NFP was designed to examine the utilization and outcomes of direct services to clients and extended family. As the model continued to shift from direct services to the mom and family unit, to services to mom’s only, and finally to consultation for nurses to enhance service provision to families, this study and associated research questions were modified in April of 2014 to represent the various stages of the model iteration and NFP staff engagement and perceptions of the model throughout the various phases.

Using a formative evaluation design, this study aimed to provide stakeholders relevant and meaningful information during early establishment for the improvement, modification, or management of newly implemented NFP Goodwill Guide program enhancement (Patton, 1985). Additionally, to examine the integration of Guides into home visiting services provided by NFP, this evaluation highlights how these processes were implemented, the perceived outcomes of these processes, and how they could be improved. This evaluation employed complimentary mixed-methods to include specific quantitative measures to clarify or support the results from qualitative inquiry (McMillan & Schumacher, 2001). Specifically, this study used document analysis, semi-structured interviews, focus groups and surveys to provide a broad, but rich description of the service provision that results from the integration of Guides into NFP home visiting activities and to allow for triangulation of results. Adhering to the complementary mixed

method design, a constant-comparative data analysis method (Glaser & Strauss, 1967) was utilized to allow for frequent and ongoing data collection with continuous data analysis. NFP and Goodwill Guides stakeholder interviews were conducted in February/March 2014 (N=5) and 2015 (N=8), which included NFP program managers, nurse supervisors/director, and Goodwill Guides. Additionally, focus groups with 24 nurse home visitors were conducted in December 2015 and January 2016. Finally, a survey of nurse home visitors' perceived effectiveness of the Guide model was conducted in June and July of 2014 and 2015. In 2014, a total of 17 out of 21 nurses completed the survey of their perception of Guide effectiveness and in 2015, a total of 23 out of 25 nurses completed the survey. The participation rate for the data collection time points was 80% and 92% respectively.

A grounded theory approach (Corbin &Strauss, 2007) was used to elucidate how the model was conceived, as well as to identify the critical components of the Guide model (Research questions #1 and #2). Data collected from program documents and semi-structured interviews were analyzed using NVivo 10 software for each phase of analysis. To enhance validity, documents and transcribed interviews were coded independently by multiple researchers in order to segment information to form mutually exclusive categories related to conception of the model and resulting critical components (Denzin & Lincoln, 2011). Coding schemes and resulting themes were validated using constant comparative and content analysis methods. Similarly, both analytic induction and the constant comparison method were used to allow the critical components of the model to emerge and construct a visual model depicting the theory driving the model evolution, as well as description of the intervening and contextual factors that influenced the early and current stages and how it was experienced by stakeholders (Dye et. al. 2000). Most importantly IU relied heavily on member checking (Denzin & Lincoln, 2011) or soliciting feedback from critical stakeholders and participants throughout the analyses to verify credibility of the findings.

A phenomenological approach (Moustakas, 1994) was used to determine how NHVs utilize Guides to support NFP goals, as well as their perception of the Guide services as promoting positive family outcomes (Research questions #3 and #4). Analysis was facilitated by NVivo for each phase of analysis which included: 1) horizontalization, where IU highlighted significant statements that provided an understanding of how NHVs utilize Guides; 2) theme development, where IU developed clusters of meaning from significant statements in to themes; 3) textural description, where IU used the developed themes to write a description of what NHVs experienced in the Guide interaction process, and finally; 4) a structural description of how the Guides are utilized and how NHVs perceive the contributions of Guides to support NFP goals. Additionally, nurse perceptions of and satisfaction with Guide services data were collected from annual surveys to further examine research question #4. Frequency and descriptive statistics, item-level survey data was analyzed to provide insight into NHV perceptions of Guides service quality and effectiveness in supporting NFP home visiting goals.

V. EVALUATION RESULTS

V.1 – Interagency Collaboration:

Research Question #1: *To what extent are collaborative relationships at the state level developing or strengthening over time?*

Overall, response rates were 50% and 55% state and program level stakeholders, respectively. State agency representatives included agency directors, administrators/managers, data governance representatives, and MIECHV grant coordinators from ISDH and DCS. Program level stakeholders included program operations managers, program directors, and internal

program data coordinators.

At the state level (Table #7), *"Funding,"* remained a consistently high item-level indicator of collaborative activity, increasing slightly from an average score of 4.33 (2014) to 4.83 (2015), indicating stakeholders from DCS and ISDH perceived collaborative processes related to funding to occur "considerably" to "very much," followed by "*Program Evaluation*" that presented with an average score of 2.66 (2014), and subsequently increased to 4.17 (2015). Each item-level indicator of collaboration between DCS and ISDH presented with increases from baseline to follow up, yielding commendable increases in all three average subscale scores as measured by the IACAS.

Table #7: DCS and ISDH Collaboration: IACAS Ratings
(n=6) (n_1 (sample size) M_1 (means) for 2014, n_2 M_2 for 2015)

Scale	n_1	n_2	M_1	M_2
Financial and Physical Resources				
Funding	3	6	4.33	4.83
Purchasing of services	3	6	1.66	4.17
Facility Space	3	6	1.33	2.17
Record keeping and management information systems data	3	6	1.33	3.17
Total	**3**	**6**	**2.16**	**3.58**
Program Development and Evaluation				
Developing programs or services	3	6	1.33	3.00
Program evaluation	3	6	2.66	4.17
Staff training	3	6	1.66	3.33
Informing the public of available services	3	6	2.00	3.17
Total	**3**	**6**	**1.91**	**3.42**
Collaborative Policy				
Case conferences or case reviews	3	6	1.33	3.17
Informal agreements	3	6	1.66	3.83
Formal written agreements	3	6	1.66	4.17
Voluntary contractual relationships	3	6	2.00	4.00
Total	**3**	**6**	**1.66**	**3.79**

These findings were supported by interview data that funding and evaluation were highlighted as primary collaborative processes in both baseline and follow-up interviews. In the 2015 follow-up interviews, stakeholders at the state and program level corroborated the substantial increases in collaborative processes, attributing most of these improvements to transition in leadership within both state agencies and observable changes in frequency and quality of communication.

Research Question #2: *To what extent are collaborative relationships, at the* *<u>program level</u>* *(HFI and NFP) developing or strengthening over time in order to meet specified state project objectives, including referral coordination?*

The highest consistent item-level IACAS mean scores across both baseline and follow-up administrations (Table #8) for *collaboration between programs* include "Funding" yielding a 2.67 (2014) and a 3.80 (2015), indicating stakeholders from HFI and NFP consistently perceived they collaborated "somewhat" in processes related to funding. Rated second with regard to collaborative processes at baseline and follow-up administrations of the IACAS, "Program Evaluation" received a score of 2.33 (2014) increasing to 3.20 (2015). Item-level indicators of collaboration between HFI and NFP presented with increases from baseline to follow up, but yielded modest increases when compared to gains demonstrated between state agencies.

Increases regarding perceived collaboration on all three subscales of the IACAS, highlight improved collaboration between HFI and NFP. Baseline and subsequent follow-up interviews

still highlighted notable barriers to program-level collaboration and referral coordination. MIECHV stakeholders, particularly at the program level, continued to perceive processes for MIECHV implementation as driven by adherence to specific national models for each program.

Table #8: NFP and HFI Collaboration: IACAS Ratings
(n=5) (n_1 (sample size) M_1 (means) for 2014, n_2 M_2 for 2015)

Scale	n_1	n_2	M_1	M_2
Financial and Physical Resources				
Funding	6	5	2.67	3.80
Purchasing of services	6	5	1.00	2.00
Facility space	7	5	1.00	2.00
Record keeping and management information systems data	7	5	1.14	2.20
Total	**6**	**5**	**1.42**	**2.50**
Program Development and Evaluation				
Developing programs or services	7	5	1.00	2.20
Program evaluation	6	5	2.33	3.20
Staff training	7	5	1.71	2.40
Informing the public of available services	7	5	1.71	2.60
Total	**6**	**5**	**1.58**	**2.60**
Collaborative Policy				
Case conferences or case reviews	7	5	1.00	2.40
Informal agreements	7	5	1.29	2.20
Formal written agreements	6	5	1.00	2.00
Voluntary contractual relationships	7	5	1.00	2.00
Total	**6**	**5**	**1.04**	**2.15**

The need for the expansion of home visiting services was noted as a barrier to specific collaboration between HFI and NFP, particularly with regard to *program referral coordination*, in that there are "more than enough" eligible families in need of services to meet the target enrollments for each program. Program-level interviewees emphasized that no coordinated process for referring agencies exists, thus organizations send referrals to the home visiting programs with which they have developed a relationship.

Research Question #3: *To what extent are collaborative relationships among other home visiting programs, as well as with other outside child and family service providers, strengthening over time in order to meet specified state project objective related to outside referral coordination?*

The *Home Visitor Program Referral Survey* included two waves of data collection. In year 1, there were 77 respondents, and 24 (31.2%) of the 77 respondents were from Nurse-Family Partnership® and 53 (68.8%) were from Healthy Families Indiana. In year 2, there were 75 respondents, and 26 (34.7%) of the 75 respondents were from Nurse-Family Partnership® and 49 (65.3%) were from Healthy Families Indiana (HFI).

Service awareness: In Year 1, home visitors were "aware of at least one organization provides services" in the areas of mental health treatment (98.5%), domestic violence service (98.5%), adult education service (98.5%), and job training and employment (98.5%). Home visitors were less able to cite "at least one organization" providing services in the areas of stable housing (75.4%), maternal preventive care (88.7%), and emergency/crisis services (93.8%). In Year 2, home visitors noted available services in the areas of domestic violence service (100.0%), adult education service (100.0%), and pediatric primary care (100.0%), while fewer reported in the areas of stable housing (78.0%), substance use treatment (87.3%), and maternal preventive care (90.8%). Findings suggest that overall, home visitors perceive services to be available across most service areas.

Ease of obtaining services: Perceived "ease" with regard to obtaining services for families, home visitors' ratings of "very easy" and "relatively easy" were aggregated to facilitate data visualization and interpretation for comparison of Year 1 and Year 2. In Year 1, the areas of family planning (91%), prenatal care (87%), adult education services (84%), and early childhood development intervention services (84%) ranked the highest with regard to home visitors' perceived "ease of obtaining services for families," while the lowest rankings were obtained in the areas of stable housing (35%), substance use treatment (56%), and childcare (60%). In Year 2, home visitors reported it was "easy or relatively easy for the families to get services" in the areas of adult education services (85%), family planning (83%), and early child development intervention services (81%), while access to service provision was reported as more difficult for stable housing (35%), child care (44%) and substance use treatment (47%).

Meeting Family Needs: With regard to home visitors' perceived "effectiveness in meeting families' needs" in specific service areas, in Year 1, areas of early child development intervention services (85%), pediatric primary care (80%), and prenatal care (80%) ranked highest, while lowest rankings were obtained in areas of stable housing (35%), substance use treatment (46%), and emergency crisis services (55%). In Year 2, home visitors ranked early child development intervention services (75%), adult education services (75%), and prenatal care (70%), as "very or quite effective in meeting needs of families" while areas of stable housing (37%), substance use treatment (39%), and child care (42%) were ranked as least effective.

Ability to share information: In Year 1, home visitors ranked early child development intervention services (76%), pediatric primary care (66%), and maternal preventative care (65%), as excellent or good when asked the extent to which they are "able to share information about the families." Conversely, the lowest rankings were given to the areas of stable housing (33%), substance use treatment (40%) and job training and employment (44%). In Year 2, the highest rank adult education services (72%), early child development intervention services (63%), and family planning (60%) were ranked among the highest, while the lowest rankings included child care (29%), stable housing (33%), and domestic violence service (37%).

A total of 37 providers out of 127 providers (29% response rate) participated in the Interagency Collaboration Activities Scale (IACAS) in December 2014. The results of the IACAS from community providers that receive referrals from HFI and NFP were aggregated and averaged by type of service. The data suggest that both HFI and NFP have developed strong collaborative partnerships with *other outside child and family service providers* such as "maternal preventative health" and "family planning" as indicated by community provider IACAS scores. Collaborative partnerships with outside providers in other service areas such as substance use, child care, and mental health are not yet well-established or may be less accessible to home visiting clients. Home visitors perceive that referral coordination with outside community agencies is a relative strength and cite specific examples that reflect collaborative practice.

These findings demonstrate that collaboration between and within the state and program levels, as measured by the IACAS and corroborated by stakeholder interviews, increased from baseline (2014) to follow-up (2015). These increases were more pronounced between the state-level agencies (ISDH and DCS) than between programs (HFI and NFP) and were perceived to be most effective in supporting the MIECHV project objectives that were specific to implementation, expansion, and enhancement of HFI and NFP programs to provide appropriate home visiting services to a greater number of families (FY11 Objective 1). The need for enhanced statewide referral coordination between HFI and NFP, but particularly between other home visiting programs, was a recurring theme, indicating that both state and program level stakeholders

perceived less progress towards the development of a statewide system of appropriate, targeted, and unduplicated services of existing and newly developed home visiting programs and outside wraparound services (FY11 Project Objective 2). Even so, home visitors and NHVs perceive that referral coordination between their respective programs and outside community agencies was a relative strength. Awareness of at least one provider ranged from 75% agreement (stable housing) to 100% agreement (Adult Education Services) depending on the type of service. Perceived effectiveness of these services ranged from 35% that ranked stable housing as effective to 91% citing early child developmental intervention services as effective. 76% of home visitors ranked early child developmental intervention services as good or excellent with regard to ease of information sharing, while only 29% of home visitors provided similar rankings to local child care services. These findings suggest while home visitors report range of available community resources, the effectiveness of these services, as well as ease of information sharing between the respective home visiting programs and community providers is perceived by home visitors as problematic among specific types of services. Stable housing, childcare, and substance abuse treatment consistently ranked lowest with regard to availability, perceived effectiveness, and ease of information sharing, while adult education, prenatal care, family planning, and early child developmental intervention services consistently ranked among the highest.

Research Question #4: *What are the specific contextual factors identified as barriers or contributors to collaboration at the state and program/agency levels, as well as to coordination with outside child and family serving agencies?*

Stakeholder interview data highlighted contextual factors identified as *concerns or barriers* to collaboration. One noted barrier is the differing perspective and focus, as well as funding structures of home visiting partner agencies. Some stakeholders view a difference in focus between the programs as a potential strength with regard to targeting the differing needs of families with young children. Stakeholders from both state and program levels believe that as both programs grow and expand, potential for collaboration in smaller counties will promote coordinated efforts to address scarcity of resources and meet service provision demands. Similar to many communities, stakeholder's overwhelmingly referenced maintenance of funding as primary concern related to not only current service provision to families, but as potential barrier to continued development of state-wide coordination between programs. A recurring theme emphasized the need for communication between ALL state programs to be inclusive, rather than just exclusive to current MIECHV partners, and that development of operational definition of home visiting for young families within the state was a necessary next step. The need for state-level referral coordination between ALL home visiting programs and agencies/providers that provide wrap-around services to families was recurring theme among stakeholders.

V.2 – Mental Health Consultation:

RESEARCH QUESTION #1: *To what extent do MIECHV funded families in HFI sites receiving mental health consultation services experience increased improvement over time and better overall outcomes as measured by the Healthy Families Parenting Inventory (HFPI) and the North Carolina Family Assessment Scale (NCFAS) when compared to families in non-funded sites not receiving mental health consultation?*

HFPI: Results of the repeated ANOVA found MIECHV Funded and non-MIECHV Funded families both showed significant improvement over time on six (Problem-Solving, Depression, Mobilizing Resources, Role Satisfaction, Home Environment, Parenting Efficacy) of the nine subscales of HFPI. Non-MIECHV funded site families showed significant higher average scores on Social Support (*p*=.025), Mobilizing Resources (*p*=..001), and Role Satisfaction (.022)

compared to MIECHV funded families. None of the interaction effects (time x group) for the nine domains were statistically significant. In brief, MIECHV funded and non-MIECHV funded families had similar trend on subscale scores over time and the enhancement of mental health consultation was not related to HFPI subscale scores.
The omnibus 4 × 2 chi-square analysis shows that the Depression subscale on the HFPI was the only subscale that showed a significant difference between the families in sites receiving mental health consultation and families in sites not receiving mental health consultation.

Two 2 × 2 follow-up chi-square analyses were performed and results revealed that of those families who showed area of concern in depression at infancy 3 months the percentage of families showing no concern at 12 months were MIECHV funded families in sites receiving mental health consultation, 47.3% and families in sites not receiving mental health consultation, 63.3%, $\chi^2(1, N = 227) = 5.728$, $p = .017$ (Figure 2). Of those families who did not show area of concern in depression at infancy 3 months, families in sites receiving mental health consultation were less likely to maintain no concern regarding depression at infancy 12 months, compared to families in sites not receiving mental health consultation. The percentage of families maintaining no concern (depression) at 12 months but not at 3 months were MIECHV funded families in sites receiving mental health consultation, 89.5%; families in sites not receiving mental health consultation, 93.8%. $\chi^2(1, N = 1055) = 6.337$, $p = .012$.

NCFAS: Results from the omnibus 4 × 2 chi-square analyses on NCFAS scales showed that there were six subscales that showed significant differences between the families in sites receiving mental health consultation and families in sites not receiving mental health consultation.

Table #9: Omnibus Comparison of families in sites receiving mental health consultation and sites not receiving mental health consultation based on NCFAS

Measure	Chi-squared value	P value	Benjamini & Hochberg (1995) corrected significance level
Environment (N = 1320)	$\boldsymbol{\chi^2_{(3)} = 18.916}$	**.000285**	.0047
Parental Capabilities (N = 1242)	$\boldsymbol{\chi^2_{(3)} = 18.916}$	**.000285**	.0063
Family Interactions (N = 1289)	$\chi^2_{(3)} = \mathbf{20.231}$	**.000152**	.0016
Family Safety (N = 1242)	$\chi^2_{(3)} = \mathbf{16.478}$	**.001**	.0078
Child Well-Being (N = 916)	$\boldsymbol{\chi^2_{(3)} = 9.278}$	**.026**	.0250
Social-Community Life (N = 1269)	$\chi^2_{(3)} = 3.284$	.350	.0375
Self- Sufficiency (N = 1289)	$\chi^2_{(3)} = 3.049$	.384	.0391
Family Health (N = 1263)	$\chi^2_{(3)} = \mathbf{12.749}$	**.005**	.0141

Note. Significant results (p < .05) are bolded.

Follow-up chi-square analyses indicated for families who did not show an area of concern in environment ($\chi^2(1, N = 1161) = 8.421$, $p = .004$), parental capabilities ($\chi^2(1, N = 1133) = 6.826$, $p = .009$), family interaction ($\chi^2(1, N = 1077) = 7.005$, $p = .008$), family safety ($\chi^2(1, N = 1148) = 13.273$, $p < .001$), and child well-being ($\chi^2(1, N = 857) = 9.000$, $p = .003$) at intake, MIECHV funded families in sites receiving mental health consultation were more likely to show concern in the same area at infancy 12 months, compared to families in sites not receiving mental health consultation. Among families who showed an area of concern in family health at intake, MIECHV funded families in sites receiving mental health consultation were more likely to show no concern at infancy 12 months compared to families in sites not receiving mental health consultation, $\chi^2(1, N = 127) = 5.800$, $p = .016$.

RESEARCH QUESTION #2: *To what extent does enrollment in sites receiving mental health*

consultation vs. sites not receiving mental health consultation predict mother's initial mental health status and change in mental health outcomes over time? Because families in sites not receiving mental health consultation were not assessed using the CES-D, the CES-D was not further examined. Findings showed that no significant difference between MIECHV funded mothers at sites receiving mental health consultation and mothers at sites not receiving mental health consultation on the changes of depressive symptoms on the EPDS from infancy 6 weeks to infancy 6 months $\chi^2(3, N = 127) = 6.964, p = .073$.

RESEARCH QUESTION #3: *To what extent do mothers in sites receiving mental health consultation demonstrate increased engagement in HFI service provision as indicated by completed home visits when compared to mothers in sites not receiving mental health consultation?* Results showed that MIECHV funded families in sites receiving mental health consultation ($M = .7896$, $SD = .1116$) had a smaller percentage of completed home visits than families in sites not receiving mental health consultation ($M = .8172$, $SD = .1163$), $t(1498) = 4.695$, $p < .0001$. The meaningfulness of the difference was difficult to articulate as these two groups were selected based on the criteria of enrollment of at least one year, meaning the analysis compared percentage of completed home visits between two highly engaged groups. The research team suggested analyzing data for length of continuous enrollment for all MIECHV funded families in sites receiving mental health consultation and non-MIECHV families in sites not receiving mental health consultation. The length of continuous enrollment for all MIECHV and non-MIECHV families may be a better measure of engagement than percentage of completed home visits for families used in propensity score matching.

RESEARCH QUESTION #4: *To what extent does working in a site receiving mental health consultation vs. a site not receiving mental health consultation predict home visitors' perceived skill /effectiveness and reduced stress in providing mental health supports to families?*

In years 1 (or 2013) and 2 (or 2015), log linear models demonstrated a significant tendency for agreement to ***decrease*** for the question ***adequately trained*** *to help families recognize and address problems with alcohol and drug use* as home visitors varied from sites receiving mental health consultation to sites not receiving mental health consultation. This means that home visitors serving MIECHV funded families tended to "agree" with this statement less than home visitors not serving MIECHV funded families. A significant tendency for agreement to decrease was also noted on the following questions 1) *my program* ***gives me useful tools*** *to help families recognize and address problems with alcohol and drug use,* 2) *my program gives me useful strategies and tools to help families recognize and address mental health issues, and* 3) *my program gives me useful strategies and tools to help families recognize and address partner violence*. All of these tendencies were noted in Year 2. In addition, no significant tendency for agreement to increase or decrease (whether a home visitor was from a site receiving mental health consultation or a site not receiving mental health consultation) was found on the following questions related to mental health supports: 1) *adequately trained to help families recognize and address mental health issues,* 2) *adequately trained to recognize and address partner violence.*

There was a significant tendency for agreement to **increase** as home visitors varied from sites receiving mental health consultation and sites not receiving mental health consultation, for questions: 1) *frequency of guidance received from supervisor concerning substance abuse,* 2) *access to one or more professionals to consult with about substance abuse (not supervisor),* 3) *access to one or more professionals to consult with about stress and mental health (not supervisor), and* 4) *access to professionals (other than supervisor) to consult about stress and mental health in the last 6 months.* However, these tendencies were only significant in Year 1.

Table #10: Tendencies of Agreement as Home Visitors Vary from Non-funded to Funded sites

	Year1 Annual Report		Year2 Annual Report	
	Estimates	P value	Estimates	P value
Adequately trained to help families recognize and address problems with alcohol and other drug use	-.2299	**.0382**	-.2643	**.0166**
Adequately trained to help families recognize and address mental health issue.	-.1391	.2033	-.1466	.1634
Adequately trained to recognize and address partner violence.	-.1420	.2115	-.0440	.7045
My program gives me useful strategies and tools to help families recognize and address problems with alcohol and other drug use.	-.1590	.1285	-.3819	**.0005**
My program gives me useful strategies and tools to help families recognize and address mental health issues.	-.1096	.1898	-.3328	**.0030**
My program gives me useful strategies and tools to help families recognize and address partner violence.	-.1787	.1142	-.3279	**.0056**
Frequency of guidance received from supervisor concerning substance use.	.2291	**.0233**	.0492	.3607
Status of Access to One or More Professionals to Consult with about Substance Use (Not Including Supervisor)	.2462	**.0231**	-.1331	.1494
Status of Access to One or More Professionals to Consult with about Stress and Mental Health (Not Including Supervisor)	.4462	**.0003**	.0662	.5010
Status of Access to Professionals (other than supervisor) to Consult with about Stress and Mental Health in the Past 6 Months	.5878	**.0052**	.1835	.4211

Note. *p* values less than .05 were bolded

RESEARCH QUESTION #5: *Are there identifiable patterns related to rates of staff retention over time in sites receiving mental health consultation and sites not receiving mental health consultation?* Using list-wise deletion, there were 479 cases included in the survival analysis. Two covariates (i.e., mental health consultation and experience) predicted survival time at alpha < .05: Attrition Risk = .433 (Serving families at sites not receiving mental health consultation) and .141 (years of experience). The hazard ratio of 1.542 for mental health consultation indicated that serving families at sites not receiving mental health consultation increased the odds of attrition by 54.2%. The hazard ratio of .868 for years of experience indicated increases in one year of experience decreased the odds of attrition by 13.2%. The hazard ratio of .976 for average quarterly caseload indicated increases of one unit of average quarterly caseload decreases the odds of attrition by 2.4% (not significant). Figure I. displays the probability of survival (employment retention) for home visitors who served families at sites receiving mental health consultation and home visitors serving families at sites not receiving mental health consultation.

Table #11: Cox Regression Analysis of mental health consultation, years of experience, and caseload on Survival Time of home visitors during July 1st 2013 to December 31st 2014.

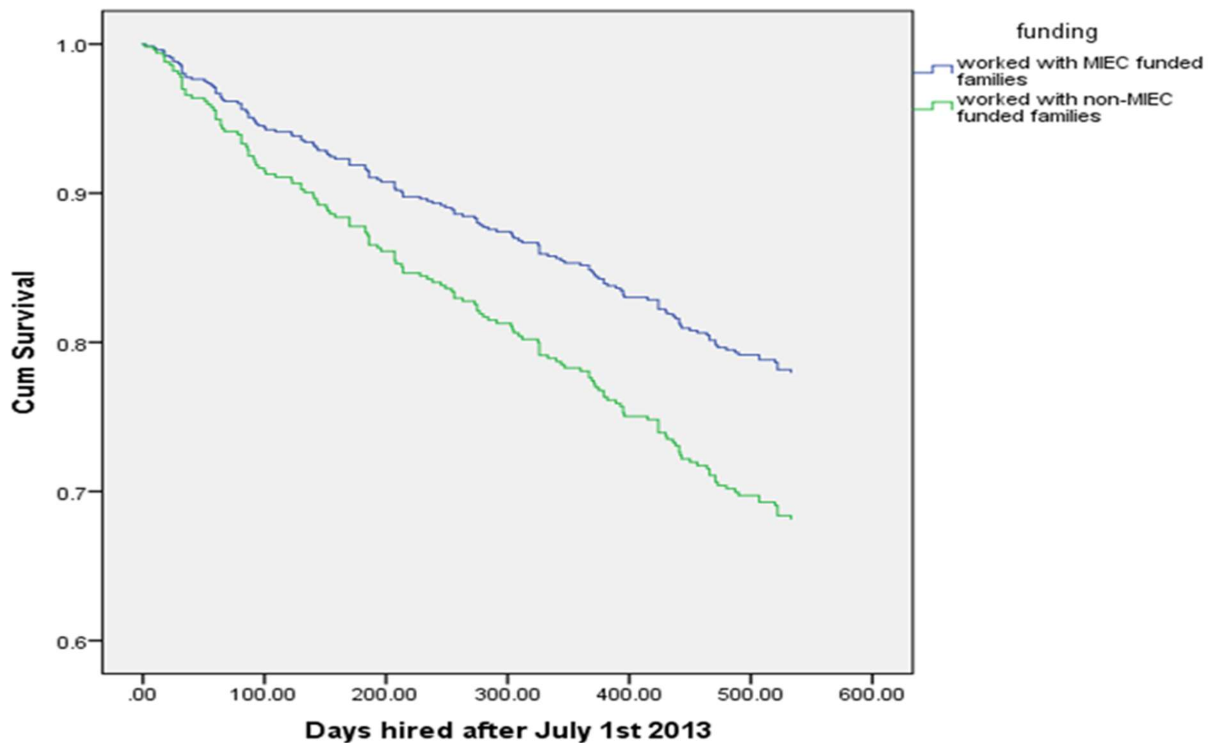
Covariate	*B*	*df*	Prob.	Hazard Ratio
Serving families at sites not receiving mental health consultation[1]	.433	1	.016	1.542
Years of experience	-.141	1	<.001	.868
Average quarterly caseload	-.024	1	.107	.976

Note. [1]Compare to families at sites receiving mental health consultation.

The majority of significant findings related to overall family outcomes measured by HFPI and

NCFAS sub-scales showed that families in sites not receiving mental health consultation showed or maintained fewer concerns than MIECHV funded families from baseline to 12 months. In turn, MIECHV funded families may have also presented with reduced levels of engagement as measured by completed home visits, possibly because families may be less likely to keep home visit appointments when they are experiencing more areas or increased levels of concern. MIECHV funded mothers in sites receiving mental health consultation manifested depressive symptomatology similar to mothers in sites not receiving mental health consultation from infancy 6 weeks to infancy 6 months. However, MIECHV funded families who had concerns at intake in family health on the NCFAS were more likely to show no concern at 12 months than the families in sites not receiving mental health consultation. This result is notable, given the family health subscale includes a specific measure of mental health.

Figure I: Days in Employment as Home Visitors from July 1, 2013



These results suggest that the FY11 mental health consultation model did not result in improved outcomes for MIECHV funded mothers as measured by the HFPI and NCFAS subscales or EPDS total scores. Given that programmatic mental health consultation is provided to the home visitors who work with families, there are many potential explanations for the lack of significant indirect effects on families in this initial study. First, existing program measures were deliberately selected as outcome measures in order to reduce the burden of added data collection on home visitors. The HFPI, though validated as an appropriate tool for research and evaluation, indicates several subscales, including the depression subscale, that may not be appropriately sensitive to detect change, particularly regarding the indirect effects of programmatic consultation (Krysik & LeCroy, 2012). Authors of the NCFAS report that its subscales were designed as “case practice tools to aid in the assessment of family functioning for the purposes of service planning” and cautioned against using the tool to establish clinical “cut scores” (Kirk,

2012). Second, home visitors who received mental health consultation may be more sensitive to potential indicators and risk factors for mental health challenges and thus, were more rigorous in assessing their families using the NCFAS than home visitors who had not received mental health consultation. Lastly, it may be that the mental health consultation model did not include key components recommended for high fidelity programmatic mental health consultation models including licensed clinicians and appropriate supervision and support for consultants (Cohen & Kauffman, 2005).

Lack of certain key recommended model components may have also influenced the lack of significant findings related to the perception of enhanced supports reported by home visitors receiving mental health consultation when compared to home visitors who did not. Though home visitors receiving consultation reported tendencies to agree that they had increased access to professionals other than their supervisor in year 1, they were less likely to exhibit a tendency to agree that they were provided tools and strategies to address mental health, substance use, and domestic violence. This may be due in part of the qualifications of HFI site supervisors across MIECHV and non-MIECHV sites, which equal and in many cases may exceed those of the mental health consultants. Thus, home visitors in sites that did not receive mental health consultation rated the perception of support from their sites supervisors as comparable to the supports provided to home visitors by the mental health consultant. Still, survival analyses demonstrated that home visitors receiving mental health consultation were more likely to remain in their role as home visitors, even after controlling for years of experience and quarterly caseloads, than home visitors who did not receive consultation. This is a notable finding given staff retention is a documented concern among home visiting programs.

Green et al (2004) found that the most important predictor of perceived effectiveness of consultation was the quality of relationship of the staff member with the mental health consultant. Duration of mental health consultation is recommended to be considered in relation to the findings in future evaluation because duration has predicted lower staff turnover, increased self-efficacy among service providers (Geller & Lynch, 1999), and improvements in service quality (Harms & Clifford, 1980).

V.3 – Goodwill Guides:

Research Question #1: *How was the Guide Consultant model for NFP conceived?*
Analysis of documents and interviews indicated that the Guide model was conceived by a diverse range of stakeholders prior to the implementation of the MIECHV NFP program as a long-term solution of addressing critical and complex client needs. The need for Guides was described by NFP program leadership as rooted in the idea that "Stabilization of [the] client [is] necessary [in order] to move to life course issues." Home visiting services, while highly valuable, cannot operate optimally when families struggle with meeting basic needs. Subsequently, a team approach where a "nurse and guide meet client 'where she is' to assist [her on] to [the] pathway to education and employment" aligned with the Goodwill mission to "change lives every day by empowering people to increase their independence and reach their potential through education, health and employment."

As articulated by Goodwill leadership, the Guides were conceived to function as a "rapid response system" to assist nurses in identifying and addressing needs quickly. The Guide model was designed to grow and utilize community connections.

Research Question #2: *What are the critical components of the Guide Consultant model?*
Guides support coordination of services, drawing upon the Goodwill resources – job training,

education, and employment – in addition to leveraging resources in the broader community. Guides provide largely indirect support to mothers enrolled in NFP or their family members through consultation with NHVs and an end goal of building connections to high quality community resources appropriate to their client's needs. Thus, three critical components of the guides model as articulated by nurses, as well as NFP and Goodwill leadership: 1) existing Goodwill resources and community partnerships, 2) consultation services to nurse home visitors, and 3) referral coordination to outside services, have remained consistent throughout the model phases. However, stakeholders emphasize the belief that these core components have been strengthened as the model has been refined to prioritize specific areas of specialization and expertise within individual guides driven by the needs of NFP families.

The initial phase of this partnership saw the Guides as a parallel track with the NHVs. While NHVs implemented their model focusing on mother & child well-being, parenting, and general health outcomes, upon a nurse's referral Guides would meet with mothers and their support system to address economic needs. Some challenges that arose during the initial phase led to an adjustment in the model. The number of Guides assigned to NFP decreased and as the NFP program enrolled more and more mothers, it became increasingly difficult for Guides to provide the same level of service. At the same time, it was recognized a mismatch between design of the initial phase and the NFP model: NFP clients had begun to reach out exclusively to Guides without mentioning or discussing the need with their nurses. This bifurcation of service became a challenge for the NFP model. Guides support in leveraging community relationships remained constant throughout all the iterations of the partnership's model.

With these dynamics at play, phase two saw fewer visits from Guides to clients as well as a central focus on clients rather than their support system. The decrease in Guides initiated a process where NFP could participate in the hiring process to match Guide expertise to needs of clients most frequently noted. This initiated a process and a consumer-driven model where Guides specialized in developing community relationships and providing support in a particular domain of need (i.e. housing, transportation, childcare).

In phase three, the Guides primary role with NFP NHVs was to support the nurse-client relationship and link nurses to community resources to then refer their clients. This iteration of the model could be most efficiently accomplished by completely specializing the services provided by the Guide Consultants. In this phase, the Guides offered expertise in a) housing and utility assistance, b) education, employment, and legal services, and c) early childhood care and education and transportation. Guides created and maintained an online resource that allowed nurses to search digitally for resources based on type of needs. Guides disseminated announcements from community partners about job fairs and companies hiring. As needed, NHVs and/or the nurse supervisor invited Guides to participate in case conferences. These phases promoted increased self-sufficiency among the NHVs to address clients' needs. The final and current phase maintains much of what was established in phase three with minor additions. First, an additional guide was hired that provided expertise in addressing emergency needs (baby items, food pantries), healthcare (Medicaid and HIP), and health classes. Second, relationships between NHVs and Guides were strengthened by convening regular meetings. These meetings provided NHVs opportunities to express challenges they face and suggest ways Guides could better support NFP services.

Research Question #3: *How do NHVs utilize Guide Consultants to support NFP goals?*

After independent coding was completed, interrater reliability via the percentage of coding

agreement and Kappa's coefficient was assessed. The software-reported percentage of coding agreement was high (93.5%) and the average Kappa coefficient value calculated (0.445) indicated fair to good interrater reliability.

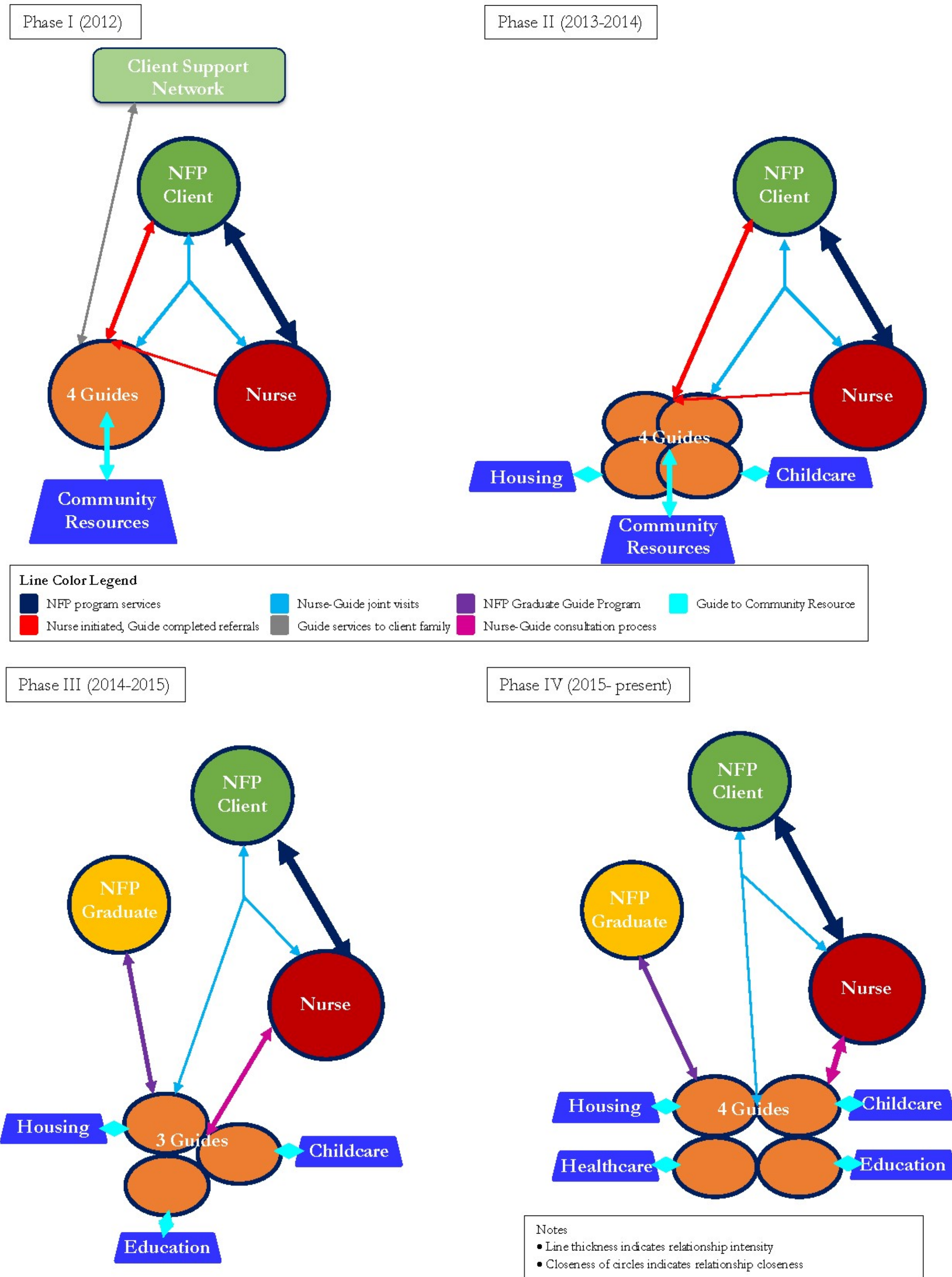
As NHVs developed relationship with clients, they gained an understanding of client needs beyond the scope of the NFP. At this point, NHVs pursued different "next-steps," depending on various factors. NHVs who were less experienced or less aware of resources in the community to refer their client, reached out to Guides or their resources. These requests typically were made during the visit or shortly after and was generally answered promptly by Guide Consultants via text, phone call, email, or face to face conversation. Some NHVs were aware of resources from previous experience with Guides or through their own prior experience. NHVs requested Guides to join the nurse on a home visit in to address critical and/or immediate client needs or crises. In the current phase (4), nurses' responses indicated knowledge of guides to contact for specific needs (Immediate needs (baby items and other supplies, food pantries), healthcare, health classes; Housing and utility assistance; Education, employment, legal services, immigration; and Early childhood education and transportation). Finally, Guide Consultants join nurse home visitors on a visit toward the end of the NFP nurse program to prepare the client to transition to the NFP Graduate Guide program. This transition is designed to provide additional support for NFP clients who wish to continue pursuing education and employment goals beyond the NFP enrollment period.

Research Question #4: *How do nurse home visitors perceive the services provided by Guide Consultants as promoting positive family outcomes?*

A survey of NHVs perceived effectiveness of the Guide model was conducted twice with nurse home visitors; the survey was distributed once in 2014 during the second phase of the Guide model development and again in 2015 during the fourth phase. In 2014, the majority of survey respondents reported the ***overall quality*** *of Guide Consultants' services* as either adequate or excellent for improving NFP ***family*** educational attainment (88%), financial literacy (76%), workforce development (94%), economic self-sufficiency (94%), and partner relationships (77%). In 2015, during phase four of Guide model development, the survey question was revised to better align with model changes. The revised question asked NHVs to "rate extent to which Guide Consultants have contributed to referral services and coordination in [various] areas". The majority reported *Guide contributions to referral services and coordination* to be either adequate or excellent for improving NFP *family* educational attainment (74%), financial literacy (70%), workforce development (91%), economic self-sufficiency (78%), and partner relationships (52%). Direct comparison of the two time points is not possible due to the question revision.

In 2014, respondents reported *Guide Consultant's* ***support to nurses*** to be either adequate or excellent in the areas of educational attainment (94%), financial literacy (80%), workforce development (94%), economic self-sufficiency (94%), and partner relationships (93%). In 2015, respondents reported *Guide Consultant's* ***support to nurses*** to be either adequate or excellent in the areas of educational attainment (90%), financial literacy (92%), workforce development (100%), and economic self-sufficiency (93%), and partner relationships (100%). More respondents rated the quality of Guide consultant's support to nurses for workforce development, financial literacy and partner relationships as adequate or excellent in 2015 as compared to 2014; however fewer in 2015 as compared to 2014 nurses reported adequate or excellent Guide support to NHVs for educational attainment. Rating of Guide support to NHVs for economic self-sufficiency remained consistent.

Figure II: Phases of Guide Model Development



Similarly, when asked to rate the perceived ***impact*** *of Guide Consultant services on* ***family outcomes,*** the majority of survey respondents reported the perceived impact of services to be moderate or high for improving client educational attainment. In 2014, respondents reported the ***impact*** *of Guide Consultant's on* ***family outcomes*** to be either moderate or high in the areas of educational attainment (88%), financial literacy (71%), workforce development (94%), economic self-sufficiency (94%), and partner relationships (77%). In 2015, respondents reported the ***impact*** *of Guide Consultant's on* ***family outcomes*** to be either moderate or high in the areas of educational attainment (82%), financial literacy (55%), workforce development (91%), economic self-sufficiency (86%), and partner relationships (55%). More respondents rated the perceived impact of Guide consultant services on family outcomes for educational attainment, financial literacy, workforce development, economic self-sufficiency, and partner relationships as moderate or high in 2014 as compared to 2015. NHVs described a variety of areas in which their clients have benefited from Guide services, most commonly noted in education, employment, housing, childcare, and immediate needs.

Guides were able to address specialized, complex problems beyond the NHVs experience and abilities and NHVs reported increased efficiency with Guide resources that meet client needs beyond the scope of NFP. This allowed NHVs to spend more time addressing NFP's core areas. NHVs also identified recommendations regarding improvement or potential expansion of the Guide services, such as determining a specific method for follow up on referrals to outside agencies, increasing the areas of expertise among Guides related to health insurance, college preparedness, criminal history, mental health, disabilities, social security, FSSA, partner relationships, and bilingual needs, increased training on resource-usage and regularly updating a resource list. Overall, NHVs endorse the Guides model as effective and helpful engaging clients.

VI. EVALUATION SUCCESSES, CHALLENGES, AND LESSONS LEARNED

A core feature and noted success of the comprehensive evaluation is the establishment and functioning of the Evaluation Advisory Board (EAB) that assisted the community and IU in implementation of evaluation activities across the three studies. EAB consisted of leadership from ISDH, DCS, HFI, and NFP, including program evaluators and data system representatives. The primary goal of EAB was to ensure that the analyses of systematically gathered data drive all aspects of the project. This ensured that evaluation activities were both informed by and contributed to day-to-day and long-term functioning of the MIECHV project. Evaluation was consistently noted in both administrations of the IACAS as among the highest ranked items with regard to collaboration and this was also reiterated by key stakeholder interviews as the one consistent meeting of all MIECHV stakeholders, which provided a forum for open communication between state agencies and home visiting programs. Throughout turnover in EAB membership, particularly within various roles at the two state agencies, the EAB provided consistent leadership and continuity throughout the evaluation process. Still, staff turnover was a significant barrier across studies for over-time comparison, as study participants varied over time, which was a particular limitation with regard to the examination of state and program inter- and cross agency collaboration (Study 1). Additionally, these staff changes impacted internal data review and data governance processes, though these processes have become much more streamlined as consistency in staff have been established in 2014 and 15.

Though much of the evaluation uses existing program assessment tools, lack of an integrated information system for data collection and retrieval presented as a challenge. Substantial

coordination between the existing data systems for HFI and NFP for data access and transfer was necessary for measures that were derived from existing data such as measures of mental health/depression (EPDS) and the overall family functioning (NCFAS and HFPI). Data access, transfer protocols and on-going technical assistance support were established between IU and data system representatives.

Deviations from approved evaluation plan were noted primarily in the Mental Health Consultation study. IU initially aimed to use EPDS and CES-D together to compare depression trajectory over time between MIECHV-funded families at sites receiving mental health consultation and those families in sites not receiving mental health consultation. Because families in sites not receiving mental health consultation were not assessed using the CES-D, the CES-D was not further examined. To examine family engagement, Datatude provided completed home visits and "expected" home visits for matched MIECHV moms and comparison moms, who were enrolled at 12 months post-partum. Ideally, IU would have compared completed home visits of all MIECHV moms and all comparison moms (including those who may have dropped out prior to 12 months). It was determined that to provide IU all of the information on all (not just matched) comparison moms over time (i.e. each completed home visit, inclusive dates for level changes, etc.) was not feasible, thus IU was not able to conduct the analyses originally proposed. Given that criteria for the propensity match to compare family outcomes on HFPI and NCFAS included enrollment at 12 months post-partum, IU compared an “engaged” MIECHV sample to an “engaged” comparison sample given they remained enrolled for 12 months.

Additionally, rapid changes to the NFP model, particularly in Phases 1 and 2, required a revision of the original evaluation plan of this model enhancement. A shift in Goodwill Guides service provision from direct services to moms and extended family members, to indirect services to moms via consultation to nurse home visitors, dictated a change from an initial outcome study to include the impact on the core family unit, to an examination of the model development and iteration and programmatic outcomes. Thus, a new evaluation study was proposed and approved in 2014, which delayed the initial implementation of evaluation activities. However, the constant/comparative data analyses yielded formative information and a well-conceived conceptual model through a stakeholder participatory design that helped to shape the current model.

Much of the independent data collection relied on survey responses from staff at MIECHV sites, but also from comparison sites and outside community agencies. To increase participation from HFI comparison sites, state administrators and EAB representatives worked with program site coordinators in comparison sites to identify recruitment strategies and encourage participation. Participation from nurse home visitors and home visitors, particularly the notably high rate of response from home visitors who did not work sites that served MIECHV-funded families, is a testimony to effort of leadership to promote buy-in across all sites. Including program-level stakeholders in regular review of data was also a perceived as a successful strategy to promote participation and ownership of the evaluation process and findings. Even so, lack of participation of outside community agencies that provide additional services to MIECHV families was a significant barrier.

The importance of an EAB that is regularly convened and includes administrators with governing or decision-making authority, to expedite data access, collection, and dissemination of findings, in addition to program-level membership to facilitate data collection (particularly from program staff) and contextualization of finding is a critical lesson learned in conducting a

rigorous and meaningful evaluation. Implementing a comprehensive multi-year evaluation with multiple data access and collection needs is dependent on the active collaboration and contributions of leadership at various levels within and across participating agencies and the research institution. Study findings suggest that IN MIECHV was successful in facilitating and improving inter-agency collaboration to successfully implement the project activities and support comprehensive evaluation. Specifically, negotiating the balance between program service provision and internal program reporting requirement, with the data collection and reporting requirements for the external evaluation dictated extensive coordination between project managers and external evaluators. Similarly, the development and regular review and revision of a comprehensive and well-defined study timeline is critical to successful implementation of a comprehensive evaluation. Such a timeline should also deliberate in building realistic time for internal review and ideally include proposed dates for data sharing and dissemination of findings both internally and externally.

VII. CONCLUSIONS, IMPLICATION OF FINDINGS, AND RECOMMENDATIONS

Interagency Collaboration: Findings indicate substantial increases in collaboration over time between ISDH, DCS, HFI, and NFP to provide appropriate home visiting services to low-income, high-risk families (FY11 Objective 1). There is less evidence to support progress towards the development of a system of coordinated services statewide of existing and newly developed home visiting programs (FY11 Project Objective 2). Lack of statewide referral coordination between HFI and NFP, but particularly between other home visiting programs, was a recurring theme across state and program level stakeholders. Implications of findings related to emergent and growing collaboration between ISDH and DCS to expand existing HFI services and initiate NFP to address and improve prenatal and birth outcomes in Indiana are notable, as supported by the benchmark performance related to MIECHV service provision. However, relationships with outside agencies appear to be less established in certain service areas (FY11 Project Objective 3) as evidenced by the *Program Referral Survey* and missing data regarding rates of referral from the *Community Provider Survey.* Recommendations for continued evaluation would include a comprehensive referral coordination study at program level that examines referral protocols with outside agencies across various service areas and multiple program sites to identify and address identified gaps in referrals processes and service access barriers to inform CQI practices at the program-level related to outside referrals, as well as identify services areas that require state-level agency engagement to leverage support and increase capacity.

Mental Health Consultation: MIECHV funded families who had concerns at intake in family health on the NCFAS were more likely to show no concern at 12 months than the families in sites not receiving mental health consultation. The implication of this finding is notable, given the family health subscale includes a specific measure of mental health. Still, overall implications of these finding suggest revision of the FY11 mental health consultation model in that overall, it did not result in improved outcomes for MIECHV funded mothers when compared to non-MIECHV funded mothers as measured by the HFPI and NCFAS subscales or EPDS total scores. Program recommendations include efforts to integrate core model components suggested via existing professional literature which include licensed clinicians that receive adequate supervision from a mental health professional experienced in mental health consultation. Regular face-to-face interaction with consultants in critical to building relationships with consultees (home visitors) which the research suggests is critical to effective consultation. In light of emerging research regarding programmatic mental health consultation,

recommendations include a greater focus on staff and program outcomes because “they are the primary targets of program-focused consultation, and they are also posited to be important mediators of change in problem behaviors (Cohen & Kaufmann, 2000; Johnston & Brinamen, 2006).” Longitudinal studies of child and family outcomes is a continuing recommendation.

Home visitors receiving mental health consultation were more likely to remain in their role as home visitors, even after controlling for years of experience and quarterly caseloads, than home visitors who did not receive consultation. This is a notable finding given staff retention is a documented concern among home visiting programs. Lack of certain key recommended model components may have also influenced the lack of significant findings related to the perception of enhanced supports reported by home visitors receiving mental health consultation when compared to home visitors who did not. Future recommendations for continued evaluation include examining the effects of consultant qualifications, as well as the quality of the consultant-consultee relationship. Duration of mental health consultation needs to be examined in relation to the findings because duration has predicted lower staff turnover, increased self-efficacy among service providers (Geller & Lynch, 1999), and improvements in service quality (Harms & Clifford, 1980).

Goodwill Guides: Key findings indicate NHVs and nurse supervisors perceived the effectiveness and support of the Guides within the current model (phase 4) to be effective in supporting their work as NHVs. The implication of these finding suggest that the model revision to develop specific areas of expertise related to family needs within a program consultation model that supports nurses rather than providing direct services to families is nonetheless successful in supporting improved family outcomes. These results are based on cross-sectional survey, focus group, and interview group data measuring *perceptions* of effectiveness only; thus, it is important for continuing evaluation of the Guides model to measure effectiveness and impact of Guide services on family outcome measures.

VIII. PLAN FOR DISSEMINATION OF EVALUATION FINDINGS

Prior to submission of Indiana’s D89MC23147 Competitive Grant final report and FY11 Evaluation, the Indiana state team reviewed and achieved approval to share findings from data authorities within each respective agency. Findings from the NFP Goodwill Guides Program Model Enhancement study were presented at the American Educational Research Association Annual Conference in April of 2015 and 2016, as well as at the American Public Health Association Annual Conference in 2016. Indiana will post a copy of the approved Final Report on the Indiana MIECHV website, and share with LIAs, INHVAB and other state partners by March 2017. The work conducted in the FY11 Evaluation established groundwork and influenced additional studies for the FY15 Evaluation. Indiana intends to present findings from the FY11 Evaluation at The Institute for Strengthening Families and may share data from this study with HFA, NSO and their respective national model conferences. Indiana will continue to use the data and lessons learned to inform practice and quality improvement within home visiting and collaborative early childhood efforts. In addition, researchers, in partnership with MIECHV stakeholders, plan to publish in professional and academic journals to include summative study results to include findings from the FY11 and FY15 studies.

References

Benjamini, Y. and Hochberg, Y. (1995) Controlling the False Discovery Rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society B*, 57, 289–300.

Charmaz, K. (2006). Constructing grounded theory. London, England: Sage.

Cohen, E., & Kaufmann, R. (2000). Early childhood mental health consultation. Rockville, MD: Center for mental health services of the substance abuse and mental health services administration and the georgetown university child development center

Cohen, E. & Kaufman, R. (2005).Early Childhood Mental Health Consultation. Volume 1 of 2005 series on Promotion of Mental Health and Prevention of Mental Health and Behavioral Disorders, published by the Substance Abuse and Mental Health Services Administration. http://mentalhealth.samhsa.gov/publications/allpubs/svp05-0151/

Corbin, J., & Strauss, A. (2007). Basics of Qualitative Research: Techniques and procedures for developing grounded theory (3rd ed). Thousand Oaks: CA: Sage.

Dedrick, R. F. & Greenbaum, P. E. (2011). Multilevel confirmatory factor analysis of a scale measuring collaboration of children's mental health agencies. Journal of Emotional and Behavioral Disorders 19 (1), 27-40.

Dedrick, R. F. & Greenbaum, P. E. (2012). Multilevel confirmatory factor analysis of a scale measuring collaboration of children's mental health agencies. Journal of Emotional and Behavioral Disorders 19 (1), 27-40.

Denzin, N. K. & Lincoln, Y. S. (2011). *The handbook of qualitative research* (4th ed.). Thousand Oaks, CA: Sage.

Dye, J. F., Schatz, I. M., Rosenberg, B. A., & Coleman, S. T. (2000). Constant Comparison Method: A Kaleidoscope of Data. The Qualitative Report, 4(1), 1-10. Retrieved from http://nsuworks.nova.edu/tqr/vol4/iss1/8

Fleiss, J. L., Cohen, J. (1973). The equivalence of weighted kappa and the intraclass correlation coeficient as measures of reliability. *Educational and Psychological Measurement*, 33(3), 613-619.

Geller, S., & Lynch, K. (1999). Teacher Opinion Survey. Richmond: Virginia Commonwealth University Intellectual Property Foundation, and Wingspan.

Green, B. L., Simpson, J., Everhart, M. C., Vale, E., & Gettman, M. G. (2004). Understanding integrated mental health services in Head Start: Staff perspectives on mental health consultation. NHSA Dialog, 7(1), 35–60.

Greenbaum & Dedrick (n.d.) The Interagency Activities Collaboration Scale. Retrieved from: http://rtckids.fmhi.usf.edu/rtcpubs/study01/CollaborationScaleVersion6.pdf

Glaser, B. & Strauss, A. (1967). The discovery of grounded theory. Chicago: Aldine

Harms, T., & Clifford, R. M. (1980). Early Childhood Environment Rating Scale. New York: Teachers College Press.

Johnston, K. & Brinamen, C. (2006). Mental health consultation in child care: Transforming relationships with directors, staff, and families. Washington, DC: Zero to Three Library.

Kirk (2012). Development and Testing of the North Carolina Family Assessment Scales and their Relation to Reliability and Validity of the Scales. National Family Preservation Network. http://www.nfpn.org/Portals/0/Documents/ncfas_scale_development.pdf

Kryisk, J., & LeCroy, C. W. (2012). The Development and Initial Validation of an Outcome Measure for Home Visitation: The Healthy Families Parenting Inventory. Infant Mental Health (33), 496-505.

LeCroy, C. W., & Milligan, K. B. (2006). *Healthy families parenting inventory*. Tucson, AZ: LeCroy and Milligan Associates, Inc.

McMillan, J. H., & Schumacher, S. (2001). Research: A conceptual introduction. New York, NY: Longman Publishing.

Moustakas, C. (1994). Phenomenological Research Methods. Thousand Oaks, CA: Sage

Patton, M. Q. (1985). *Practical evaluation.* Beverly Hills, CA: Sage Publications.

Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika, 79,* 41-55.

The following tables describe measurement tools used for the Indiana MIECHV evaluation.

Interagency Collaboration Instruments

Program Referral Survey

The Program *Referral Survey*, developed by IU Evaluation, is a 69-item survey intended for MIECHV home visitors to complete about their referral coordination with other community agencies that provide services to families participating in HFI or NFP home visiting programs. The survey solicits home visitors' perceptions of ease of access and effectiveness of services provided by indicated referral agencies and the process of referral coordination with outside agencies. Validity and reliability evidence are not available for this tool.

Community Service Provider Survey

The *Community Service Provider Survey*, developed by IU Evaluation, is a 15-item survey intended for agencies and community partners providing family referrals to MIECHV home visiting services. The survey covers awareness of home visiting program eligibility criteria, as well as referral site protocols (i.e., who gets referred to what program and why). Purposefully selected stakeholders from a representative sample of types of agencies that refer to HFI and NFP and from agencies that receive referrals from HFI and NFP were asked to participate in surveys related to referral coordination and perceived levels of collaboration between home visiting programs and outside community agencies (N~250). The indicated service areas for outside community providers to be surveyed are as follows: Prenatal Care, Maternal Preventive Care, Family Planning and Reproductive Health Care, Substance Use (Alcohol and other drugs) Treatment, Mental Health Treatment, Domestic Violence (Shelter, Counseling), Adult Education Services (including GED and ESL), Job Training and Employment, Pediatric Primary Care, Childcare, Early Child Development Intervention Services, Stable Housing, Emergency/Crisis Services (Utility, Food, Emergency Shelter). Validity and reliability evidence are not available for this tool.

Interagency Collaboration Activities Scale (IACAS) Survey

The *IACAS Survey* (Greenbaum & Dedrick, 2012) is a 12-item tool IU adapted from Greenbaum & Dedrick's original 17-item tool. IACAS examines collaborative relationships between state, program, and site level agencies in four areas: 1) financial and physical resources, 2) program development and evaluation, 3) client services, and 4) collaborative policy activities. The IACAS yields a total collaboration score for IN MIECHV partners as well as subscale measures of collaborative relationships between state, program, and site level agencies. IACAS reliability for the four subscales are estimated to be .84 for *Financial and Physical Resource Activities,* .83 for *Program Development and Evaluation Activities*, .83 for *Client Service Activities*, and .86 for *Collaborative Policy Activities*.

HFI Mental Health Consultation Model Enhancement Instruments

Healthy Families Parenting Inventory (HFPI)

The Healthy Families Parenting Inventory (HFPI; LeCroy & Milligan, 2006) is a 63-item inventory that includes 9 subscales designed to assess parent change related to the overarching goals of Healthy Families. The underlying theory is that the development of healthy parenting skills and behaviors will in turn reduce child abuse and neglect. The 9 subscales included in the HFPI include: Social Support, Problem-solving/Coping, Depression, Personal Care, Mobilizing Resources, Role Satisfaction, Parent/Child Interaction, Home Environment, Parenting Efficacy

The HFPI is considered a direct measure of the intervention provided by the Healthy Families program. In other words, the Healthy Families program should impact what is being measured by the HFPI, such as the parent's sense of competence, efficacy, depression, perceptions of social support, and problem-solving and coping skills. Thus, this instrument serves as an adequate tool to examine the added value of the mental health clinician component for funded sites when compared to the control group. Reliability analyses have noted that the HFPI subscales have alpha coefficients ranging from .76 to .86, indicating excellent internal consistency. Factor analyses have supported the existence of the nine distinct subscales. The subscale items correlate poorly with measures with which they should not correlate, and low to moderately with other total subscale scores on the instrument.

North Carolina Family Assessment Scale (NCFAS)

The *North Carolina Family Assessment Scale* (Reed-Ashcraft, Kirk, & Fraser, 2001) was developed to assess family functioning and includes the domains of Environment, Parental Capabilities, Family Interactions, Family Safety, and Child Well-being. A study examined the internal reliability of scale items within the areas of well-being measured by the NCFAS and concurrent validity using correlations with scales intended to measure similar domains, including the Child Well-being Scales, the Family Inventory for Resources Management, and the Index of Family Relations. These analyses supported the NCFAS as a measure of overall environment, child well-being, overall family interactions, and family safety. The NCFAS also was found to correlate well with other similar measures currently in use (Reed-Ashcraft, Kirk, & Fraser, 2001).

Edinburgh Perinatal Depression Scale (EPDS)
The 10-question *Edinburgh Perinatal Depression Scale* provides a valuable and efficient way of identifying patients at risk for perinatal depression (Cox, Holden, & Sagovsky, 1987). Two major studies by Cox, et al. were conducted to validate the EPDS with postnatal women. In 1987, Cox, et al. validated the 10-item EPDS on a cohort of 84 mothers Participants were interviewed using Goldberg's Standardized Psychiatric Interview followed by an administration of the EPDS. A "threshold" score of 12/13 identified women who also had a Research Diagnostic Criteria (RDC) diagnosis of Definite Major Depressive Illness. Cox, et al. (1987) suggested that threshold scores of 9/10 might be used in primary care settings to indicate mild depression. In 1996, the EPDS was further validated by Cox, et al. on postnatal and non-postnatal women. Using a 12/13 threshold score, non-postnatal women with major or minor depression were identified via the RDC and in the postnatal group, women with major or minor depression were likewise identified. Total scores on the EPDS were used.

Center for Epidemiologic Studies Depression Scale (CES-D)
The *Center for Epidemiologic Studies Depression Scale* is a 20 item scale designed to measure depressive symptomatology in the general population. The items include symptoms associated with depression which have been used in previously validated, longer scales. Moreover, they were tested in household interview surveys and in psychiatric settings. Research has demonstrated that the CES-D is valid and reliable instrument that can be used in research, and possibly clinical practice, to screen for common symptoms of major depression. Internal consistency using coefficient alpha has been estimated at .85 for the general population and .90 in patient samples (Radloff, 1977). Most estimates of test-retest reliability from 2 weeks to 12 months fall in the moderate range (.45-.70); however, Radloff (1977) pointed out that moderate test-retest estimates are consistent with the CES-D's design, which emphasizes current affective symptoms that are expected to fluctuate across test administrations.

HFI Home Visitor Survey
The 18-item *HFI Home Visitor Survey*, adapted from the MIHOPE Home Visitor Baseline Survey by IU Evaluation, was used to estimate the effects of mental health services on the perceived skill and effectiveness of home visitors and reduced stress when providing mental health interventions among home visitors in MIECHV funded and non-MIECHV funded sites. The *HFI Home Visitors Survey* was used to compare the perceptions of home visitors in funded and comparison sites regarding provided training and available supports across the multiple home visiting activities they provide, particularly training and support for related mental health activities when compared with other home visiting activities.

Goodwill Guides Model Enhancement Instruments

Nurse Home Visitor/Nurse Supervisor Survey
The *Nurse Home Visitor/Nurse Supervisor* tool is a short 9-item survey for NFP nurse home visitors and NFP nurse home visiting supervisors designed by IU Evaluation to measure nurse perceptions of and satisfaction with Goodwill Guide services.

Appendix B: Indiana MIECHV Data Collection Schedule

Schedule		Instruments	Participants	Collected By
Year 1 : 2014	*Interagency Collaboration*			
	Annual	Stakeholder Interview	All ISDH, DCS MIECHV team members and HFI, NFP administrators of programs serving MIECHV funded families	IU
	Annual	Program Referral Survey	*HFI and NFP home visitors who served MIECHV funded families*	IU
	Annual	Community Service Provider Survey	*Indiana service providers receiving referrals from HFI and NFP programs who served MIECHV funded families*	IU
	Annual	Interagency Collaboration Activities Scale Survey	All ISDH, DCS, MIECHV team and HFI, NFP administrators of programs serving MIECHV funded families	IU
	HFI Mental Health Consultation Model Enhancement			
	Client baseline, 6 & 12 months	Healthy Families Parenting Inventory	All HFI participants	HFI program data provided to IU by Datatude
	Client baseline, 12 months	North Carolina Family Assessment Scale		HFI program data provided to IU by Datatude
	Client baseline, 6 months	Edinburgh Perinatal Depression Scale		HFI program data provided to IU by Datatude
	Client 7 & 12 months	Center for Epidemiologic Studies Depression Scale		HFI program data provided to IU by Datatude
	Annual	HFI Home Visitor Survey	*All HFI home visitors*	IU
	Goodwill Guides Model Enhancement			
	Annual	Nurse Home Visitor/Nurse Supervisor Survey	*NFP home visitors serving MIECHV funded families*	IU
	Annual	Guide Interviews	*NFP administrators, nurse home visitors serving MIECHV funded families, Guides*	IU
Year 2 : 2015	*Interagency Collaboration*			
	Annual	Stakeholder Interview	All ISDH, DCS MIECHV team members andHFI, NFP administrators of programs serving MIECHV funded families	IU
	Annual	Program Referral Survey	*HFI and NFP home visitors who served MIECHV funded families*	IU
	Annual	Community Service Provider Survey	*Indiana service providers receiving referrals from HFI and NFP programs who served MIECHV funded families*	IU
	Annual	Interagency Collaboration Activities Scale Survey	All ISDH, DCS MIECHV team and HFI, NFP administrators of programs serving MIECHV funded families	IU
	HFI Mental Health Consultation Model Enhancement			
	24 months	Healthy Families Parenting Inventory	All HFI participants All HFI participants	HFI program data provided to IU by Datatude
	24 months	North Carolina Family Assessment Scale		HFI program data provided to IU by Datatude
	24 months	Center for Epidemiologic Studies Depression Scale		HFI program data provided to IU by Datatude
	Annual	HFI Home Visitor Survey	*All HFI home visitors*	IU
	Goodwill Guides Model Enhancement			
	Annual	Nurse Home Visitor/Nurse Supervisor Survey	*NFP home visitors serving MIECHV funded families*	IU
	Annual	Guide Interviews	*NFP administrators, nurse home visitors serving MIECHV funded families, Guides*	IU

Appendix C: Timeline

	Sept 2011 - Feb2013	2013										2014												2015												2016											
		Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Indiana FY11 Evaluation																																															
Evaluation Planning, Drafting Evaluation Plan																																															
HRSA Approval																																															
Final Report including Evaluation to HRSA																																															
Interagency Collaboration																																															
IRB Approval																																															
Key Stakeholder Interviews																																															
Program Referral Survey																																															
IACAS with key stakeholders																																															
Community Provider Survey																																															
Data Cleaning, preparing, analyzing and Report Writing																																															
Reports submitted for data governance approval and/or state agency/program																																															
Draft Evaluation Report to Stakeholders for review (ISDH + DCS)																																															
Mental Health Consultation																																															
IRB Approval																																															
IN HFI Homevisitor Survey																																															
Data Cleaning, preparing, analyzing and Report Writing																																															
Reports submitted for data governance approval and/or state agency/program																																															
Draft Evaluation Report to Stakeholders (ISDH + DCS for review																																															
Goodwill Guides																																															
IRB Approval																																															
Semi-structured interviews																																															
Focus Groups																																															
Surveys																																															
Data Cleaning, preparing, analyzing and Report Writing																																															
Reports submitted for data governance approval and/or state agency/program																																															
Draft Evaluation Report to Stakeholders (ISDH + DCS) for review																																															

Appendix D: Evaluation Logic Model