Arizona Department of Health Services

Affordable Care Act Maternal, Infant and Early Childhood Home Visiting Program

Updated State Plan

Arizona 2011

Award # 6X02MC19390-01-01

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Introduction

This document contains Arizona's Updated Home Visiting Plan for the Affordable Care Act (ACA) Maternal, Infant and Early Childhood Home Visiting Program (MIECHV). Arizona set out on this journey over a year and a half ago and has at every stage made this as collaborative and transparent process as possible. This plan has been developed with all of the information available to us today. We suggest that as the journey progresses, and we come to experience implementation we may need to go back, reassess data and information and realign some of our processes in order to implement the models with fidelity and to achieve the desired outcomes of improved maternal and prenatal health, infant health, parenting skills, school readiness, reduction in child maltreatment and abuse and improved family socioeconomic status as well as an improved referral and the integration of this home visiting system into the state early childhood system. In October 2009, the Arizona Early Childhood Development and Health Board, also known as First Things First, along with the Arizona Departments of Health Services, Economic Security and Education and community providers of home visiting services convened an Early Childhood Home Visiting Task Force.

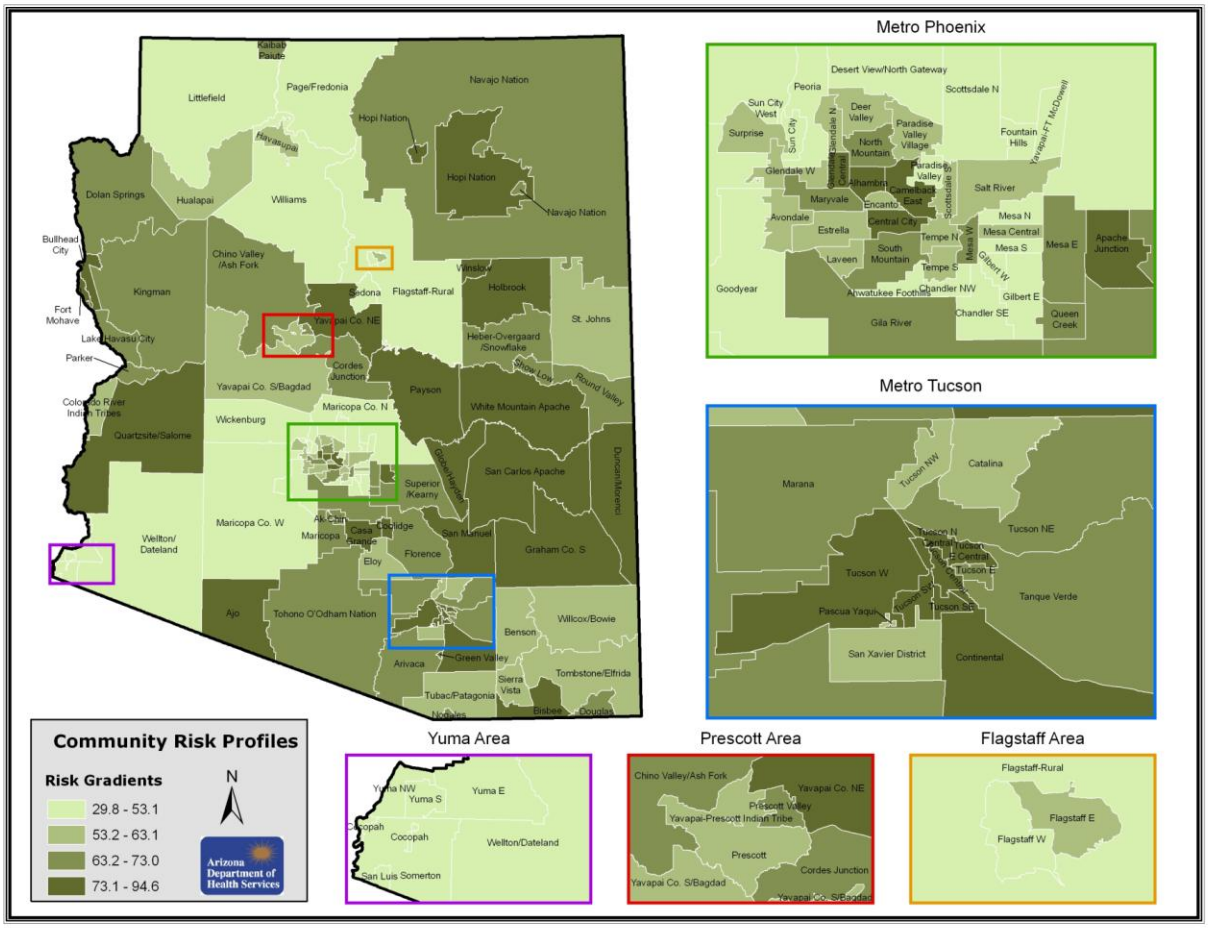
The purpose of the Task Force was to define a system-wide strategy for the future development and delivery of quality home visiting services throughout Arizona. After several focused meetings, the Task Force produced a plan, titled The Vision for Early Childhood Home Visiting Services in Arizona. The Plan hoped to provide a pathway for delivery of consistent, high quality home visiting services in the context of Arizona's statewide early childhood development and health system.

While the Task Force was a start for Arizona; when the ACA Maternal, Infant and Early Childhood Home Visiting statute was passed, the state agencies that provide early childhood home visiting decided to convene a group to begin work on the grant opportunity. Included in this group is representation from the Title V agency and the state's Single State Agency for Substance Abuse which are housed within the Arizona Department of Health Services, the state's Head Start Collaboration Director which is housed in the Arizona Department of Education, the state's Title II agency, the Arizona Department of Economic Security, which serves as the state's child care and child welfare agency, the Intertribal Council of Arizona and senior management from Arizona's Early Childhood Development and Health Board. These agencies are Early Childhood Comprehensive System stakeholders as well and several members serve on Project LAUNCH's State Advisory Council.

These agencies committed to work together on this process. The approach was founded on a commitment to make decisions together that guided the needs assessment process and built on the earlier plan for early childhood home visiting in a concerted effort to best serve the most at risk families of Arizona. The group, called the Inter Agency Leadership Team (IALT) determined the units of analysis, data needs and sources, evaluation criteria for communities at risk and examined evaluation criteria for evidence based models. Arizona's 2010 MIECHV Needs Assessment identified 31 high risk communities using community health analysis areas (CHAAs) that were built from US 2000 Census Block Groups and were originally developed and created by the Arizona Department of Health Services. These CHAAs are relatively small geographic regions of the state and provide a detailed picture of the community and can be utilized to monitor trends over time. A key analytic strategy to identify "at risk communities" was based on ranking methodology that ranks a state, a census block, or a community (typically a geographic unit) on identified risk and/or capacity indicators by estimating the average rank. The average ranks are typically grouped into quartiles and/or quintiles, which can then be displayed as a statistical map (GIS map) to describe geographical variations.

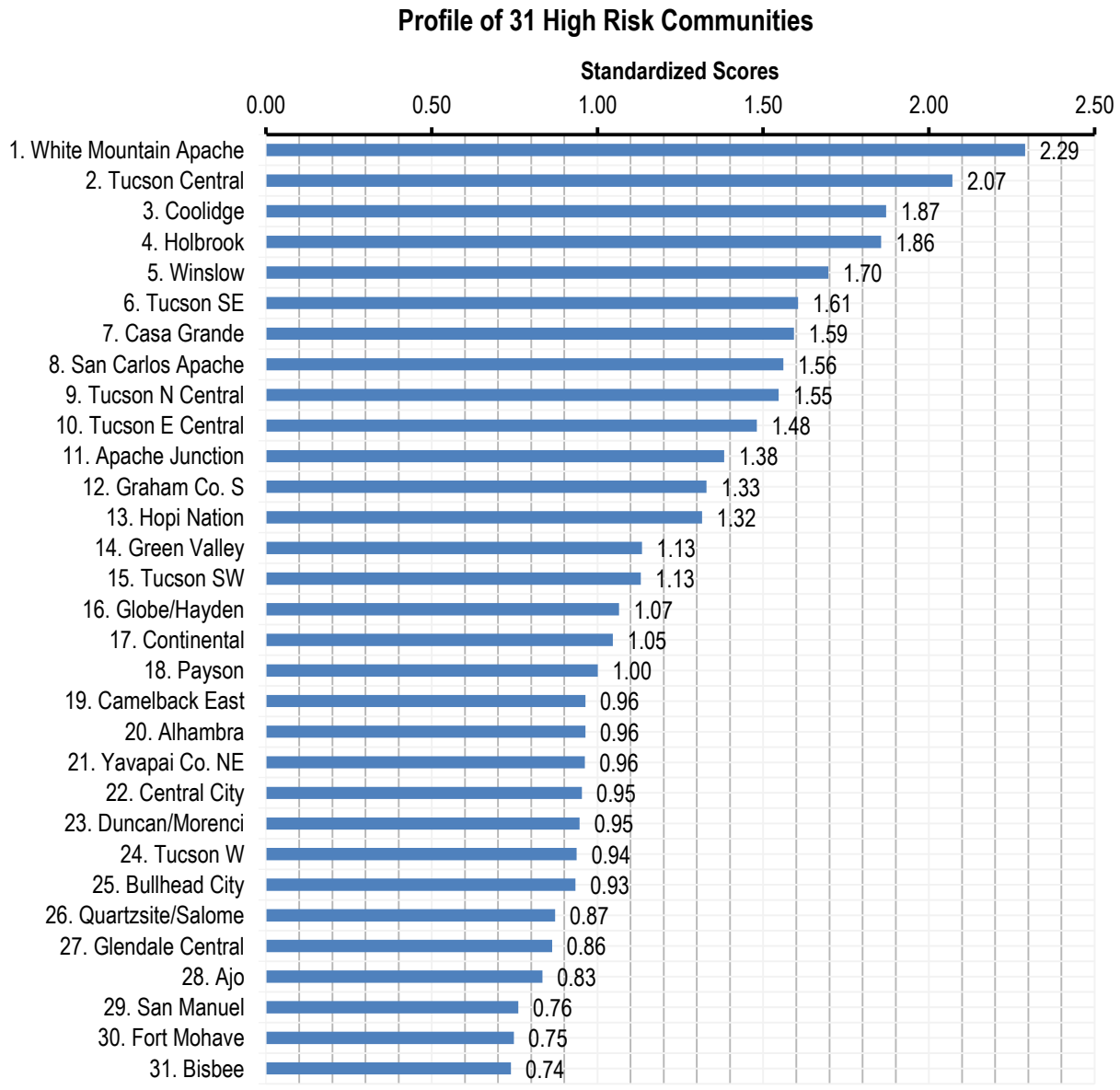
Each CHAA was ranked on all of the 21 indicators outlined in the SIR and these indicators were averaged to produce an overall risk score for each CHAA. Higher scores indicated higher risk. Figure 1 gives an overview of the risk profile for Arizona's CHAAs. The detailed methodology including discussion of indicators, data sources, strengths and limitations of the data was discussed in Arizona's Needs Assessment in 2010.

Figure 1. Arizona CHAAs by Overall Risk Score



In this figure darker shades correspond to higher risk scores and indicate higher risk and vice-versa. Figure 2 displays the profile of these high risk communities as a standardized score (z-score) with a mean of zero and standard deviation of one. The standardized scores indicate how far each CHAA is from the mean zero. From an interpretational point, all positive z-scores are in theory at-risk and/or high risk. Positive z-scores ranged between 0.74 to 2.29 with Bisbee at lower-end of high-risk score to White Mountain Apache which had the highest risk with a standardized score of 2.29, followed by Tucson Central (2.07), Coolidge (1.87), Holbrook (1.86), Winslow (1.70), Tucson SE (1.61) etcetera.

Figure 2. Profile of 31 High Risk Communities identified by Arizona's MIECHV 2010 Needs Assessment



In the following pages you will find the identification and selection of Arizona's targeted at risk communities, the program goals and objectives, the models we selected and how we saw them to fit the communities' needs, the implementation plan, the plan for meeting the benchmarks, the state plan for program administration, plan for CQI, our technical assistance needs and the required attachments of memorandum of concurrence and the budget.

Identification of the State's Targeted At-Risk Communities

The 31 high risk communities identified in Arizona's 2010 MIECHV Needs Assessment formed the initial basis for prioritizing and identifying the state's targeted communities discussed in this document. Some of the criteria were:

- Analyses of these 31 highest risk communities;
- Efficiency/Economies of Scale (0 to 4 population, geographic proximity, start-up costs, capacity, need);
- Appropriateness of high-risk indicators to home visiting indicators (e.g. child maltreatment, school dropout, IMR, domestic violence, crime) and benchmark;
- Relevance and applicability of evidence-based programs (EBPs) to the targeted at-risk community;and
- Existing home visiting programs in the community and the percent of young children served by current home visiting programs.

An important criterion for the IALT was to identify the efficiency and economies of scale. The development of this criterion was based on within-group analyses of high risk communities. Prior to Mathematica's[1] review of evidence-based programs on home visiting, the Office of Assessment and Evaluation at ADHS had reviewed home visiting programs at The California Evidence-Based Clearinghouse for Child Welfare (CEBC) and SAMHSA's National Registry of Evidence-Based Programs and Practices (NREPP).

1.1 Within-group Analyses of High Risk Communities

The within-group analyses was based on the logic of identifying 'risk clusters' that could be targeted through specific EBP, which subsequently appeared in Mathematica's review of home visiting programs as having met the evidence criteria. The within-group analyses utilized the top-quartile of at-risk and/or high risk communities (i.e. CHAAs) and ranked them across indicators and within each of the high-risk indicators. Each indicator was then grouped into specific domain (benchmark) area. Analyses of the risk factors indicated that the top risk factor was childhood negligence, maltreatment, and injuries with 55 percent of the high risk CHAAs having this risk factor, followed by substance use and abuse (39%), maternal and child health (26%), domestic violence (20%), economic self-sufficiency (16%), and school dropout rate (10%). While within-group analyses provided information on the 'risk clusters,' it was also important understand what home visiting programs served these at-risk and/or high risk communities.

Arizona's 2010 MIECHV Needs Assessment had identified several home visiting programs that not only included 'home grown' programs but also evidenced-based home visiting programs that were later vetted through Mathematica's formal analysis of evidence-based program. Although the data was not available by CHAA, IALT utilized county-level data on home visiting programs to assess if any of the home visiting programs served the identified 31 high risk communities. Some of these programs were Nurse Family Partnership (NFP), Healthy Families America (HFA), Home Instruction for Parents of Preschool Youngsters (HIPPY), Parents as Teachers, Parent-Child Home (PCH), Early Head Start (EHS), and Early Steps to School Success (ESSS). While each could have multiple home visiting programs, out of the 31 at-risk

[1] See http://homvee.acf.hhs.gov

and/or high risk CHAAs, 77 percent (n = 24) of the CHAAs had Healthy Families America home visiting program, 50 percent (n = 16) of the CHAAs were being served by Parents as Teachers, 39 percent (n = 12) of the CHAAs were served by early Head Start, and both Parent-Child Home (PCH) and ESSS in only two CHAAs.

Table 1 presents the cross-walk of risks, presence and/or absence of any existing home visiting program and existing licensed behavioral health facilities.

Table 1. Cross-walk of risk factors, home visiting programs, and number of behavioral health facilities

31 High-ranking CHAAs	Indicator	Within-group z-score	# children 0-4	Current HV	NFP	HF	HIPPY	EHS	Parent-Child Home	PAT	ESSS	Licensed Behavioral Health Facilities
White Mountain Apache	Poverty	2.32	1,347	Yes	No	No	No	No	No	Yes	No	0
	Teen birthrate	2.22										
Tucson Central	Crime	2.06	4,816	Yes	Yes	Yes	No	No	No	Yes	No	34
	Negligence	1.58										
Coolidge	Sexual Abuse	3.28	959	Yes	No	Yes	No	Yes	No	Yes	No	3
	MCH	1.15										
Holbrook	Substance abuse	2.49	640	Yes	No	Yes	No	Yes	No	No	No	2
	Unemployment	1.69										
Winslow	Women 15-44 Assaults	3.89	765	Yes	No	Yes	No	No	No	Yes	No	3
	Substance Abuse											
Tucson SE	Substance Abuse	1.21	7,801	Yes	Yes	Yes	No	No	No	Yes	No	7
	Injuries	1.14										
Casa Grande	Crime	1.09	4,476	Yes	No	Yes	No	Yes	No	No	No	29
	Substance abuse	1.08										
San Carlos Apache	Poverty	2.85	1,006	Yes	No	No	No	No	No	No	Yes	0
	Substance abuse	2.24										
Tucson N Central	Negligence	3.69	3,912	Yes	Yes	Yes	No	No	No	Yes	No	20
	Child Maltreatment	3.32										
Tucson E Central	Crime	2.32	4,839	Yes	Yes	Yes	No	No	No	No	No	38
	Negligence	0.65										
Apache Junction	Substance abuse	<2	2,702	Yes	No	Yes	No	Yes	No	No	No	13
Graham Co. S	Preterm Birth	1.35	1,942	Yes	No	Yes	No	No	No	No	NO	2
	Unemployment	1.34										
Hopi Nation	Substance Abuse	2	590	Yes	No	Yes	No	No	No	Yes	No	0
Green Valley	MCH	3.35	84	Yes	No	Yes	No	No	No	Yes	No	1
	Physical abuse	2.68										
Tucson SW	Injuries	1.32	8,074	Yes	Yes	Yes	No	No	No	Yes	No	7
Globe/Hayden	Substance abuse	+/-1	1,464	Yes	No	No	No	Yes	No	No	No	6
Continental	School dropout	1.98	1,926	Yes	No	Yes	No	No	No	Yes	No	4
	Sexual abuse	1.38										
Payson	Substance Abuse	> 1	1,502	Yes	No	No	No	Yes	No	No	No	6
Camelback East	Injuries	2.4	11,889	Yes	Yes	Yes	No	No	No	Yes	No	29
	MCH	<1										
Alhambra	Injuries	2.77	13,600	Yes	Yes	Yes	No	Yes	No	Yes	No	30
	Teen birth	1.24										
Yavapai Co. NE	Sexual Abuse	0.69	3,021	Yes	Yes	Yes	No	Yes	No	Yes	No	12
Central City	Poverty	2.03	8,227	Yes	Yes	Yes	No	Yes	Yes	Yes	No	43
	Crime	1.75										
Duncan/Morenci	Substance abuse	>2	537	Yes	No	No	No	Yes	No	No	No	1
Tucson W	School Dropout	3.55	3,582	Yes	No	Yes	No	No	No	Yes	No	11
Bullhead City	Substance abuse	<2	3,556	Yes	No	Yes	No	No	No	No	No	9
Quartzsite/Salome	Physical Abuse	3.87	340	Yes	No	Yes	No	No	No	No	No	1
	Child maltreatment	2.18										
Glendale Central	Injuries	1.53	9,016	Yes	Yes	Yes	No	Yes	No	Yes	No	20
	Crime	<1										
Ajo	Maternal/Child Health	>3	225	Yes	No	No	No	No	No	No	No	2
San Manuel	Substance Abuse	>2	1,125	Yes	No	Yes	No	Yes	No	No	No	3
	MCH	1.37										
Fort Mohave	Substance abuse	>1	491	Yes	No	No	No	No	No	No	No	0
Bisbee	School dropout	1.73	842	Yes	No	Yes	No	No	No	No	No	3
	Substance abuse	<1										

The next important element in the within-group analyses was to select communities with higher standardized scores (z-scores) that were typically one-standard deviation or more. This led to further narrowing the number of communities from 31 at-risk and/or high risk CHAAs to 15 high-risk CHAAs. Upon consideration of the resources likely to be available in the first year of the grant and the average cost of a home visitation program, the IALT estimated that approximately 400 children could be served. It was further estimated that there would need to be about 6,000 children to reach this level of voluntary enrollment. The benefits of a geographic cluster were noted, as some CHAAs did not have the requisite population density. A map of the state was set up with dots representing the high risk CHAAs to assess 'risk clusters'. There was clearly a clustering of CHAAs in the Tucson area. Accordingly, this area was selected for a community meeting to determine the level of community support, adequacy of an early childhood workforce, and the possibility of community partnerships for purposes of referrals. While it could have been easy to have selected the top 15 CHAAs, it was important for the IALT to see if the communities would be receptive to the home visiting programs, and also if the EBPs could be scaled-up to serve as many families (400 families based on $3500 per family) as possible during the life of the grant, keeping in view attrition in the program and current percent of young children served.

The other communities identified include Casa Grande and Coolidge, two distinct CHAAs representing communities located in close proximity to one another in Pinal County. While these areas are not as populous as the Tucson cluster, they have a sufficient number of young children and an even lower rate of existing service. A community meeting was also planned for this area.

The area with the highest risk score was the White Mountain Apache CHAA. The number of children ages 0-4 is relatively low, but the need is quite high. Historically there have been challenges associated with setting up programs in tribal areas due to historical trauma.[2] Meetings were held with Tribal members and the White Mountain Apache Health Department in Whiteriver, which has been piloting an early childhood home visiting model. As a result, this CHAA was designated as the area for further consideration for a promising approach using the set-aside funding. Family Spirit was developed by Johns Hopkins University and has undergone randomized trials in Whiteriver as well as on the Navajo Nation. There was a great deal of interest in narrowing the focus of a future trial as data has identified substance abuse as a grave concern.

1.2 Targeted At-risk Communities in Arizona

As a result of the within-group analyses and deliberations by the IALT, community meetings were planned for both Tucson and Casa Grande/Coolidge. These meetings were facilitated by a contracted consultant. Invitees included family members, community leaders, and representatives from the child welfare agency, county health departments, court system, early childhood programs, school districts, existing home visitation programs, parent support programs, universities, behavioral health agencies, and other community resources. Family member participation was supported through the ADHS, Office for Children with Special Health Care Needs.

The Tucson community meeting was held on March 25, 2011. There were 19 people in attendance. Input was solicited through a facilitated small group discussion process, led by an independent consultant. From

[2] Brave Heart, M. Y. H. (2004). The historical trauma response among natives and its relationship with substance abuse: A Lakota illustration. In E. Nebelkopf & M. Phillips (Eds.), *Healing and Mental Health for Native Americans: Speaking in Red* (pp. 7-18).

this meeting, it was learned that: 1) the Tucson area has experienced, embedded home visitation providers who are using evidence based programs; 2) there are multiple evidence based programs in place and there is no need to add more models but there is a need for expanded capacity in existing programs; 3) the Pascua Yaqui Tribe has a program serving Tribal members in New Pascua, but other communities are not being served; 4) community collaborations are strong and medical/dental professionals are willing to partner; 5) the community has an inclusive, family-centered culture; 6) there is an active Family Support Alliance; 7) in order to foster family involvement, it will be necessary to address fear of stigma for participating; 8) increased coordination among service providers is needed; and 9) while there is an adequate workforce, there is a need to grow capacity in specific areas such as infant mental health and to recruit more bilingual staff.

The Casa Grande/Coolidge meeting was held on March 31, 2011. There were 17 people in attendance. Input was solicited through a facilitated small group discussion process. From this meeting, it was learned that: 1) the two communities are geographically close but there are differences between them; 2) the communities are relatively stable and many families have lived and worked there for generations; 3) the Casa Grande area, in particular, is experiencing a high rate of growth; 4) Central Arizona College is a major asset, particularly in terms of workforce development; 5) both communities have been largely dependent on government funding for social services; 6) there is a perceived need for more home visitation services, as well as transportation and child care subsidies; 7) births and health care often occur outside the county due to the lack of healthcare facilities/providers; and 8) hiring local bachelors' level staff may be a challenge.

There were some commonalities. Both communities have evidence of need. Both have a solid basis for collaboration among providers, but would benefit from improved coordination and a clearly articulated pathway for referrals. Both have had a successful history with home visitation programs and have the capacity to expand. Families in both areas may be unaware of the availability and benefits of home visitation, so outreach will be critical to expansion. Some workforce development will be needed in both areas. Both are willing and ready to accept new home visitation resources.

Casa Grande, Coolidge, Tucson Central, Tucson North Central, Tucson South East and White-Mountain Apache were finally selected for targeted EBP home visiting intervention. These communities were selected based on the criteria discussed earlier and most importantly through engaging the various community stakeholders. Table 2 gives an overview of the socio-demographic data including overall risk scores (z-scores) comparing to the State. It is evident that all the targeted communities were 1.5 to 2.5 standard deviations above the mean in terms of their risk-profile. Except for White Mountain Apache, all communities had higher population density, with the Tucson CHAAs relatively more dense than Coolidge and Casa Grande. The percent of females was slightly higher compared to the State except for Tucson Central (34,473/69,793 = 49%). The zero to four population for the Tucson South East CHAA was 11.2 percent compared to the State 7.8 percent. All CHAAs except Casa Grande had a large percentage of population below poverty compared to the State average. Data on average family income further supported income disparity in these high-risk communities. The State average family income in 2008 was $66,207.57 while White Mountain Apache had the lowest average family income ($33,608.09), followed by Tucson South East, Tucson Central, Tucson North Central, Coolidge, and Casa Grande. The number of non-profits reflect both supply of services and the degree of social capital in a given community.[3,4,5] Per

[3] Gronbjerg, K.A. & Paalberg, L. (2001). Community Variations in the Size and Scope of the Nonprofit Sector: Theory and Preliminary Findings. *Nonprofit and Voluntary Sector Quarterly, 30,* 684-706.

capita number of non-profits was highest in Tucson Central (2.53), i.e. two non-profits per 1000 people, followed by Tucson North Central (1.06) with one per 1000 population compared to State average (0.78) with lowest per capita non-profits in Tucson South East (0.17), followed by White Mountain Apache (0.29), Coolidge (0.33), and Casa Grande (0.44).

Table 2. Socio-demographic characteristics of targeted communities for EBPs in Arizona

Demographic characteristics	Selected High Risk Communities						State[†]
	Casa Grande	Coolidge	Tucson Central	Tucson N Central	Tucson SE	White-Mountain Apache	
Overall risk score*	1.59	1.87	2.07	1.55	1.61	2.29	0
Population	58,596	11,945	69,793	57,325	69,393	13,657	6,446,544
Population density	212.31	163.01	4242.14	4751.70	5445.05	5.18	56.5
Population female	30,603	6,248	34,473	28,993	35,255	7,110	3,227,747
Population 0 to 4 years	4,476	959	4,816	3,912	7,801	1,347	505,052
Population 0 to 18 years	17,007	3,750	18,730	13,375	25,013	5,511	1,789,302
Dependency ratio[1]	56.06	56.72	38.50	46.84	57.13	57.55	54.3
Crude Death Rates[2]	6.5	9.13	6.32	8.32	5.52	6.52	6.97
Average family size	3.22	3.43	3.41	2.94	3.72	4.38	3.15
% below poverty[3]	12	20	25	17	27	42	14.7
Average family income	$53,460.40	$51,248.89	$42,609.39	$47,209.79	$37,781.01	$33,608.09	$66,207.57
Number of non-profits[δ]	26	4	177	61	12	4	5063
% Black	5.12	12.19	4.39	3.05	2.25	0.31	3.4
% Hispanic	33.67	35.08	51.13	29.75	80.97	0.81	30.7
% Native American	3.75	2.98	3.50	3.01	4.31	94.59	4.6
% Other[‡]	4.06	3.33	6.48	5.97	1.43	1.29	5.93
% White	53.39	46.42	34.49	58.22	11.03	3.00	55.37

*Overall risk score is a standardized z-score (M = 0; SD = 1). Scores above the mean indicate high risk and below the mean indicate lower risk. Overall risk score was distributed normally (Mdn = 62.96; M = 62.97; SD = 13.79) with a minimum rank score of 29.76 and a maximum of 94.57. Further, Shapiro-Wilks test did not indicate that the distribution of the overall risk score was non-normal (W = 0.99; p = 0.57).

[†]State data is based on 2008 Census estimates produced by NIELSEN Claritas, and estimates are slightly conservative than Census.

[δ]Non-profit data was based on National Center for Charitable Statistics (NCCS) Circa 2008 data

[1]Dependency ratios indicate the potential effects of changes in population age structures for social and economic development, pointing out broad trends in social support needs. A high dependency ratio indicates that the economically active population and the overall economy face a greater burden to support and provide the social services needed by children and by older persons who are often economically dependent. A high youth dependency ratio, for instance, implies that higher investments need to be made in schooling and child-care.

[2]Crude deaths rates were expressed per 1000 as opposed to the traditional per 100,000.

[3]Percent below poverty data is from Census 2000

[‡]Other category includes Asian/Pacific Islanders and two or more races

1.3 Mechanisms for Screening, Identifying, and Referring Families and Children to Home Visitation Programs

Mechanisms for screening, identifying, and referring families and children to home visitation programs were discussed at the two community meetings. Based on input from both communities, it appears that there is a strong foundation for building a more coordinated screening, identification, and referral system in

[4] Hillemeier, M.M., Lynch, J., Harper, S., & Casper, M. (2003). Measuring Contextual Characteristics for Community Health. *Health Services Research, 38*(6), Part II 1645-1717.

[5] Saxton, G.D., & Benson, M.A. (2005). Social Capital and the Growth of the Nonprofit Sector. *Social Science Quarterly, 86*(1)

collaboration with the selected communities. The new ADHS Program Manager responsible for the home visitation program will reconvene stakeholders in the communities to continue the discussion about how to build on their current strengths in order to improve these processes. Stakeholders will include home visitation, healthcare, behavioral health, child welfare, schools, and others.

In Tucson, multiple programs are implementing home visiting. Referral to these programs occurs on an informal basis and varies program by program. Eligibility criteria also differ from one program to another. Many referrals come from hospitals, neonatal ICUs, physicians, clinics, schools, and Child Protective Services. The number and appropriateness of referrals depend on the knowledge level of the referral source. It was noted in the community meeting that there is a need for greater awareness of home visitation resources and for informational resources for healthcare providers and others. Additional needs identified were for a better transition process from one program to another and for better coordination among providers when families are receiving multiple services. Tucson has a history of successful collaboration among community providers and the community is optimistic that they can build on this asset in strengthening home visitation services. For example, the Southern Arizona Family Support Alliance has developed a partner guide and a screening tool that lists various community agencies and organizations, the characteristics of the persons whom they enroll, and the types of programs they offer.

In the Casa Grande and Coolidge areas, primary referral sources include hospitals and prenatal clinics; secondary referral sources include behavioral health programs, Child Protective Services, the county health department, schools, and other community programs. As in Tucson, there are differences from program to program. For early intervention services, referral sources include Early Head Start/Head Start, physicians, hospital social workers, other home visiting programs, Child Protective Services, the schools, and families themselves. For Early Head Start/Head Start, referral sources include community events, the Arizona Early Intervention Project (AzEIP), schools, community partners, healthcare providers, as well as formal recruitment efforts and word-of-mouth. Hospital social workers are the primary referral source for the Newborn Intensive Care Program. It was noted in the community meeting that many programs have a long waiting list and only those with the greatest need receive services. There is an additional challenge in these areas because births often occur outside the geographic area, so it is necessary to ensure that services and supports are in place when the family brings their infant back to the area. Local providers use a community resource guide but it is hard to keep it up-to-date. Parents frequently learn about programs by networking with other parents. Coordination among programs occurs informally, except in those instances where there is a formal agreement, e.g., Head Start and Local Educational Agencies (LEAs). Participants in the community meeting indicated that there is good collaboration among agencies in the area and a strong social services network in both Casa Grande and Coolidge from which to build.

The White Mountain Apache Health Department has a very close relationship with the Indian Health Service hospital and obstetricians; they receive most of their referrals from there. In addition, they advertise in the SCOUT, the local paper, and they work closely with the nurse at the local high school and the WIC clinics.

1.4 Integration of Home Visitation into the Early Childhood System

In 2007, Arizona passed an initiative creating the Early Childhood Development and Health Board, commonly known as First Things First. This Board, a governmental agency, is in the process of developing a model early childhood system with three key components—early learning, health, and family support. All

the partner agencies that comprise the Inter Agency Leadership Team are actively engaged in this process. Home visitation is an integral part of the statewide model.

First Things First convened the Early Childhood Home Visiting Task Force that created The Vision for Early Childhood Home Visiting Services in Arizona: A Plan of Action 2010-2015. That plan formed the basis for the recent needs assessment and this updated plan. First Things First and the MIECHV Program Manager Task Force will reconvene the task Force to work toward the implementation of this plan.

First Things First is comprised of 31 Regional Councils that each has responsibility for planning and funding strategies identified to respond to concerns recognized in the local needs and asset assessments. The Councils serving the Tucson, Casa Grande, Coolidge, and White Mountain Apache Tribe will continue to be informed about and involved in the implementation of this home visitation plan, so they can coordinate this program with others they fund and leverage resources to maximize benefits for young children and their families.

1.5 Other At-risk and/or High Risk Communities

The 2010 Home Visiting Needs Assessment provided risk factor information for all 126 CHAAs and initially identified the 31 in the quartile with the highest overall risk factor scores for further consideration. The other CHAAs in this quartile were: Holbrook, Winslow, San Carlos Apache, Apache Junction, Graham County South, Hopi Nation, Green Valley, Globe/Hayden, Continental, Payson, Camelback East, Alhambra, Yavapai County Northeast, Central City, Duncan/Morenci, Bullhead City, Quartzsite/Salome, Glendale Central, Ajo, San Manuel, Fort Mohave, and Bisbee.

State Home Visiting Program Goals and Objectives

2.1 Goals and Objectives

The overarching goal Arizona's State Home Visiting Program is to improve maternal and child health and parenting outcomes for enrolled families. To achieve this desired result, we seek to improve access to and coordination of home visiting and other community services. As mentioned previously, Arizona began the process of developing a statewide system of home visiting in the fall of 2009 when it convened early childhood home visiting stakeholders, the Home Visiting Taskforce, to look at early childhood home visiting as it was currently being implemented in the state. Arizona, like many states, has a long history of implementation of multiple models of home visiting, some evidence based and some 'home grown' but based on best practices. These are managed by State agencies, local or county agencies, or community based providers, and range from follow up for infants who began their lives in Newborn Intensive Care Units to Head Start. Arizona also has associations or coalitions of home visitors in several locales.

The strength of the existing services and collaborations, coupled with training opportunities available in some areas, provides the foundation for establishing a robust system of quality home visiting service. To ensure an ongoing system-wide, collaborative approach to the future expansion of high quality home visiting services, the Home Visiting Taskforce provided Recommendations and an Implementation Plan. The Implementation Plan called for continued involvement and collaboration among funders and providers of service, methods to assure high quality, effective home visiting services and established priorities for targeting new funding opportunities.

The first goal of the Maternal, Infant and Early Childhood Home Visiting Program will focus on the improvement of maternal and child health outcomes and improvement of parenting skills for the enrolled population through the implementation of evidence based home visiting models. This will be accomplished by implementation of two different evidence based models and the implementation of a promising practice in a third community.

The second goal will be to ensure that each family is linked to the home visiting program that best fits their needs and preferences. As noted above, there is an array of different types of home visiting services in each of the selected communities and each program type has somewhat different purposes and approaches. The objectives will be to develop a comprehensive and current list of available home visiting programs serving each area, their characteristics and strengths, and target populations; to make this information available to families; and to strengthen the home visiting referral process.

The third goal will be to improve coordination of community services that will support child health, family stability, and parenting, to which families receiving home visiting services may be referred. This will be both on the regional level and on a statewide level. Each of the three regions will first identify the services available. This has been done in many communities but lists often sit on a shelf, where they become outdated and unused. Updated information will be made available throughout the community. At two of the community forums we learned of parents who did not know different services were available in their community. Finally we will seek to create a referral system within each community. This could prove to be a challenge because the different contractors are often looking for clients and are reluctant to 'hand someone over' to a different service. The plan is to build a continuum of services so each family's need

can be met where they are. Finally, as our fourth goal, we plan to build onto a fledgling statewide system of home visiting that will become a part of a comprehensive early childhood system. We will build on the work begun by the Home Visiting Taskforce. The work of reconvening the group will be coordinated by the Maternal, Infant and Early Childhood Home Visiting Program Manager to be hired by the Arizona Department of Health Services. This Taskforce will develop policy and procedures which will include, among other things, standards for training of home visitors and consider standardization of screening materials, where appropriate.

Goal 1: Improve maternal and child health and parenting outcomes for enrolled families.

Objective 1.1: Implement evidence based home visiting in the selected communities.
Objective 1.2: Ensure fidelity of the home visiting models being used.

Goal 2: Ensure that each family is referred to the home visiting service that best fits their needs and preferences.

Objective 2.1: Develop a comprehensive list of available home visiting services available, their characteristics and strengths, and target populations.
Objective 2.2: Develop and implement community education for families about available early childhood home visiting or referral services.
Objective 2.3: Work with the local early childhood community to develop or strengthen the process for referral to home visiting services.

Goal 3: Improve families' access to community services that will support child health, family stability, and parenting.

Objective 3.1: Update or develop the list of community services potentially available to families receiving home visiting services.
Objective 3.2: Strengthen or establish linkages and referral protocols among home visiting programs and community based providers.
Objective 3.3: Establish methods for follow-up and feedback to assure families receive needed and desired services.

Goal 4: Working with First Things First, strengthen the statewide system for home visiting and ensure that it is integrated into the greater early childhood system.

Objective 4.1: Re-establish the Home Visiting Taskforce and coordinate it with the First Things First family support workgroup.
Objective 4.2: Examine, develop, build on, and promulgate policies and procedures for home visiting that are consistent with best practices.

Figure 3 gives an overview of the Arizona State's Maternal, Infant and Early Childhood Home Visiting Program from a systemic perspective.

2.2 Logic Model

Figure 3. Arizona's MIECHV Logic Model

Inputs	Activities	Outputs	Short Term Outcomes	Long Term Outcomes
Grant funding Partner agencies Evidence based home visiting models Community based providers Home Visiting Taskforce Home Visiting State Plan	Provide expanded home visiting in the selected communities	# of families served by program type/area	Families supported to achieve their home visiting objectives	Improved maternal and child health Improved parenting outcomes for enrolled families
	Develop a comprehensive list of available home visiting services available, their characteristics and strengths, and target populations	# of service identified by area	Increased number of families accessing appropriate home visiting services in the selected communities	
	Develop and implement community education for families about available early childhood home visiting or referral services	#/type of community education materials/programs provided		
	Work with the local early childhood community to develop or strengthen the process for referral to home visiting services	Documentation of referral process		
	Update or develop the list of community services potentially available to families receiving home visiting services	#/type of services identified by area	Increased number of families linked with services that improve their child's health, their family stability, and parenting in the selected communities	
	Strengthen or establish linkages and referral protocols among home visiting programs and community based providers	Protocols developed		
	Establish methods for follow-up and feedback to assure families receive needed and desired services	Protocols developed		
	Re-establish the Home Visiting Taskforce and coordinate it with the First Things First family support workgroup	# of Taskforce meetings	Strengthened home visiting services statewide	
	Examine, develop, build on, and promulgate policies and procedures for home visiting that are consistent with best practices	# and types of policies and procedures developed		

Proposed Home Visiting Models

The selection of the proposed home visiting models was primarily based on the 'evidence' criteria outlined in the MIECHV review of home visiting programs by Mathematica. In particular, the home visiting model:

- conforms to a clear consistent home visitation model that has been in existence for at least 3 years;
- is research-based;
- is grounded in relevant empirically-based knowledge;
- is linked to program determined outcomes;
- is associated with a national organization or institution of higher education that has comprehensive home visitation program standards that ensure high quality service delivery and continuous program quality improvement; and
- has demonstrated significant, positive outcomes;

Arizona selected Nurse Family Partnership (NFP) to be implemented in the Tucson CHAAs and Healthy Families America (HFA) to be implemented in Casa Grande and Coolidge. Because Arizona also has a significant Native American population, and further, the White Mountain Apache was one of the highest ranking CHAAs, a promising practice called 'Family Spirit' was also identified. The following paragraphs detail the methodology in selecting the proposed evidence-based home visiting models and how they meet the needs of their prospective communities. This includes description of the state's or specific communities' current and prior experience in implementing the proposed models and the capacity to support the model. Section 4 provides a description of how each model is expected to be implemented. The state's overall approach to home visiting quality assurance, program assessment and support of model fidelity will be a part of the Program Manager's responsibilities of ensuring she/he is well versed in all aspects of each of the models, working closely with the regional managers of the models, developing a site visit monitoring tool and monitoring both process and outcome reports as well as working closely with the External Evaluator. It is anticipated that there could be some difficulty coordinating data from the models but we will develop a process to obtain the necessary information and to streamline data collection where feasible.

3.1 Evidence-based Models and the Process of Selection

The Office of Assessment and Evaluation at the Bureau of Women and Children's Health utilized the evidence criteria and review of evidence-based models proposed by Mathematica to create a cross-walk of primary and secondary outcomes, within-group analyses of risk factors for the identified CHAAs (i.e. Coolidge, Casa Grande, Tucson Central, Tucson North Central, Tucson South East, and White Mountain Apache), and evidence-based models. Table 3 and table 4 provide the crosswalk of evidence-based programs (EBPs) by primary and secondary outcome. Figure 4 gives the percentage of favorable outcomes by EBP and table 5 gives an overview of Arizona's identified at-risk and/or high-risk communities and the within-group analyses of specific risk factors along with existing home visiting programs that addresses those specific risks. Based on the information from table 3, table 4 and figure 4 it was evident that both NFP and HFA met most of the evidence criteria outlined by Mathematica. While the evidence suggested that these models met the 'primary' criterion it was also important to assess whether or not NFP and HFA also addressed specific risk factors that emerged in Arizona's 2010 MIECHV Needs Assessment and within-group analyses. Further, it was also important for IALT to know if the State had a history of

implementing these programs, apart from assessing identified communities' experience (i.e. CHAAs) with both NFP and HFA. Table 3 and table 4 displays the impact of EBPs on specific outcomes (i.e. primary versus secondary outcome) by constructs and benchmarks and a 'dot' indicated that the EBP addressed the specific outcome in the hypothesized direction, 'N/A' indicated that the EBP did not target the specific construct and those without a 'dot' indicated that the specific construct was a null effect and/or unfavorable effect by the EBP. The details of specific effects and the effect sizes for each of the EBPs on different constructs and domains are noted in detail by Mathematica. A major concern underlying Mathematica's assessment of 'effectiveness' was lack of clarity and distinction of primary and secondary measure as both primary and secondary measures included 'self-reported' data and the concern was whether a 'primary measure' implied more reliable and valid and therefore 'better' than secondary measure.[6]

Table 3. MIECHV evidence of effectiveness by primary outcome and benchmarks

Primary Outcomes	BenchMarks	Early Head Start	Family Checkup	HFA	Healthy Steps	HIPPY	NFP	PAT
1. Child health	1			●	●	N/A	●	
2. Child development and school readiness	3	●	●	●	●	●	●	●
3. Improvements in family economic self-sufficiency	5		N/A		N/A	N/A	●	
4. Improvements in the coordination and referrals for other community resources and supports	6	N/A	N/A	●	N/A	N/A	●	N/A
5. Maternal health	1					N/A	●	N/A
6. Parenting skills	3	●	●	●	●	●	●	n
7. Prevention of child injuries and maltreatment	2		N/A			N/A	●	N/A
8. Reductions in crime or domestic violence	4	N/A	N/A			N/A		N/A
TOTALS		**2**	**2**	**4**	**3**	**2**	**6**	**2**

Primary measures were defined as outcomes measured through direct observation, direct assessment, administrative data, or self-report data collected using a standardized (normed) instrument.

Table 4. MIECHV evidence of effectiveness by secondary outcome and benchmarks

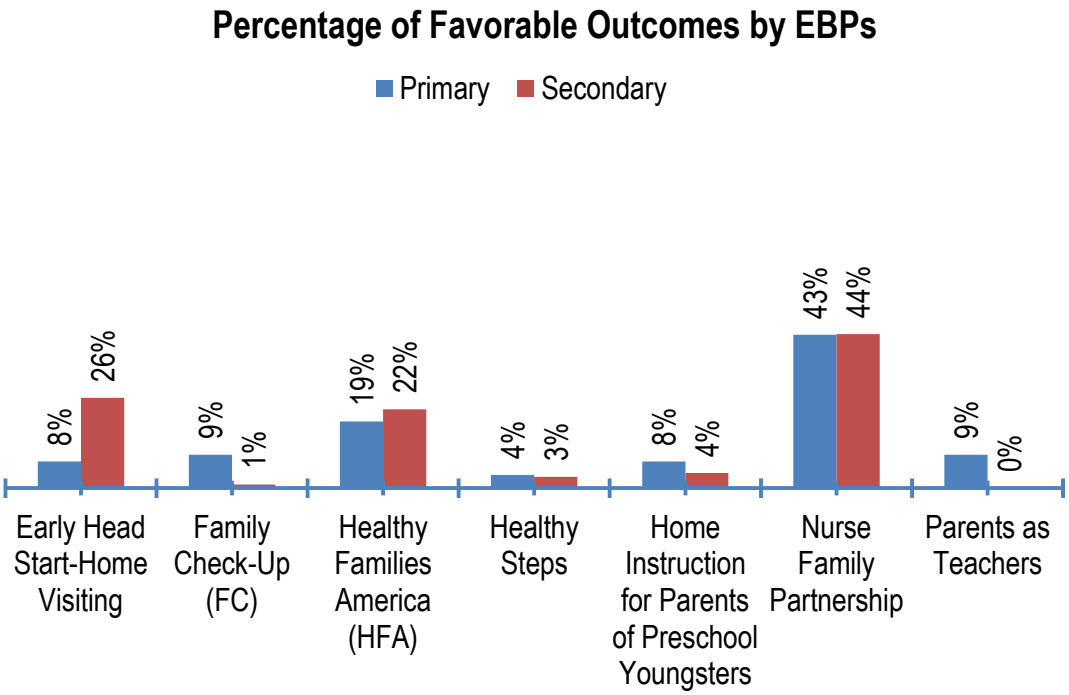
Secondary Outcomes	BenchMarks	Early Head Start	Family Checkup	HFA	Healthy Steps	HIPPY	NFP	PAT
1. Child health	1			●		N/A	●	
2. Child development and school readiness	3	●		●		●	●	
3. Improvements in family economic self-sufficiency	5	●	N/A	●	N/A	N/A	●	
4. Improvements in the coordination and referrals for other community resources and supports	6	N/A	N/A	●	N/A	N/A	●	N/A
5. Maternal health	1		●	●		N/A	●	
6. Parenting skills	3	●		●	●	●	●	
7. Prevention of child injuries and maltreatment	2		N/A	●		N/A	●	N/A
8. Reductions in crime or domestic violence	4	N/A	N/A	●		N/A	●	N/A
TOTALS		**3**	**1**	**5**	**1**	**2**	**6**	**0**

Secondary measures included other self-report measures.

Figure 4 outlines the percentage of favorable outcomes by specific EBPs and this further supported Arizona's selection of NFP and HFA as prospective EBPs.

[6] This concern was also directed to the Principal Investigator at Mathematica through personal communication.

Figure 4. Favorable outcomes by evidence-based home visiting programs



Although NFP and HFA met the primary 'evidence' of effectiveness criteria; as discussed earlier, it was also important to assess whether NFP and HFA would align with identified risk profiles for Casa Grande, Coolidge, Tucson Central, Tucson North Central, and Tucson South East. Table 5 provides the cross-walk of risk factors identified through within-group analyses, and existing evidenced-based programs. White-Mountain Apache was not included in this analysis (see table 5) because none of the identified EBPs was specifically targeted to Native American population. Review of evidence for the Needs Assessment relied mostly on existing local home visiting programs specifically implemented among the population and available documentation of evaluation reports and/or program information. The discussion of the home visiting program 'Family Spirit' to be implemented in White Mountain Apache is detailed in the following sub-section under the 'promising practice approach.'

Based on table 5, it was clear that both NFP and HFA closely aligned with identified risk factors in the Casa Grande, Coolidge, Tucson Central, Tucson North Central, and Tucson South East CHAAs. Further, community meetings discussed under subsection 1.3 supported the choice implementing NFP and HFA. For instance, at the facilitated community meeting, it was clear that in Tucson both NFP and HFA were being implemented but there was a need for expanding these services. Analyses of the facilitated discussion pointed to the fact that the community did not want to bring in a 'new' EBP in the Tucson area but decided to expand existing programs. As the community expressed concern that the effects of the model not be 'watered down', the decision was made to reduce the number of Tucson CHAAs from six to the three identified above, targeting the most at risk. Further, there were existing contracts for both NFP and HFA in the Tucson area, as indicated through Arizona State's Department of Economic Security (DES) contractual agreement with HFA, and the Central Pima First Thing First Regional Council contractual agreement with NFP. After examination of risk factor data, evidence criteria, and facilitated discussion in

Tucson and the IALT's deliberation it was decided that NFP in the Tucson area would a better fit, thus enhancing the chances of impacting the required number of benchmarks.

Table 5. Cross-walk of risk factors by outcome and benchmarks for Arizona's CHAAs

Community Health Analysis Area (CHAA)	Z-SCORE	EBP by Outcome		Benchmark
		Primary[1]	Secondary[2]	
CASA GRANDE				
Zero to 18 years injuries per 1000	0.44	**NFP**	**HFA**	**2**
Prescription drug use in last 30 days	0.83	**NM**	**NM**	**NM**
Illicit drug use by youth in last 30 days	1.08	**NM**	**NM**	**NM**
Total Crime Index per 100,000	1.09	**-**	**NFP/HFA**	**4**
COOLIDGE				
Negligence per 1000	0.75	**NFP**	**HFA**	**2**
Total Crime Index per 100,000	0.93	**-**	**NFP/HFA**	**4**
Infant mortality rate	1.15	**NFP**		**1**
Sexual abuse per 1000	3.28	**NFP**	**HFA**	**2**
TUCSON CENTRAL				
School dropout rate	1.17	**ALL**	**ALL**	**3**
Child maltreatment per 1000	1.30	**NFP**	**HFA**	**2**
Negligence per 1000	1.58	**NFP**	**HFA**	**2**
Total Crime Index per 100,000	2.06	**-**	**NFP/HFA**	**4**
TUCSON E CENTRAL				
Zero to 18 years injuries per 1000	0.43	**NFP**	**HFA**	**2**
Illicit drug use by youth in last 30 days	0.47	**NM**	**NM**	**NM**
Negligence per 1000	0.65	**NFP**	**HFA**	**2**
Total Crime Index per 100,000	2.32	**-**	**NFP/HFA**	**4**
TUCSON N CENTRAL				
Physical abuse per 1000	1.57	**NFP**	**HFA**	**2**
Sexual abuse per 1000	3.21	**NFP**	**HFA**	**2**
Child maltreatment per 1000	3.32	**NFP**	**HFA**	**2**
Negligence per 1000	3.69	**NFP**	**HFA**	**2**
TUCSON SE				
Percent below poverty	0.95	**NFP**	**HFA**	**5**
Alcohol use by youth in last 30 days	1.07	**NM**	**NM**	**NM**
Zero to 18 years injuries per 1000	1.14	**NFP**	**HFA**	**2**
Binge drinking by youth	1.21	**NM**	**NM**	**NM**
TUCSON SW				
Infant mortality rate	0.06	**NFP**		**1**
Women 15NM44 assaults per 100,000	0.17	**NM**	**NFP/HFA**	**4**
Illicit drug use by youth in last 30 days	0.71	**NM**	**NM**	**NM**
Zero to 18 years injuries per 1000	1.32	**NFP**	**HFA**	**2**
TUCSON W				
Zero to 18 years injuries per 1000	0.16	**NFP**	**HFA**	**2**
Illicit drug use by youth in last 30 days	0.25	**NM**		**NM**
Sexual abuse per 1000	0.50	**NFP**	**HFA**	**2**
School dropout rate	3.55	**ALL**	**ALL**	**3**

Notes: NM implies that the construct is not measured or well-defined in the EBP or Federal Guidance.

[1]Primary measures were defined as outcomes measured through direct observation, direct assessment, administrative data, or self-report data collected using a standardized (normed) instrument.

[2]Secondary measures included other self-report measures.

Each bench mark number corresponds to main constructs and outcomes referred in the Federal Guidance (for e.g. bench mark 2 refers to "Child Injuries, Child Abuse, Neglect, or Maltreatment and Reduction of Emergency Department Visits," which fall under outcome **prevention of child injuries and maltreatment** and bench mark 1 encompasses two outcomes **maternal and child health**).

In Casa Grande/Coolidge, the best match was HFA because these communities had lost the HFA program in 2009 due to state budget cuts and there was no existing NFP program in these communities. Because HFA had recently operated in these communities, capacity exists to implement HFA with little start up costs. Risk factors at Casa Grande and Coolidge more closely aligned with HFA and made the selection of HFA an obvious choice.

3.2 Promising Practice at White Mountain Apache

While selection of EBPs was relatively easy with respect to Casa Grande, Coolidge, Tucson Central, Tucson North Central, and Tucson South East, it was important to ensure that the highest ranking CHAA i.e. White Mountain Apache, a sovereign tribal nation, had a home visiting program that was culturally appropriate and also demonstrated effectiveness. Representatives from the ADHS traveled to Whiteriver to meet with the White Mountain Apache Health Director and some of her staff. They were very interested in this home visiting opportunity and expressed a desire to implement Family Spirit as a home visiting model for their community. The following will describe the model, identify the university affiliated with the model, demonstrate how it meets the needs of the community, a description of White Mountain's experience with the model and an evaluation plan. The implementation plan will be discussed in Section 4.

The Family Spirit home visiting program is an evidence-based and culturally tailored home visiting model delivered by Native American paraprofessionals to promote healthy families in Native American communities. In 1966 Johns Hopkins University began the implementation of Family Spirit. It started with breastfeeding and nutrition and grew to include substance abuse, child abuse and parenting. Family Spirit was designed and rigorously evaluated by Johns Hopkins Center for American Indian Health in partnership with the Navajo, White Mountain Apache and San Carlos Tribes since 1995. The Family Spirit program was originally designed as a 15-month in-home parent education and advocacy program administered by Native paraprofessionals, called Family Health Educators (FHEs). FHEs undergo rigorous training, use a structured curriculum that has been adapted to local cultural beliefs, and follow a training guide and policies and procedures manual to administer the program. The curriculum consists of a minimum of 40 visits for parent training, and an average of 5 to 7 visits in which the FHEs act as parent advocates by assisting their clients to get care and services from available community-based services. The FHEs also assist participants in accessing other community resources relevant to their specific needs—including pursuit of Temporary Assistance to Needy Families, GRE and higher education opportunities, job skills education, legal services and other social services.

The program development and evaluation was originally supported by the Substance Abuse and Mental Health Services Administration (SAMSHA), and the curriculum is slated for review for inclusion in the National Registry of Effective Parenting Programs. Peer-reviewed presentations on positive outcomes have been made to The American Public Health Association (November 2003, November 2004, December 2005, November 2006, November 2007), SAMHSA (August 2004), National Early Head Start Conference (September 2004), Native American Child & Family Conference (February 2006) the Indian Health Service national conferences (May and September 2004, May 2005, May 2006, and June 2007), and the annual conference of the American Academy of Child and Adolescent Psychiatry (2008,2009) among others.

The program was featured as an outstanding Native-run public health initiative in the summer 2003 Winds of Change magazine. Pilot results were published in November 2006 (Volume 160) edition of the Archives of Pediatrics and Adolescent Medicine. More recently, an article titled *Randomized Controlled Trial of a Paraprofessional-Delivered In-Home Intervention for Young Reservation-Based American Indian Mothers*,

by Walkup, Barlow, Mullany and Pan et al was published in the June 2009 issue of the Journal of the American Academy of Child and Adolescent Psychiatry describing Family Spirit on the White Mountain Apache Reservation. In this study, as a primary outcome treatment mothers experienced greater knowledge gains than control mothers. Knowledge scores were inversely correlated with infant behavioral outcomes; the higher the knowledge score, the fewer infant behavioral problems. Secondary outcomes found infants of treatment mothers had significantly fewer behavioral difficulties at 1 year of age. This publication won the journal's annual Norbert and Charlotte Rieger Award for Scientific Achievement.

Family Spirit seeks to increase parenting knowledge and skills, address maternal psychosocial risks that could interfere with positive child rearing including drug and alcohol use, depression, low education and employment and domestic violence. It also prepares children for early school success and links families in the community to needed services.

While the evidence for a 'promising practice' was there, it was also important to ensure feedback from the White Mountain Apache tribal members, who indicated that they have an extensive history of implementing the model. The funding for this initial trial in Whiteriver is scheduled to end August 2011. The model calls for family health educators who actually make the home visits and institute the curriculum, a family health liaison who recruits clients and administers assessments and a blinded evaluator who completes paperwork and screenings. Another person administers the same screenings to ensure the reliability of the evaluator's assessment. The model was designed for the Native American community. The health educators described how they piloted questions for example and came back and told the developers when the question was not socially or culturally appropriate. The community has the capacity to bring on more health educators, liaisons and evaluators if needed. Although the training is described as rigorous the community is excited at the prospect of reinstituting this model.

The evaluation will include participants being recruited and enrolled by 32 weeks gestation. At enrollment they will complete a baseline assessment, including demographic information and an outcomes assessment, including all benchmark –related measures. Outcome data will be collected at five time points during the study period: Baseline (<32 weeks gestation); 6, 12, 24, and 36 months postpartum. A combination of maternal self-report questionnaires, in-person interviews, audio computer-assisted self interviews (ACASI), observational data, and medical chart data are collected to assess study outcomes. Section 5 on Benchmarks will display the data collection schedule.

Mothers and children's data will be compared pre- and post-intervention and will also be compared to treatment and control mother-child dyads (n=105) who are completing the current Family Spirit trial. The primary hypothesis is that mothers/children in this trial will have significantly better outcomes that previous control mother-child dyads and also, improved outcomes in psychosocial domains targeted by the substance abuse curriculum that will be moved earlier in the intervention period during this trial.

The educator and manager we met with described in great detail the rigor with which the model is implemented. Each visit is recorded by the home visitor, with permission of the client, and sent to Baltimore for analysis to evaluate fidelity. The evaluator gets back to the health educator with suggestion for improvements if needed. The state team will rely on Johns Hopkins for assessment and to ensure model fidelity and quality assurance. Because these processes had been in place, this will be more appropriate. This model, instituted through Johns Hopkins has already been approved through the White Mountain Apache Health Board and Tribal Council and the Phoenix Area Indian Health Service Institutional review board.

There is always risk of challenges in implementing a new program. One of the challenges found in previous study of this model in Whiteriver is client retention. This area, as well as a great deal of Arizona, has a very mobile at risk population. The White Mountain Apache and Johns Hopkins team have perfected a number of retention and sample maintenance strategies since the inception of the Family Spirit trials. The primary strategies for retention and sample maintenance are delivering high quality intervention in a timely, relevant manner and maintaining consistent contact and positive relationships with study participants. Educators and evaluators reschedule a lesson or assessment visit when participants are facing personal challenges, and provide referral and transportation assistance to address crises that arise during the course of their outreach. Staff also distribute quarterly study newsletters, birthday cards for mothers and their babies and annual certificates of program completion. Incentives in the form of Walmart gift cards are given for assessments. Participants are also maintained in the trial even if there are brief periods when they cannot participate due to personal challenges. It is often the case that their situation will change and they are eager to receive lessons again.

Another challenge could be data collection and the ability of the ADHS to evaluate the program. There are historical reasons why tribes are reluctant to enter into data sharing agreements. However, the White Mountain Apache have had a 30 year relationship with Johns Hopkins to conduct appropriate and desirable community research to reduce health disparities. Johns Hopkins has conducted a trial of Family Spirit with the White Mountain Apache and the study protocols were approved by the Johns Hopkins Institutional review board and the White Mountain Apache Health Board and Tribal Council. The ADHS proposes to enter into an Inter Governmental Agreement with the White Mountain Apache to implement Family Spirit and have the tribe enter into a subcontract with Johns Hopkins for evaluation. We would clearly indicate what we, ADHS, would need in order to ensure compliance with the legislation.

Part of the preparation for the development of the Updated State Plan was participating in or viewing a series of webinars. On April 21, 2011, Rhode Island presented a webinar titled *Planning for Quality Implementation of Evidence-Based Programs: Part II Maternal, Infant, and Early Childhood Home Visiting Programs.* This presentation, drawing largely from the seminal work on implementation*: Implementation Research: A Synthesis of the Literature*[7] described how major implementation occurs in stages: Exploration, Installation, Initial Implementation and finally Full Implementation.

Briefly, Exploration is the time when the needs of the community are examined and it is determined if they fit with the evidence based practice and community resources. It is a time to decide if the community is interested. The Installation stage is when the 'nuts and bolts' are gathered, i.e., ensuring funding, hiring staff, developing policies. Initial Implementation is the actual start of the evidence based programs. This is when a community experiences the highs and lows of implementation, enrolling clients and maybe recognizing process concerns. Finally, Full Implementation really speaks to the community's 'buy in' of the model and full acceptance. Below you will find Arizona's journey toward implementation.

4.1 Exploration/Community Engagement

Arizona looks forward to implementing this multifaceted project. In order to begin the process, the Inter Agency Leadership Team scheduled meetings in each of the communities. Emails were sent out and information posted on Arizona's Maternal, Infant and Early Childhood Home Visiting website http://www.azdhs.gov/phs/owch/VisitingProgram.htm.

Invitees included family members, community leaders, and representatives from the child welfare agency, county health departments, court system, early childhood programs, school districts, existing home visitation programs, parent support programs, universities, behavioral health agencies, and other community resources. Family member participation was supported through the ADHS, Office for Children with Special Health Care Needs.

At the meetings the data from the Needs Assessment was presented and the group was asked a series of questions designed to determine the level of interest and support for the implementation of evidence based home visiting. One of the outcomes of the community meetings was to determine which evidence based model to implement. Part of the exploration included looking at the identified needs and determining if the model successfully addressed the needs. The next was looking at the capacity of the community. For example, in a community with few registered nurses it would be difficult to attempt to implement Nurse Family Partnership. Each of our communities has had a successful relationship with the model we will implement. This helps to create an atmosphere ready for change.

Beyond engaging the at risk communities, Arizona will seek to reconvene the state wide Home Visiting Taskforce which had met in 2009 and created an initial Home Visiting Plan.

[7] Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M. & Wallace, F. (2005). Implementation Research: A Synthesis of the Literature. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231).

Exploration also includes developing a relationship with the model developers. In the case of Healthy Families, the state has successfully implemented Healthy Families for years and has 20 sites operating currently. Arizona also has three different Nurse Family Partnership sites, one of which has been in existence for many years. Family Spirit, the promising practice has been in the White Mountain Apache community for many years as well.

4.2 Installation/Setting Policies

After exploration, we moved into Installation. The webinar described the goal of Installation as making the structural and instrumental changes necessary to initiate services. For Arizona this would include statewide structure as well as structure at the three sites. Statewide the process would include:

Hiring a Program Manager

- We have begun the process to interview for this position. We have advertised for someone with experience and knowledge of public health and early childhood administration, state, county and local health care delivery systems, community development; program planning and development principles including quality assurance, budget development and resource allocation principles; procurement and contract policies; maternal and child health topics to include public health best practices related to early childhood health and development; a minimum of three years' experience in administration/budget management; or two years in public health or child welfare programs and preferably a Master's degree in public health, behavioral health, education, social work, nursing or related field, or a Bachelor's with at least three years of combined work experience in a relevant field.

Hiring an evaluator

- We have a contractual relationship with an evaluator who we have successfully utilized for other programs. She has the experience and capacity to evaluate the process and outcomes for this far reaching program.

Developing a budget

- An overall budget has been developed. See Attachment II. We will require each of the models to submit their itemized budgets for approval.

Awarding contracts

- Developing the Scope of Work for an RFP, an Interagency Agreement and an Intergovernmental Agreement.
- The Scope of Work, the Tasks and the Deliverables will reflect the requirements of the SIR and the Legislation including all the information required for the Updated plan: a plan for working with the national model developer and a description of the technical assistance and support to be provided through the national model; a timeline for obtaining the curriculum or other materials needed; a description of how and what types of initial and ongoing training and professional development activities will be provided by the implementing agency; a plan for recruiting, hiring, and retaining appropriate staff for all positions; a plan to ensure high quality clinical supervision and reflective practice for all home visitors and supervisors; the estimated number of families served; a plan for identifying and recruiting participants; a plan for minimizing the attrition rates for participants enrolled in the program; an estimated timeline to reach maximum caseload in each location; an

operational plan for the coordination between the proposed home visiting program and other existing programs and resources in those communities, especially regarding health, mental health, early childhood development, substance abuse, domestic violence prevention, child maltreatment prevention, child welfare, education, and other social and health services; a plan for obtaining or modifying data systems for ongoing continuous quality improvement (CQI); and finally a discussion of anticipated challenges to maintaining quality and fidelity, and the proposed response to the issues identified.

Developing contract oversight/management tools to monitor, assess and support implementation with fidelity to the model using:

- Site visit tools
- CQI tools

Working with First Things First, reconvening the original Home Visiting Task Force

- Deciding who else needs to be at the table
- Developing procedures to develop policies
- Creating consensus around policies
- Researching best practices
- Establish relationships with model developers

The Program Manager would not only manage and monitor the contracts but work to reestablish the Home Visiting Task Force. Building on the work already begun, the Manager will coordinate efforts to develop a statewide system of early childhood home visiting which would inherently be a part of the more comprehensive early childhood system.

4.3 Implementation of Evidence-based Programs in Arizona

From there we will progress on to Initial Implementation. This will include implementation of each of the evidence based models and will include enrolling clients, developing a referral system and strengthening the coordination between the different programs in the communities. It is critical from the start to ensure the programs are being implemented with fidelity to the model. We will look to the consultants for the models to support us and provide technical assistance.

This stage will also include the reconvening of the Home Visiting Task Force to enhance the state wide home visiting system. This will begin with the Program Manager calling together those participants from the original Home Visiting Task Force and also looking to see who else should be included. In order to maintain transparency this will include keeping the community abreast of all updates on the ADHS web home visiting site. The Home Visiting Task Force, working collaboratively, will research best practices and set policies and standards based on the research and consensus.

The Program Manager will also have oversight of the three different models as they are implemented and reach full implementation. This will include reviewing reports, creating a site visit tool to be used during site visits and periodically going out on client visits. She/he will develop a relationship with each of the model developers individually and gather them together as needed to ensure alignment of goals. This will be a part of the larger home visiting system. She/he will work to create an early childhood home visiting community within the larger early childhood statewide system.

Below are the implementation plans for each of the models as represented to the ADHS at this time by the model developers. More detailed plans will be forthcoming in contracts.

4.3.1 *Nurse Family Partnership*

The ADHS will issue a Request for Proposals to implement Nurse Family Partnership (NFP) in the three CHAAs in Tucson. There is a Nurse Family Partnership program in the First Things First Central Pima Region (which includes parts of Tucson) but as one of the CHAAs identified at very high risk is not in that Region of service, we will not be able to expand an existing NFP contract to support services to that area. We will use a competitive process to contract for Nurse Family Partnership in the Tucson Central, Tucson North Central and Tucson Southeast Community Health Analysis Area. The ADHS will ask for an implementation plan that addresses each of the elements required in the SIR as well as an operational plan for how the model will coordinate with other existing programs in the community.

In exploring how the contractor will work with the developer, we learned Nurse Family Partnership has an extensive Implementation Plan process that each prospective implementing agency must complete. NFP provides extensive support to the local contractor as they develop their plan which must be approved by NFP. The ADHS will work closely with NFP to ensure the successful bidder meets the requirements of NFP. We have already begun a relationship with the local Program Developer. The following represents some of the technical assistance offered to contractors through NFP: program development, ongoing clinical consultation and marketing and communication materials.

This plan requires a new contractor to establish the need for NFP in a community and to identify the characteristics of the population to be served, including the number to be served. NFP wants the applicant to describe the other programs already serving the area and how the applicant plans to integrate and coordinate with the other programs. There is quite a bit of discussion in NFP's literature for prospective contractors about meeting with the other programs in the area to explain the need for NFP and to explain how NFP might add to the continuum of services. The prospective contractor must describe their agency's mission and culture as well as the capacity of the organization to implement NFP with fidelity to the model.

The Implementation Plan discusses staff recruitment. It advises the prospective agency to contact the state nursing board among other things to assess the pool of BSNs in the area. The implementation plan suggests hiring slowly so the supervisor does not have to vet a new group of nurses all at once. There is also detail about looking at comparable compensation packages in the area.

Once hired, each new nurse is required to go to a week of training in Denver after completing at least 40 hours of self study. Nurses can only begin to see clients after they have been to the weeklong training in Denver. Each nurse home visitor will build a caseload slowly over 9 months and then strive to keep the caseload at 25.

Arizona plans to implement NFP with one supervisor and four FTE nurse home visitors which would bring the caseload to a total of 100. NFP requires weekly one on one reflective meetings with the supervisor for each nurse. NFP has supervisor/visitor ratio requirements that could include one supervisor to 8 visitors. Arizona plans to have one supervisor to 4 visitors.

It is clear from the Implementation Plan that nurses need to be free to visit during nontraditional (8 am-5 pm) hours. This promotes the clients school attendance or employment and engagement with the client, thereby reducing attrition.

4.3.2 *Healthy Families*

The Arizona Department of Health Services (ADHS) plans to utilize an Interagency Service Agreement (ISA) with the Arizona Department of Economic Security (ADES) to implement Healthy Families in Casa Grande/Coolidge. The Arizona Department of Economic Security has extensive history implementing Healthy Families. In the ISA, the ADHS will require an implementation plan that addresses each of the elements required in the SIR as well as an operational plan for how the model will coordinate with other existing programs in the community.

The decision to affiliate a new Healthy Families Arizona (HFAz) program is a function of the Central Administration of HFAz. A program must first apply to Healthy Families America (HFA) to receive preliminary permission to deliver home visiting services as a credentialed Healthy Families program. The program must provide a statement regarding their intention to deliver services per the HFA 12 Critical Elements.

Following the submission of the application, the program must submit a full program plan to the HFAz Central Administration. Together, the program and Central Administration work to build a viable system for service delivery consistent with the HFA National Accreditation Standards.

The Department of Economic Security (DES) has a current contract with Child and Family Resources (CFR) to provide HFAz home visiting services in Pinal County, however, the contract has not been funded since 2009. Per the contract terms, upon receipt of funding, CFR must implement their program plan and be able to begin delivering home visitation services within 90 days of receipt of funding.

Healthy Families monitors quality assurance and fidelity through its accreditation process. The 12 Critical Elements are operationalized by a set of best practice standards. Each HFA program completes a self study that assesses and offers continuous quality improvement related to each of the120 best practice standards. Once the self study is completed, a peer team (usually 2 nationally trained peers from different states) completes a 3-day on-site visit. They review family records and documentation, they interview direct service staff, advisory group members, parents, supervisors and program managers, and they assign ratings to each of the 120 standards. The site receives a report of the findings which is reviewed individually with each program by the regional directors who offer technical assistance. The program must meet a threshold of standards in adherence to be accredited. The site may be asked to respond to the panel by improving practice for standards out of adherence. Then, the site visit report and the program's response are submitted to the HFA Accreditation Panel which reviews any responses and determines if the standard(s) may be upgraded based on new practice. The HFA Panel is comprised of 2 researchers, 2 trainers, 2 program managers, 2 state leaders, and 1 at-large representative. Additionally each program (as part of the standards) is required to monitor progress of the program towards meeting its goals and the quality of the work.

The Central Administration will provide regular technical assistance and training for the new program to assure that the program is implementing services with fidelity to the HFA model. All accredited HFAz programs are subject to the HFAz Quality Assurance Plan which requires a minimum of yearly quality

assurance site visits, internal quality assurance processes at the program level, and regular analysis of data to inform program improvement opportunities.

As Arizona has been implementing Healthy Families for years there is a very well established relationship with the national model developer. Because the Arizona Department of Economic Security (DES) is a multi site accredited affiliate, the state has its own in-state trainers. As well, DES is a member of the Inter Agency Leadership Team.

The DES sites have already identified and determined which curriculum they use. Child & Family Resources uses the Growing Great Kids Curriculum and has a certified trainer on their team. Other sites use different curriculum.

Healthy Families adheres to best practice standards regarding hiring and training. They offer a web portal that allows new staff to receive all the 12 required trainings through distance learning at no additional costs for the training (it is included in annual fees). This training also evens the playing field as it allows for assurance that all staff who use the web portal are receiving high quality training.

In addition, the Director of Healthy Families America (HFA) Southeastern/Western Regional Office Prevent Child Abuse America provides training to the current state trainers. The new HFA sites would be part of the DES system and would participate in training offered through the in-state process.

Supervision is required in the best practice standards which include weekly individual supervision for all direct services staff of a minimum of 1.5 hours per FTE. Healthy Families is an infant mental health promotion program and reflective practice is a requirement of supervision.

A home visitor may serve a maximum of 15 families when families are receiving the most intensive services (weekly). As families progress and become stronger and develop more protective factors there is a home visit level system that allows for the reduction of the intensity from weekly to every other week, to monthly, and finally a safety net for families as they transition to preschool or kindergarten of quarterly visits. Then a home visitor may serve up to 25 families.

Healthy Families has arrangements to receive referrals from birthing hospitals. Healthy Families has a screening and assessment process for accessing families. One of the goals of Healthy Families is to increase access to those families with the greatest needs. Programs select their target population. They are required to screen at least 75% of the target population. Families that screen positive complete a Parent Survey (Family Stress Checklist) that covers 10 areas of need. These areas are past history of abuse, mental health, substance use, and criminal history, past experiences with CPS, isolation & coping skills, stressors (relationship, housing, finances, other), anger management skills (& intimate partner violence), child development expectations, parents' perceptions of their new baby, and potential for bonding. This is scored for both moms and dads for no risk, mild risk, and severe risk (0, 5, 10 points). Parents with scores of 25 or more are offered intensive home visiting through HFA. Parents that score less than 25 are offered community resources. In essence, Healthy Families does not wait for families to come to them, they go out into the hospitals and clinics, etc. to determine which families might benefit from home visiting (parents usually sign permission for an HFA person to visit them). Some programs have partnered with HFA for HFA to triage families into services because of its screening processes.

Healthy Families has a strategy entitled, Creative Outreach which is unique to the program - if families do not "show" for visits they are not simply closed. There is a period of at least 3 months to reach out to those families to encourage participation. It has been determined that often families that are hard to reach are often families with the highest scores on the Parent Survey. Additionally, all programs are required to conduct a family retention analysis every two years to identify patterns and trends of families that drop out of services including why, demographics, social, and cultural factors. Programs are required to develop a plan for improving retention and implementing that plan.

Healthy Families estimates it will take approximately nine months to a year to reach maximum caseload (25 families per home visitor FTE).

4.3.3 *Family Spirit*

In implementing Family Spirit, the ADHS will enter into an Intergovernmental Agreement with the White Mountain Apache Tribe. The ADHS will ask for an implementation plan that addresses each of the elements required in the SIR as well as an operational plan for how the model will coordinate with other existing programs in the community.

The tribe has an extensive history of working with the model developer, Johns Hopkins University, on a trial of Family Spirit as well as other behavioral health programs. Johns Hopkins will be providing technical assistance and support to the home visitors.

Upon acceptance of this Updated Plan, Family Spirit anticipates the first three months to be spent in curriculum development and home visitor training. Prior to recruitment, paraprofessional staff will receive extensive training (>80 hours) in trial protocol and policies, protection of human research subjects, and intervention delivery (for Educators). Family Health Educators will have to demonstrate mastery of the Family Spirit curriculum (>80% correct) through written and oral exams.

The tribe anticipates no concerns with recruiting staff for the program. Family Spirit will ensure high quality supervision and reflective practice through a weekly 30 minute meeting with the on-site supervisor and each home visitor. The meeting will cover the home visitor's schedule for the week, the current caseload, challenges with case management or lesson implementation, home visitor's own stress levels and coping strategies, and other issues specific to that home visitor. Beyond that there will be a weekly 30 minute meeting with the site manager and field coordinator. This meeting will cover personnel management issues, schedules and programmatic activities for that week, the on-site supervisor's own workload and stress levels, and other pertinent items.

For all staff and supervisors there will be a weekly 60 minute team meeting to review progress towards goals, review successes and challenges from the past week, trouble-shoot challenges as needed, and make plans for the upcoming week.

During the first year of employment, supervisors will observe educators conducting home visits on a quarterly basis and rate them on professionalism, rapport, interpersonal skills, and protocol adherence. Independent Evaluators will be trained by a senior evaluator on all standardized assessments. In the current Family Spirit trial, quarterly inter-rater reliability checks have consistently indicated ~95% agreement between raters on primary outcome assessments. Both Educators and Evaluators audiotape each participant visit and a random 20% of tapes are reviewed by study coordinators for protocol adherence.

It is anticipated that 150 families will be served during the course of the grant. The plan is to enroll 25 families each quarter.

The White Mountain Apache Health Department has a very close relationship with the IHS clinic and obstetricians. For this project, as with previous Family Spirit trials, mothers will be recruited primarily from the Indian Health Services (IHS) clinic, followed by schools, WIC offices, and by word of mouth. In addition, they advertise in the SCOUT, the local paper, and they work closely with the nurse at the local high school. Informed consent will be obtained from the parent or guardian when a participant is <18 years of age, as well as assent from the participant. If a participant is ≥18 years old, informed consent will be obtained from the participant alone. Minimizing attrition rates was discussed in Section 3: Promising Practices and includes offering high quality services and process changes when needed.

4.4 Ongoing Monitoring

The Program will monitor the quality of implementation at the community, agency and participant level through the Continuous Quality Improvement process. Please see Section 7 where the plan for modifying data systems for CQI and the state's approach to monitoring, assessing, and supporting implementation with fidelity to the chosen models as well as the challenges to maintaining quality and fidelity will also be discussed.

4.5 Assurances

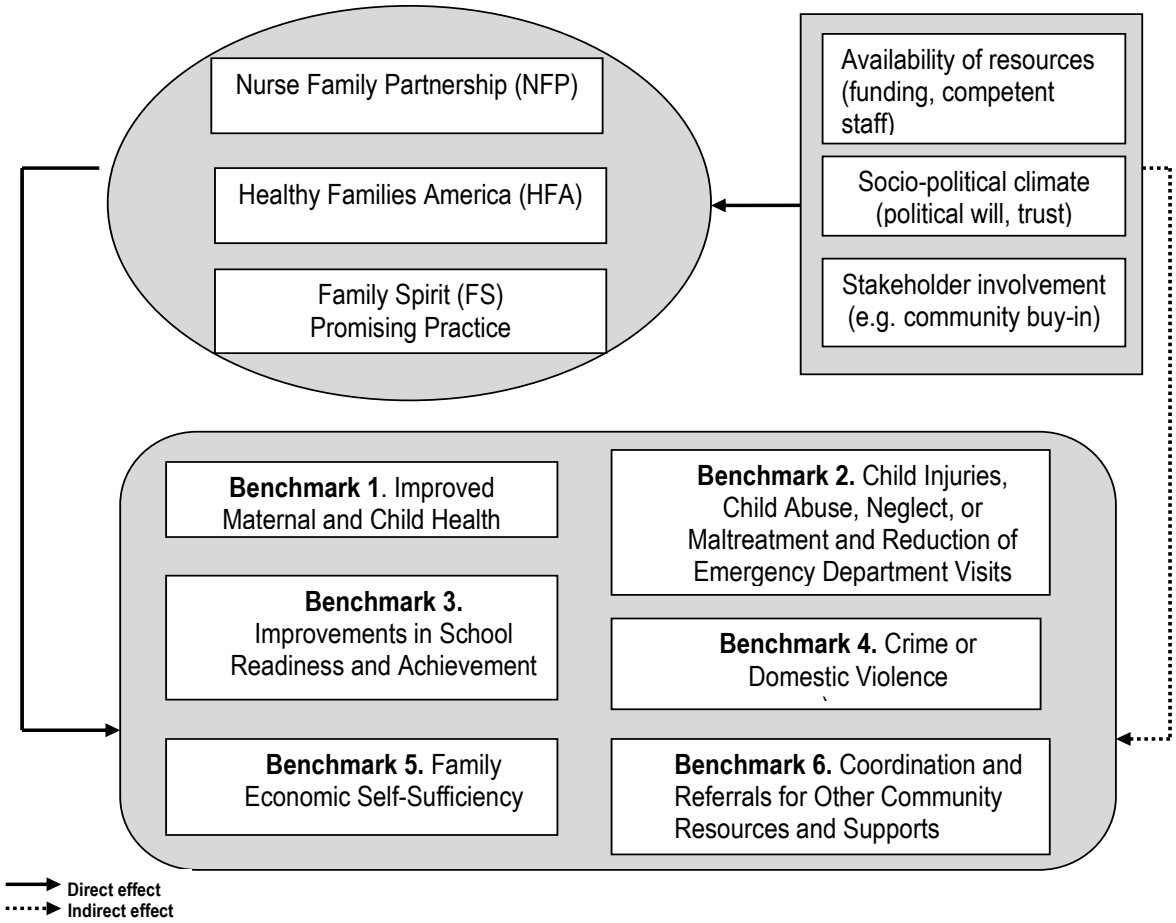
With the submission of this Updated Plan Arizona offers assurances that the Arizona home visiting program is designed to result in participant outcomes noted in the legislation; that individualized assessments will be conducted of participant families and that services will be provided in accordance with those individual assessments; that services will be provided on a voluntary basis; and that priority will be given to serve eligible participants who:

- Have low incomes;
- Are pregnant women who have not attained age 21;
- Have a history of child abuse or neglect or have had interactions with child welfare services;
- Have a history of substance abuse or need substance abuse treatment;
- Are users of tobacco products in the home;
- Have, or have children with, low student achievement;
- Have children with developmental delays or disabilities;
- Are in families that include individuals who are serving or have formerly served in the armed forces, including such families that have members of the armed forces who have had multiple deployments outside of the United States.

Arizona had no state general funded evidence based home visiting prior to the issuance of the ACA Maternal, Infant and Early Childhood Home Visiting grant, March 23, 2010, and as a result has no Maintenance of Effort obligation.

A key element outlined in the MIECHV is the use of EBPs to target risk factors that formed the basis of the needs assessment process. The Supplemental Information Request (SIR) outlined that: each grantee will collect data on all benchmark areas; the data must be collected for eligible families that have been enrolled in the program who receive services funded with the MIECHV Program funds; because each benchmark area includes multiple constructs, states must collect data for all constructs under each benchmark area and if same construct appears in more than one benchmark area, Sates may utilize the same data for each applicable benchmark area; and a key requirement is that States have to demonstrate improvements in at least four benchmark areas by the end of three years with improvements in at least half of the constructs under each benchmark area. Figure 5 gives the path analytic framework with how evidence-based home visiting program is 'intended' to impact the benchmarks and table 6 gives details of each construct associated with the benchmark. There are a total of 37 constructs (indicators).

Figure 5. Path analytic model of EBPs and its impact on benchmarks



As per figure 5 the benchmarks are to improve when an EBP is implemented fully adhering to the fidelity of the model.

Table 6. Constructs and Benchmarks

	Constructs	Benchmark 1	Benchmark 2	Benchmark 3	Benchmark 4	Benchmark 5	Benchmark 6
1	Preconception Care	●					
2	Prenatal Care	●					
3	Parental use of alcohol, cigarettes, or illicit drugs	●					
4	Inter-birth intervals (interpregnancy intervals)	●					
5	Screening for maternal and depressive symptoms	●					
6	Breastfeeding	●					
7	Well-child visits	●					
8	Maternal and Child health insurance	●					
9	Visits for children to the emergency department from all causes		●				
10	Visits for mothers to the emergency department from all causes		●				
11	Incidence of child injuries requiring medical treatment		●				
12	Reported suspected maltreatment for children in the program (unsubstantiated reports)		●				
13	Reported suspected maltreatment for children in the program (substantiated reports)		●				
14	First-time victims of maltreatment for children in the program		●				
15	Information provided or training of participants on prevention of child injuries including topics such as safe sleeping, shaken baby syndrome or traumatic bran injury, child passenger safety, poisonings, fire safety (including scalds), water safety (drowning), and playground safety		●				
16	Parent support for children's learning and development (e.g. having appropriate toys available, talking and reading with their child)			●			
17	Parent knowledge of child development and of their child's developmental progress			●			
18	Parenting behaviors and parent-child relationship (e.g. discipline strategies, play interactions)			●			
19	Parent emotional well-being or parenting stress (some of these data can be captured for maternal health)			●			
20	Child's communication, language, and emergent literacy			●			
21	Child's general cognitive skills			●			
22	Child's positive approaches to learning including attention			●			
23	Child's social behavior, emotion regulation, and emotional well-being			●			
24	Child's physical health and development			●			
25	Screening for domestic violence				●		
26	Of the families identified for the presence of domestic violence, number of referalls made to relevant domestic violence services (e.g. shelters, food pantries)				●		
27	Of families identified for the presence of domestic violence, number of families for which a safety plan was completed				●		
28	Arrests				●		
29	Convictions				●		
30	Household income and benefits*					●	
31	Employment or Education of adult members of the household					●	
32	Health insurance status					●	
33	Number of families identified for necessary services						●
34	Number of families that required services and received a referral to available community resources						●
35	MOUs: Number of MOUs or other formal agreements with social service agencies in the community						●
36	Information sharing: Number of agencies with which the home visiting provider has a clear point of contact in the collaborating community agency that includes relgular sharing of information between agencies						●
37	Number of completed referals (i.e. home visiting provider is able to track individual family referrals and assess their completion, e.g. by obtaining a report of the service provided)						●

However, implementation of EBP itself is contingent upon availability of resources (e.g. available of funding, capacity of the organizations that implement the EBP, socio-political climate, stakeholder involvement such as community buy-in as evidence suggests that the "adoption and use of EBPs is influenced by both organizational context and individual adopter characteristics."[8] These environmental factors indirectly also impact the benchmarks. The selection of targeted communities discussed in chapter 2 and selection of EBPs in chapter 3 essentially accounted for these criticalities and the improvement in benchmarks is contingent upon favorable scope conditions.

The constructs associated with each of the six benchmarks are delineated below. For each construct, the proposed measure, the reliability/validity of the specified measure, and the definition of improvement are discussed.

5.1 Proposed Measures and Proposed Definition of Improvement

The proposed measures are primarily based on the data collected by evidence-based programs such as NFP and HFA. For the "promising practice" Family Spirit data on all the benchmarks and constructs will be collected apart from the requirement of rigorously evaluating the practice. Because Arizona intends to implement NFP, HFA, and Family Spirit, differences in each model's instrument (intake/enrollment) will impact how a particular construct is measured. For instance, prenatal care for NFP that enrolls mothers at 28 weeks or early would imply percent of women receiving prenatal visits by trimester, while for HFA it may be measured as week and/or month the mother entered prenatal care. Arizona also intends to collect unique identifying information on participating mothers, children, and/or families to link them to available administrative data such as birth certificate data, hospital discharge data, child fatality review data available to the Office of Assessment and Evaluation in the Bureau of Women and Children's Health at the Arizona Department of Health Services and Child Protective Services (CPS) data available to the Arizona Department of Economic Security through a data sharing agreement. The details of data collection and analysis are described later in this chapter.

Benchmark I – Improved Maternal and Newborn Health

i. Prenatal care – Following the Healthy People 2020 objectives, Arizona's home visiting program will demonstrate a 10% improvement in the percentage of female participants receiving early and adequate prenatal care on an annual basis.

> **Definition:** Percent of women entering prenatal care by first trimester in the identified high-risk communities.
>
> **Numerator**: Number of women who reported at the time of enrollment/intake that they accessed prenatal care in the first trimester (i.e. women who accessed care within 12 weeks after the last menstrual period)
> **Denominator**: Total number of pregnant women enrolled in that cohort.
>
> **Progress:** Increase in the percentage of women entering prenatal care by first trimester in subsequent cohorts.

[8] Aaron, G.A., Sommerfield, D.H., & Walrath-Greene, C.M. (2009). Evidence-based practice implementation: The impact of public versus private sector organization type on organizational support, provider attitudes, and adoption of evidence-based practice. *Implementation Science, 4*(83).

ii. Parental use of alcohol, tobacco, or illicit drugs – In alignment with the objectives of Healthy People 2020, Arizona's home visiting program will demonstrate a 10% improvement in the percentage of pregnant female participants abstaining from alcohol, tobacco, or illicit drugs. Healthy People 2020 defines abstinence as not using alcohol, tobacco, or illicit drugs within the past 30 days. The Arizona home visiting program will utilize the Alcohol, Smoking, and Substance Involvement Screening Test to track participant behaviors for the previous three months; therefore, abstaining from alcohol, tobacco, or illicit drugs will be defined as not using these substances within the past three months. Data on the use of alcohol, tobacco, and illicit drugs will be collected from female participants during their initial intake into Arizona's home visiting program. The assessment tools associated with the NFP will be utilized to collect this data during the intake and periodically over the course of participation to document sustained abstinence.

Definition: Percent of women reporting using alcohol, cigarettes, and other illicit drugs in past 30 days at time of enrollment.

Numerator: Number of women who reported at the time of enrollment/intake that they used alcohol, cigarettes, and other illicit drugs in past 30 days.
Denominator: Total number of pregnant women enrolled in that cohort.

Progress: Decrease in the percentage of women reporting use of alcohol, cigarettes, and other illicit drugs in past 30 days at subsequent measurements.

iii. Preconception care – "Preconception health encompasses a multitude of health dimensions including identification, management and control of chronic conditions, diagnosis and treatment of sexually transmitted infections, achieving an ideal body weight, and folic acid supplementation, among others."[9] While there are a variety of indicators mentioned by Broussard et al (2010) one of the core indictors is inter-pregnancy interval (IPI). The significance of IPI is supported by the meta-analysis of 67 studies that demonstrated significant association between extremely short IPI and preterm birth, low birth weight, and small for gestational age.[10] Arizona will utilize two measures to capture preconception care: a) IPI; b) self-rated general health.

IPI Definition: Percentage of women having a live birth who had less than 18 months between their previous live birth and the start of the most recent pregnancy.

Numerator: Number of women who reported at the time of enrollment/intake (i.e. calculated as the time in months from estimated conception date for current live birth and date of last live birth)
Denominator: Total number of pregnant women enrolled in that cohort.

Progress: Decrease in the percentage of women conceiving postpartum after enrollment for each cohort.

Self-rated health Definition: Percentage of women who report good, very good or excellent health.

Numerator: Number of women who report good, very good or excellent health at enrollment/intake
Denominator: Total number of pregnant women enrolled in that cohort.

Progress: Increase in the percentage of women reporting good, very good or excellent health at subsequent measurements.

iv. Inter-birth intervals – **Same as IPI above.**

v. Screening for maternal depressive symptoms – Adhering with the American Academy of Pediatrics recommendations, Arizona's home visiting program will utilize the Edinburgh Postnatal Depression Scale (EDPS) to screen women for depressive symptoms. Screening for depressive symptoms is defined as completing the ten questions of the Edinburgh Postnatal Depression Scale.

Definition: Percentage of women exhibiting depressive symptoms measured using EDPS.

Numerator: Number of women who exhibited depressive symptoms at the time of enrollment/intake
Denominator: Total number of pregnant women enrolled in that cohort.

Progress: Decrease in the percentage of women exhibiting depressive symptoms in subsequent measurements following enrollment.

[9] Broussard, D.L., Sappenfield, W.B., Fussman, C., Kroelinger C.D., & Grigorescu V. (2010). Core State Preconception Health Indicators: A Voluntary, Multi-state Selection Process. *Maternal and Child Health Journal,* DOI 10.1007/s10995-010-0575-x
[10] Conde-Agudelo A., Rosas-Bermúdez A., & Kafury-Goeta A.C. (2006). Birth spacing and risk of adverse perinatal outcomes. *JAMA*, *295*(15) 1809–23.

vi. Breastfeeding – Healthy People 2020 has identified multiple measures in association with breastfeeding. For this program, the Arizona home visiting program has identified two measures of improvement that reflect the standards of Healthy People 2020 and the recommendations of the American Academy of Pediatrics. Data related to participants breastfeeding practices will be collected through the assessment tools of the NFP, HFA, and Family Spirit program.

Breastfeeding Definition: Percentage of women who indicated having breastfed their infants following birth until the child was 6 months old.

Numerator: Number of women who reported having breastfed their last infant at the time of enrollment/intake.
Denominator: Total number of pregnant women who enrolled in that cohort.

Progress: Increase in the percentage of women breastfeeding their infants following postpartum enrollment in subsequent measurements.

Exclusive Breastfeeding Definition: Percentage of women who indicated having exclusively breastfed their infants without supplementation following birth until the child was 6 months old.

Numerator: Number of women who reported having exclusively breastfed their last infant at the time of enrollment/intake.
Denominator: Total number of pregnant women who enrolled in that cohort.

Progress: Increase in the percentage of women exclusively breastfeeding their infants following postpartum enrollment in subsequent measurements following enrollment.

vii. Well-child visits – Based on the American Academy of Pediatrics Recommendations for Preventative Pediatric Health Care data on well-child visits will be obtained and documented through the administration of the assessment tools associated with the NFP and Healthy Families American programs.

Definition: Percentage of enrolled children in each cohort in the ages 0 to 35 months who receive well-child visits during the course of the program.

Numerator: Number of children 0 to 35 months in each cohort who received well-child visits at the time of enrollment/intake.
Denominator: Total number of children enrolled in that cohort.

Progress: Increase in the percentage of children 0 to 35 receiving well-child visits at subsequent measurements following enrollment.

viii. Maternal and child health insurance status – Lack of health insurance is important access to care measure and is associated with negative impact on both maternal and child health. Being "covered" by health insurance is defined as enrolling and being accepted into public (e.g., Medicaid, SCHIP) or private insurance. Data will be collected during the initial intake of participants into the home visiting program and periodically during the participants' retention in the program. This data will be collected using the assessment tools associated with the NFP program.

Definition: Percentage of women and children who are "covered" (i.e. enrolled and being accepted) by health insurance at any given point in time during the course of the program.

Numerator: Number of women and children who were covered by health insurance at enrollment/intake.
Denominator: Total number of women and children enrolled in that cohort.

Progress: Increase in the percentage of women and children covered by insurances during subsequent measurements following enrollment.

Benchmark II – Child Injuries, Child Abuse, Neglect, or Maltreatment, and Reduction of Emergency Department Visits

i. Visits for children to the emergency department from all causes – A visit to the emergency department is defined as admission and discharge from the emergency department. Data can be collected through self-reported cases on visits to emergency departments and/or administrative data such as hospital discharge data.

Definition: Percentage of children in each cohort who visited emergency department during the course of the program.

Numerator: Number of mothers who self-reported at enrollment/intake that her children sought care in ED for any cause
Denominator: Total number of children enrolled in that cohort.

Progress: Decrease in the percentage of children who visit the emergency department during subsequent measurements following enrollment measured through self-reports and administrative data.

ii. Visits of mother to the emergency department for all causes – **Same as above** except visits are captured for each enrolled woman as oppose to capturing visits for multiple children of the same mother.

iii. Information provided or training of participants on prevention of child injuries – To improve the knowledge of adults participating in Arizona's home visitation program, 95% of adult program participants will receive information or attend training on the prevention of child injuries. Training attendance will be documented through sign-in sheets and the distribution of information will be recorded in client records by program staff providing the NFP program and the Healthy Families America program.

Definition: Percentage of families in each cohort who were provided with information on prevention of child injuries.

Progress: Increase in the percentage of families who were provided information on prevention of child injuries at subsequent measurements following enrollment.

iv. Incidence of child injuries requiring medical treatment – Children are amongst the most vulnerable groups to injury, both in the home and on the street and for a variety of reasons and the incidence of child injuries fall within the domain of unintentional injuries.[11] Unintentional injuries are the leading causes of morbidity and mortality among children in the United States.[12] Intervention to reduce risks of injuries to children should be reflected in the injury rate. While injuries can take many different forms, and can occur in many different ways the definition in this benchmark is limited to nonfatal injuries that required treatment for children 0 to 14 years.

Definition: Incidence of physical injury to children aged 0-14 years by gender in each cohort who sought medical treatment through inpatient hospitalization and/or emergency department during the course of the program expressed as a rate (per 100,000).

Numerator: Number of families with children 0-14 years at enrollment/intake who sought medical treatment through inpatient hospitalization and/or emergency department.
Denominator: Total number of children who are 0-14 years in that community (i.e. CHAA).

Progress: Decrease in the incidence of physical injury to children aged 0-14 years by gender in each cohort in subsequent measurements following enrollment.

v. Reported suspected maltreatment of children in the program – Suspected maltreatment is defined as allegations that were screened by Child Protective Services (CPS), but were not necessarily substantiated as maltreatment. Suspected cases of maltreatment will be documented through referrals provided to CPS, participant reports, and data sharing agreements established with Child Protective Services in the Department of Economic Security through a data sharing agreement.

[11] According to the Centers for Disease Control and Prevention, unintentional events are those that are "not inflicted by deliberate means" Centers for Disease Control and Prevention, Definitions for WISQARS: Non-Fatal, 2007 [accessed May 25, 2011].Available at: http://www.cdc.gov/ncipc/wisqars/nonfatal/definitions.htm/plan/report/ahs/ahs2008/pdf/2c8.pdf
[12] Centers for Disease Control and Prevention, CDC Childhood Injury Report: Patterns of Unintentional Injury among 0-19 Year Olds in the United States, 2000-2006 [accessed May 25, 2011] Available at: http://www.cdc.gov/safechild/images/CDC-ChildhoodInjury.pdf

vi. Reported substantiated maltreatment of children in the program – Substantiated maltreatment is defined as after allowing for notification and an appeals process an investigation concludes that child abuse or neglect has occurred. Substantiated cases of maltreatment will be documented through referrals provided to CPS, participant reports, and data sharing agreements established with Child Protective Services at the Arizona Department of Economic Security.

vii. First-time victims of maltreatment for children in the program – A first-time victim is defined as a child who has a maltreatment disposition of "victim" and never had a prior disposition of "victim." Data on first-time victims will be obtained from referrals provided to Child Protective Services, participant reports, and data obtained from Child Protective Services at the Arizona Department of Economic Security through data sharing agreement.

For constructs relating to child abuse, neglect, and maltreatment data will be obtained for participating families at the time of enrollment and biannually after enrollment through data sharing agreement from the Arizona Department of Economic Security (ADES) as recommended by Supplemental Information Request rather than reliance on self-report. All definitions and identification of the numerator will be consistent with the ADES definition. For Family Spirit "Promising Practice" in the White-Mountain Apache tribal community data will be reported as an aggregate de-indentified rate data at the time of enrollment and subsequent measurements after recruitment of participants into the program. John-Hopkins will obtain data from social services charts and report the data to ADHS.

Benchmark III – Improvements in School Readiness and Achievement

Improvement in school readiness and achievement will be measured using a standardized instruments specific to the EBP. Healthy Families Parenting Inventory (HFPI) and Keys to Interactive Parenting Scale (KIPS) will be utilized for NFP and HFA. Both HFPI and KIPS have excellent psychometric properties with excellent reliability and validity with alpha's ranging from 0.86-0.95. Promising Practice to be implemented at White-Mountain Apache will utilize the "Home Observation for Measurement of the Environment (HOME)" and "Supplement to the Home for Impoverished Families (SHIF)" standardized tools. HOME is a widely utilized checklist observational measure of parental behavior, parent-child interaction, and the home environment. The measure has supportive psychometric properties, and HOME scores have been shown to improve with home visiting interventions. The SHIF is a 20-item observational measure of parental behavior, parent-child interaction, child's daily routine, and the home environment for children 0-3 (adapted to age 6) living in impoverished settings. The measure is designed to be used in conjunction with the HOME and has high validity and reliability. The instrument is both reliable and valid with alpha's ranging from 0.74 -0.89.

i. Parent support for children's learning and development – Parental support for children's learning and development is defined as the demonstration of the parent's response to the child's developmental needs through actions such as reading and talking with the child and providing age and skill appropriate toys in the household.

Definition: Average standardized scores on HFPI, KIPS, HOME, and SHIF scales at intake/enrollment.

Progress: Increases (effect sizes of 0.10) in the average standardized scores in each cohort in subsequent measurements following enrollment.

ii. Parent knowledge of child development and of their child's development progress – Parental knowledge of child development is defined as a parent's comprehension of the stages of infant and young child development. To assess parent's expectations of child development and their child's development progress, the KIPS and Ages and Stages Questionnaire (ASQ3) will be utilized. Staff observations will occur on a routine basis to track family progress and to tailor the services provided by the home visiting staff.

Definition: Average standardized scores on KIPS and ASQ3 scales at intake/enrollment.

Progress: Increases (effect sizes of 0.10) in the average standardized scores in each cohort in subsequent measurements following enrollment.

iii. Parenting behaviors and parent-child relationship – Arizona's home visiting program will document an improvement in parenting behaviors and parent-child relationship though observations conducted during home visits and interviews with participants. Data on parenting behaviors and the parent-child relationship will be collected using two measures: 1) the Healthy Families Parenting Inventory; and 2) the Keys to Interactive Parenting Scale. The combined data from these two sources will be utilized to assess scores of program participants in the areas of parenting behavior and parent-child relationship. Appropriate parenting behaviors and parent-child relationship skills measured by these two tools include problem-solving/coping, parent/child interaction, parenting efficacy, sensitivity to responses, supportive directions, and encouragement.

Definition: Average standardized scores on KIPS and ASQ3 scales at intake/enrollment.

Progress: Increases (effect sizes of 0.10) in the average standardized scores in each cohort in subsequent measurements following enrollment.

iv. Parent emotional well-being or parenting stress – Center for Epidemiologic Studies Depression Scale (CES-D), Parenting Stress Index (PSI), and Keys to Interactive Parenting Scale (KIPS) will be used to assess parent's emotional well-being along with perceptions of social support, a strong sense of parenting efficacy, and indication for depression. Both CES-D and PSI are validated and are reliable.

Definition: Average standardized scores on CES-D, PSI, and KIPS at intake/enrollment.

Progress: Increases (effect sizes of 0.10) in the average standardized scores in each cohort in subsequent measurements following enrollment.

v. Child's communication, language, and emergent literacy – Ages and Stages Questionnaire (ASQ) will be utilized across all EBPs to assess child's communication, language, and literacy. The ASQ measure is usually filled out by the caregiver, and consists of 19 questionnaires for ages 4 through 48 months. Each questionnaire contains 30 developmental items capturing five sub-domains: Communication, Gross Motor, Fine Motor, Problem Solving, and Personal-Social. The ASQ has been shown to have validity of 83%, test-retest reliability of 90%, and interrater reliability of 90%.

Caregiver's responses of *yes, sometimes, or not yet* to the questionnaire items are converted to 10, 5, or 0 points respectively for a total score. Scores below 2 standard deviations below the mean are indicative of delay and/or at-risk in that area of development.

Definition: Percentage of children 4-48 months of age in each cohort who score below 2 *SD* on the ASQ

Progress: Decrease in the percentage of children 4-48 months of age in each cohort who score below 2 *SD* on the ASQ during subsequent measurements following enrollment.

vi. Child's general cognitive skills – **Same as above.**

vii. Child's positive approach to learning including attention – **Same as above.**

viii. Child's social behavior, emotion regulation, and emotional well-being – The Ages and Stages – Social-Emotional Questionnaire (ASQ:SE) is a supplement to the ASQ and contains a series of eight questionnaires to be completed by the caregivers, which specifically addresses the emotional and social competence of young children for ages 3 through 65 months and contains seven behavioral sub-domains: self-regulation, compliance, communication, adaptive functioning, autonomy, affect, and interaction with people. The ASQ:SE will be utilized to identify children at risk for behavioral or emotional problems. Similar to the ASQ caregiver's responses of *most of the time, sometimes, or rarely or never* questionnaire items converted to 0, 5, or 10 points respectively, to yield a total score. A high total score indicates concerns about an infant's social emotional functioning and is cause for further assessment, while a low total score suggests that the caregiver considers their infant or child to be competent in their social emotional behavior. The key difference in the ASQ and ASQ:SE is the interpretation of total scores, wherein higher scores in the later are defined as at-risk while lower scores in former are defined as at-risk.

Definition: Percentage of children 4-48 months of age in each cohort who score above 2 *SD* on the ASQ

Progress: Decrease in the percentage of children 4-48 months of age in each cohort who score above 2 *SD* on the ASQ during subsequent measurements following enrollment.

ix. Child's physical health and development – Apart from utilizing the ASQ for assessing a child's health and physical development Arizona also intends to assess a child's risk of childhood obesity. Childhood obesity is a strong predictor of adult obesity;[13] and therefore, the increasing proportion of obese children will influence population health for an entire generation. Further, overweight children are at increased risk for becoming obese. When children become obese they become at risk for chronic conditions such as high blood pressure, high cholesterol and Type 2 diabetes which in turn elevate risk for cardiovascular disease early in life.[14] As with adults, obesity prevalence in youth is associated with race and socioeconomic status, and thus threatens to perpetuate existing

[13] Parsons, T.J., Power, C., Logan, S., et al. (1999). Childhood predictors of adult obesity: a systematic review, *Int J Obes Relat Metab Disord, 23(suppl 8)*, S1-S107.

[14] Centers for Disease Control and Prevention, Childhood Overweight and Obesity, 2010 [accessed March 10, 2010]. Available at: http://www.cdc.gov/obesity/childhood/index.html

disparities found in adult health. Obesity and overweight in children is determined by a Body Mass Index (BMI), a value plotted on a growth chart that is age and sex specific.[15] Overweight is defined as a BMI at or above the 85th percentile and lower than the 95th percentile, while obesity is a BMI at or above the 95th percentile for children of the same age and sex. The measures of weight, height, head circumference, and body mass index will be periodically recorded in the participant's record by the home visiting staff.

ASQ Definition: Percentage of children 4-48 months of age in each cohort who score below 2 *SD* on the ASQ sub-scales of Gross and Fine Motor Skills.

Progress: Decrease in the percentage of children 4-48 months of age in each cohort who score below 2 *SD* on the ASQ sub-scales of Gross and Fine Motor Skills during subsequent measurements following enrollment.

BMI Definition: Percentage of children who are 85th percentile and below 95th percentile and are at-risk of becoming obese (i.e. 95th percentile or greater) at intake/enrollment.

Progress: Decrease in the percentage of children who are at 85th percentile and below 95th percentile and are at-risk of becoming obese (i.e. 95th percentile or greater) during subsequent measurements following enrollment.

Benchmark IV – Crime or Domestic Violence

The Arizona home visiting program has selected to report on the benchmark of domestic violence (DV). The constructs associated with domestic violence are delineated below. The rate of assault-related injuries was utilized as a proxy measure for domestic violence in Arizona in our needs assessment. In 2008, there were 964.6 hospitalizations due to assault-related injuries per 100,000 women ages 15-44 in Arizona. Assault-related injuries among women 15 through 44 years of age were selected from the Arizona hospital discharge data (HDD) for cases in which the first listed diagnosis was an injury (ICD-9-CM codes 800.00-909.20, 910.00-994.90, 995.50-995.59, 995.80-995.85, 909.4, 909.9), and the first listed valid E-Code was among the following ICD-9-CM External Cause of Injury Codes: E960-E969, E979, E999.1. Apart from utilizing EBP-specific screening tools for domestic violence, which is mainly Revised Conflicts Tactics Scale (CTS-2), Arizona will utilize the aforementioned proxy measure to assess the incidence of domestic violence for each community compared to the overall state rate. CTS-2 consists of 39 items and is designed for both the participant and the partner; thus, there are two questions for each item, which totals to 78 questions. CTS-2 contains a total five subscales that 'capture' domestic violence: negotiation (alpha = 0.86); psychological aggression (alpha = 0.79); physical assault (alpha = 0.86); sexual coercion (alpha = 0.87); and injury (alpha = 0.95) with an overall internal consistency ranging from 0.75-0.95.[16] Two key concepts within CTS-2 are prevalence and chronicity of the instances described in the questionnaire. Because most partners experience the instances in the questionnaire it provides an inflated prevalence rate and is not statistically meaningful[15] and therefore, chronicity will be utilized as a key measure for the benchmark on domestic violence. Chronicity is defined from among those participants who report at least one act on a given scale; it refers to the sum total of all reported occurrences of all acts from that scale.

[15] Ogden, C.L., Carroll, M.D., Curtin, L.R., Lamb, M.M., & Flegal, K.M. (2010). Prevalence of High Body Mass Index in US Children and Adolescents, 2007-2008. *JAMA, 303(3)*, 242-249.

[16] Straus, M.A., Hamby, S.L., Boney-McCoy, S., & Sugarman, D.B. (1996). The Revised Conflict Tactics Scales (CTS2): Development and Preliminary Psychometric Data. *Journal of Family Issues, 17*(3) 283-316.

i. Screening for domestic violence – Domestic violence is defined as a physically, emotionally, or mentally abusive relationship between any two people who are connected in an intimate manner such as by blood, by marriage, shared residence, or expecting or raising a child together.

DV Definition: Average scores on chronicity for women at intake/enrollment based on CTS-2.

Progress: Decrease in the annual percentage of women reporting chronicity during subsequent measurements following enrollment measured through CTS-2.

Assault-related injuries: Annual rate of assault-related injuries for women 15-44 years as available in administrative data (hospital discharge data that includes inpatient and emergency department visits) with first listed diagnosis as an injury (ICD-9-CM codes 800.00-909.20, 910.00-994.90, 995.50-995.59, 995.80-995.85, 909.4, 909.9), and the first listed valid E-Code External Cause of Injury Codes: E960-E969, E979, E999.1 in communities with EBP intervention following enrollment of families.

Progress: Decrease in the annual rates of assault-related injuries compared 2008 baseline for each specific CHAA (i.e. communities).

ii. Of families identified for the presence of domestic violence, number of referrals made to relevant domestic violence services – In Arizona's home visiting program, a referral is defined as the provision of information about another organization that provides services relevant to domestic violence. The information provided to the participant shall include the name of the organization, phone number, address, description of services available, and assistance with scheduling an appointment and obtaining transportation to access these services. Data on the provision of referrals is collected in the Nurse-Family Partnership program assessment tools under the section on use of government and community services. Data related to the provision of referrals for domestic violence services will be collected on a semi-annual basis. Arizona's home visiting program will document an increase in the number of referrals made to domestic violence services by reporting a 10% increase.

Definition: Percentage of participants referred to domestic violence services.

Numerator: Number of individuals referred to domestic violence services.
Denominator: Total number of participants enrolled in that cohort.

Progress: Increase in the percentage of participants referred to domestic violence service following assessment of chronicity during subsequent measurements.

iii. Of families identified for the presence of domestic violence, number of families for which a safety plan was completed – A safety plan must reflect where the victim is in the relationship (in an abusive relationship, planning on leaving, or have left the abuser), thus a completed safety plan will identify the strategies, steps, and resources the victim has identified to facilitate their safety. To demonstrate improvement in this construct, the Arizona home visiting program will document a 10% increase in the rate of completion of a safety plan for families experiencing domestic violence. This data will be collected through the assessment tools associated with the Nurse-Family Partnership program.

Definition: Percentage of participants who were screened for domestic violence for whom a safety plan was successfully completed.

Progress: Increase in the percentage of participants who were screened for domestic violence for whom a safety plan was successfully completed during subsequent measurements following enrollment.

Benchmark V – Family Economic Self-Sufficiency

For constructs relating to Family Economic Self-Sufficiency data will be obtained for participating families at the time of enrollment and biannually after enrollment through data sharing agreement from the Arizona Department of Economic Security (ADES) as recommended by Supplemental Information Request rather than reliance on self-report. All definitions and identification of the numerator will be consistent with the ADES definition. For Family Spirit "Promising Practice" in the White-Mountain Apache tribal community data will be reported as an aggregate de-indentified rate data at the time of enrollment and subsequent measurements after recruitment of participants into the program. John-Hopkins will obtain data from social services charts and report the data to the ADHS.

i. Household income and benefits – In accordance with the information provided in the Supplemental Information Request, a household is defined as all those living in a home (who stay there at least 4 nights a week on average) who contribute to the support of the child or pregnant woman linked to the home visiting program (tenants/borders are not counted as members of the household). Income and benefits are defined as earnings from work, plus other sources of cash support including private (such as rent from tenants/borders, cash assistance from friends or relatives) or public systems (such as child support payments, TANF, Social Security, and Unemployment Insurance). Data will be collected based on each source of income and benefit for each household member through initial intake/enrollment and subsequent measurements.

ii. Employment or education of adult members of the household – Improvement in employment is defined as an increase in the number of paid hours worked plus unpaid hours devoted to care of an infant by all adults in a participating household over time. Improvement in education is defined as an increase in the educational attainment of adults in participating households over time as documented by the completion of academic degrees, training, and certificate programs. Data will be collected based on each source of income and benefit for each household member through initial intake/enrollment and subsequent measurements.

iii. Health insurance status – Improvement in health insurance status is defined as the number of household members who have health insurance over time. Health insurance includes coverage provided by both private health insurance providers and public health insurance, such as Medicaid and SCHIP. Data will be collected based on each source of income and benefit for each household member through initial intake/enrollment and subsequent measurements.

Benchmark VI – Coordination and Referrals for Other community Resources and Supports

Primarily a process measure this benchmark will be utilized to assess referrals and provision of support to all enrolled families. Specifically it will randomly sample a 30 percent of the participating families in each cohort for interview by the independent evaluator to assess coordination of referrals and support provided to the families on an annual basis after initial intake/enrollment.

i. Number of families identified for necessary services – The identification of additional services needed by families participating in the home visiting program will occur during the initial intake and over the course of involvement in this program. EBP-specific assessment tools associated to track referrals will be utilized. The need for services will be documented in the client's file. This measurement will be determined by comparing the number of families identified as in need of service with the total number of families participating in the home visiting program. Necessary services are defined as medical, dental, and mental health care needs and social services such as assistance with housing, food assistance, etc.

> **Definition:** Percentage of families identified as in need of service as identified through EBP-specific assessment tools.
>
> **Numerator:** The number of families identified as in need of service identified at intake/enrollment.
> **Denominator:** The total number of families enrolled in each cohort.
>
> **Progress:** Increase in the percentage of families who were randomly selected following enrollment in each cohort having being satisfied with coordination and referral for each EBP as assessed by independent evaluator.

ii. Number of families that required services and received a referral to available community resources – Among families identified for necessary services, the provision of referrals will also be documented in client records and through the data collected by the assessment tools associated with the Healthy Families America program. Both the provision of the referral and the outcome of the referral will be documented. A referral is defined as the provision of information about another organization that provides services which address identified client needs. The information provided to the participant shall include the name of the organization, phone number, address, description of services available, and assistance with scheduling an appointment and obtaining transportation to access these services.

iii. MOUs – Memorandums of Understanding detail and establish a collaborative relationship between organizations/agencies and how these entities will work together to address clients' needs. To facilitate the coordination of services and the provision of referrals to other community resources and supports, the Arizona home visiting program will demonstrate an annual increase in the number of MOUs established with social service agencies in the target communities. Improvement in this construct will be documented by a MOU signed by the home visiting program and social service organization.

iv. Information sharing – To facilitate and document the provision of services to clients, Arizona's home visiting program will establish formal agreements with social service agencies in order to share information on program participants. The details specifying the type of information to be

shared as well as mechanism to ensure client confidentiality will be delineated in Memorandums of Understanding signed by both agencies. To demonstrate an improvement in this construct, the Arizona home visiting program will report an annual increase in the number of MOUs established which include information sharing agreements. Improvement will be demonstrated by counting the total number of signed MOUs with information sharing agreements.

v. Number of completed referrals – The completion of a referral will be documented using two measures. First, the responses provided by participants on the assessment tools associated with the Healthy Families America program and the Nurse-Family Partnership program, specifically the section on use of government and community services, will be used to measure an increase in utilization of services. Second, the information sharing agreements established with other social service agencies will provide methods for tracking clients' utilization of these services.

5.2 Data Collection and Analysis Plan

As noted earlier, each EBP has specific enrollment and/or intake form based to collect data on each of the constructs many of which may or may not overlap. Further, each construct may be defined differently in each EBP based on the model guidelines. While majority of the data on the constructs in each EBP relies on self-report, some of the data collection tools are standardized instruments that are both valid and reliable. Nonetheless, all self-report data suffers from recall bias, mono-method and mono-operation bias. To alleviate this issue wherever feasible Arizona MIECHV will utilize administrative data to triangulate the findings from self-reports (e.g. emergency department visits, child maltreatment, etc.), with appropriate data sharing agreement and due IRB process to obtain confidential data as Arizona also proposes to develop an integrated database to collect intake and/or enrollment data for the purposes of linkage to administrative data. Comparison wherever feasible for each community utilizing administrative data will be conducted to assess overall impact of EBPs.

For Promising Practice John-Hopkins will compile all the required information from the benchmarks to the ADHS contracted independent evaluator as per the data collection plan and schedule. Data collection plan and schedule for each EBP and "Promising Practice" are available in Appendix III.

The Arizona Department of Health Services, Office of Children's Health will administer the Maternal, Infant and Early Childhood Home Visiting Program.

6.1 List of Collaborating Partners in the public and private sector

The program will collaborate with the other bureaus within the ADHS including the Office of Children with Special Health Care Needs, the Office of Oral Health, the Office of Child Care Licensing, the Division of Behavioral Health Services, Bureau of Nutrition and Physical Activity (WIC), and the Bureau of Epidemiology and Disease Control Arizona Immunization Program Office.

State agencies that will be included in the collaboration are the Arizona Departments of Education which includes the Head Start Collaboration, Economic Security which is that state's agency for Title II of the Child Abuse Prevention and Treatment Act (CATPTA) and the Early Childhood Development and Health Board also known as First Things First. We are also working with Native Health, the Native American organization who will be implementing the Native American Home Visiting grant.

The program will also collaborate with county and local governments, nonprofit and for profit provider organizations. The Home Visiting Task Force will be reinitiated. This Task Force consisted of representatives from the Child Crisis Center, Healthy Steps, Arizona Children's Coalition, Southwest Human Development, Parents as Teachers, Education Specialist for Title I and Migrant Education Arizona Department of Education, Arizona State University, United Way of Tucson and Southern Arizona, Arizona Head Start Association, Northland Pioneer College, Arizona Early Intervention Program (AzEIP) (Part C), Maricopa County Cooperative Extension, Healthy Families Arizona, Prevent Child Abuse Arizona and Casa de los Niño's.

6.2 Overall Management Plan

The Program Manager will be responsible to monitor the subcontractors and subsequently the program. She/he will report to the Chief of the Office of Children's Health who reports to the Chief of the Bureau of Women's and Children's Health. The Chief of the Office of Assessment and Evaluation will provide guidance and oversight of evaluation efforts to both the Program Manager and the External Evaluator. The role of the External Evaluator is more fully explored in section 7, CQI. Please see attached organizational chart. (Appendix IV)

The Program Manager will be responsible for the management of the independent contracts or subcontracts or agreements. She/he will develop an overarching budget; ensure appropriate staff is hired by the contractors/agencies and work with the External Evaluator to develop a monitoring tool to assess each model for fidelity and process. She/he will also be responsible to work to strengthen a statewide home visiting system that is a part of the larger statewide early childhood system.

Please see Appendix V for posted job description of the Program Manger, the resumes of the Chiefs of the Offices of Children's Health and Assessment and Evaluation and the External Evaluator.

6.3 Plan for coordination of referrals

While the state will not be supporting more than one model in a community, the Program Manager will ensure each community where the state is supporting a model works to either begin or strengthen their referral process. This may in the end be a central referral source or may be a clearly articulated continuum of services that the entire community is aware of and has access to. The Program Manager will seek to assist in developing a state wide system that links to each regional home visiting coalition, in conjunction with the Home Visiting Taskforce.

6.4 Identification of other evaluation efforts

The Program Manager will strive to identify and collaborate with other related state or local evaluation efforts. At this juncture we know that First Things First has an evaluation effort in place for First Things First Home Visiting and the ADES has just completed an evaluation of Healthy Families.

6.5 Legislative requirements

The Program Manager will have experience with public health and early childhood administration, state, county and local health care delivery systems, community development; program planning and development principles including quality assurance, budget development and resource allocation principles; procurement and contract policies; maternal and child health topics to include public health best practices related to early childhood health and development; a minimum of three years' experience in administration/budget management; two years in public health or child welfare programs and preferably a Master's degree in public health, behavioral health, education, social work, nursing or related field, or a Bachelor's with at least three years of combined work experience in a relevant field.

Local staff will be hired based on the requirements of the models. The models we have chosen all require reflective supervision. Both the ADES and White Mountain Apache have strong organizational capacity to implement the grant activities. Each has had a long history implementing their respective programs. The subcontractors will each develop referral and service networks to support the home visiting programs and the families they serve. NFP requires a detailed analysis of available community services in their required Implementation Plan. This information will be required for the intergovernmental and interagency agreements. Mechanisms to monitor fidelity to the models will be written into each intergovernmental and interagency agreement as well as the RFP.

6.6 How we will comply with model specific requirements

Each community understands that they must comply with all model specific requirements in order to maintain fidelity. This will be the nexus of the subcontracting agreements. One of the purposes of this national program is to show the efficacy of and outcomes for evidence based home visiting models. It is incumbent upon the states to ensure the rigor of the models and that fidelity is maintained. In the possible cases where the fidelity could be jeopardized, the subcontractor will be required to contact the model developer for a solution.

The ADHS has asked for and received permission to hire a Program Manager for this new program. The state has had a hiring freeze in effect for several years and so permission had to be obtained from the Arizona Department of Administration to consider this a Mission Critical position. The Chief of the Office of Children's Health will work closely with the new Program Manager to help him/her learn the history of the

initiative thus far, from the original Task Force to the establishment of the Inter Agency Leadership Team, the process and findings of the Needs Assessment, community meetings and selecting communities and models. The new Program Manager will learn about the three models, learn about the communities and how Arizona sees this as an opportunity to formalize a statewide home visiting system. The new Program Manager will develop a relationship with First Things First and become a part of their process to develop a statewide early childhood system.

6.7 Coordination and Collaboration

While Arizona developed this Updated Plan, care was taken to coordinate with other state early childhood plans. Strategically, the Early Childhood Comprehensive Systems Coordinator, the Head Start Collaboration Director and the CAPTA agency were all at the table and instrumental in developing this Updated Plan.

Arizona's MIECHV Continuous Quality Improvement

The ADHS has developed a Continuous Quality Improvement (CQI) plan that will advance efficient, effective program delivery and achievement of strategic and program goals. The CQI plan serves as a part of the foundation of the commitment of the ADHS to continuously improve the quality of its Maternal, Infant and Early Childhood Home Visiting (MIECHV) Program. The ADHS promotes evidence-based home visiting models to meet the unique needs of the communities being served.

The CQI Plan incorporates three key actions to build a culture of quality. First, data will be shared. To build a culture of quality, everyone needs to be receiving data, down to the home visitor level. The CQI Plan for the MIECHV Program will provide the means for data to be shared – data that is meaningful and important and that reflects the work that the home visitor is doing, all of which are embedded in the benchmarks. The second action is ensuring the transparency of data – sharing data that is good as well as sharing data that highlights key problem areas. The third aspect of building a culture of quality is having everyone involved in the effort. The Plan will provide the means in which home visitors can receive data that is important to them to see how they are doing on a regular basis and how their site is doing.

The ADHS will continuously strive to ensure that the MIECHV Program provides quality services in a safe, effective, recipient-centered, timely, and equitable fashion and that:

- The services provided incorporate evidence based, effective practices;
- The services are appropriate to the unique needs of the community;
- The services develop and incorporate new knowledge and practices in a data-driven manner;
- The fidelity of program implementation is monitored;
- Home visitors and program administrators are empowered to seek information about their own practices through regular feedback on process and outcome indicators.

7.1 Responsibility for Oversight of CQI

The key to success of the continuous quality improvement process is leadership. The following describes how the leaders of the ADHS and the MIECHV Program will provide support to quality improvement activities and the oversight of CQI.

The MIECHV Continuous Quality Improvement Team will be established. This Team will provide ongoing operational leadership of continuous quality improvement activities. It will meet quarterly or more frequently as needed. The CQI team will be challenged to guide the state and local organizations to a point where people feel comfortable receiving data, sharing data, using data, and seeing it as something that is important and key to their work, rather than something that is punitive and designed to identify who's not doing their job well. The CQI Team will consist of the MIECHV Program Manager, the Chiefs of the Office of Assessment and Evaluation and Children's Health, the External Evaluator and representatives from the local models once contracts are awarded.

The responsibilities of the CQI Team will include:

- Establishing measurable objectives based upon established benchmarks and constructs

- Developing and updating the CQI plan ensuring inclusion and expansion of fidelity indicators as the CQI process matures.
- Identifying indicators of quality on a priority basis (starting small, focused on individual topics).
- Reviewing regular reports which the MIECHV Program Manager will then share with local program administrators, which summarize performance on the key indicators associated with their processes and outcomes.

The ADHS will also provide leadership for the CQI process by:

- Supporting and guiding implementation of quality improvement activities of the MIECHV Program.
- Reviewing, evaluating and approving the CQI plan annually.

The MIECHV Program Manager will be responsible for ensuring:

- A culture that promotes excellence and continual improvement;
- Implementation of a statewide CQI framework;
- Data systems are compatible and support ongoing CQI;
- Collection and constructive use of data is used to promote a high-learning, high-performance, results-oriented MIECHV Program;
- Rapid information on a small scale reaches local program managers to facilitate change as needed; and
- Quarterly summary reports of gains are made against benchmarks and program goals.

MIECHV local Model Program Managers will be responsible at their individual sites for:

- Promoting a culture of quality using short-term/annual plans that support long-term strategic quality goals;
- Monitoring fidelity of program implementation;
- Encouraging service delivery processes that have been shown to contribute to good outcomes;
- Implementing and maintaining local data systems that support ongoing CQI; and
- Reporting on participant satisfaction and outcomes

The leaders will support CQI activities through the planned coordination and communication of the results of measurement activities related to CQI initiatives and overall efforts to continually improve the quality of the MIECHV Programs. This sharing of data and information with staff, families, community, funders and other stakeholders is an important leadership function. Leaders, through a planned and shared communication approach, ensure that all involved have knowledge of and input into ongoing CQI initiatives as a means of continually improving performance.

7.2 Overview of the CQI Process and Data System

The methodology used to develop the CQI plan will include a planning process as well as a cycle of assessment, analysis and improvement, including recognition and corrective action, which promote excellence and continuous improvement. The planning phase involves the identification of specific standards of program delivery, process indicators, outcome measures of programs, and coordination of efforts and communication among the ADHS, local MIECHV Program staff, families, community, and stakeholders.

7.3 Coordinated Data System

A fundamental element of the CQI process is using data to drive CQI. To this end, the CQI Team will examine the existing data systems in use by the local home visiting programs and determine interface with other local and state programs and databases. The Team will determine scalability and extensibility as well as interface needs. The assessment process will include interviews with local users to determine needs and challenges with current reporting systems as well as ways to leverage existing data systems.

The recommendation by the team will include timelines with benchmarks for 1) developing a network that interfaces with existing systems at local levels and state level data systems; 2) building the capacity of staff (and eventually all stakeholders) to understand and use data for effective decision-making; 3) producing reports that meet CQI standards / expectations; 4) linking to required programs and exploring the ability to link across the ECE pipeline and across state agencies (home visiting, pre-k, child care, K-12, and others determined by CQI Team; 5) launching the data system at a local site for purposes of pilot testing the critical components of the data system including testing the measure definitions and proposed methodologies for data collection under realistic conditions, training conducted with staff on data collection requirements and procedures. Following the pilot test, training and technical assistance will then be provided to the other local MIECHV models to support full implementation of the data system.

7.4 Internal CQI Assessment Processes

The CQI Team will engage in the local assessment phase, which includes a coordinated system of ongoing record reviews of programmatic and administrative functions in order to address organizational performance, service delivery, and participant outcomes. This work will include internal system reviews as well as conducting surveys of participant satisfaction, site visits by the External Evaluator and focus groups. Information from the assessment phase will undergo analysis, done by the External Evaluator. This analysis will compare results of the record reviews, data collected, survey results and other information to the progress on benchmarks and MIECHV goals. The status of progress toward benchmarks / goals will be monitored by the MIECHV Program Manager and External Evaluator. When analyses reveal that performance is not meeting established goals, improvements may be made through the use of process improvement and performance tools.

7.5 Stakeholder Involvement in CQI

MIECHV Program stakeholders will include representatives from HV model regional directors, HV personnel, program participants (parents/caregivers), community members, and community partners, state agency partners, and external consultants. The ADHS defines a stakeholder as anyone who is affected by, or can influence, a program or organizational decision or action. Stakeholder groups will be involved as appropriate in providing input through focus groups, surveys, feedback on draft reports, and advisory groups. A representative from key stakeholder groups will be asked to sit on the CQI Team and / or participate in CQI work groups as needed. Communication regarding the CQI process and outcomes will be conducted through the project's website, newsletters, annual reports as well as through minutes of CQI meetings.

7.6 Long-term Strategic Goals and Objectives

The CQI Team will identify and define goals and specific objectives to be accomplished each year within the context of the MIECHV Programs' Quality Expectations. The goals include training of program and administrative staff regarding both continuous quality improvement principles and specific quality

improvement initiative(s). Progress in meeting these goals and objectives will be an important part of the annual evaluation of quality improvement activities.

The External Evaluator will work with the CQI Team to establish the CQI Data Collection Process Matrix consisting of the following elements:

- What is being measured?
- Why is it being measured?
- What is the data source?
- Who is responsible?
- How often will data be collected (Frequency)?
- How will data be collected?
- How/Who will data be aggregated and reports generated?
- In what format?
- Who/When will results be reviewed and interpreted?
- To whom will recommendations be made/timeframe?
- Who will implement/oversee recommended changes?

The following are expectations and long-term strategic goals of high performance to which the MIECHV Program aspires and will continually monitor.

Documentation: As a quality-driven organization, the ADHS will seek to implement consistent rules and methods for documenting throughout the MIECHV Program sites. Documentation will be used at several levels ranging from financial records to family applications to program-specific forms. While the level of detail necessary for documenting will vary depending on each situation, program staff, administration, and home visitors have a responsibility to make sure that documentation be accurate and true; contain no unfounded opinions or conclusions; be completed promptly and be well organized; be legible and non-erasable; be kept confidential when legally required, and be readily retrievable. Documentation will follow "standards of practice" as appropriate for state and federally funded programs.

Data and Information: The MIECHV Program sites and personnel will seek and use data and information to assess current capacities, and measure performance realistically. Staff and administrators will track progress toward benchmarks concretely and consistently, and use performance results to set ambitious but attainable targets that increase and improve its capability to achieve benchmarks and families' needs and expectations. Data-enriched thinking will nurture evaluation and a results-orientation concentrated on increasing the benefits and value produced to families and other stakeholders.

Satisfaction: As a quality-driven Program, the ADHS and its partners will conduct open, honest, transparent and ongoing assessments of stakeholder confidence in its ability to serve the community. The MIECHV Program will earn the trust, confidence, and loyalty of its current and potential families and other stakeholders, both external and internal, including staff and administrators, by actively developing and regularly employing means to gather and understanding their diverse and distinctive perspectives. The CQI Team will interpret and weigh these expressed needs, preferences, hopes, and requirements to frame ongoing communication, discussion, and refinement of the MIECHV Programs and operations. Staff and administrators will integrate this shared focus into their individual work goals and decision-making strategies. Satisfaction will be re-measured regularly to determine trends and the effectiveness of improvements that have been implemented.

Best Practices: As a quality-driven organization, the ADHS dedicates itself to continuously examine its practices to make certain it is following best practices for state departments of health services, specifically maternal, infant, and early childhood home visiting including governance, legal compliance, fiduciary responsibility, responsible stewardship, communication, accessibility, and disclosure. The ADHS strives for excellence in realizing its mission, managing resources effectively, and governing well. The ADHS and its partners in the MIECHV Program have demonstrated our commitment to best practices by selecting programs that integrate research-based concepts as our evidence-based home visiting models.

Strategic Planning for Sustainability: As a quality-driven organization, the ADHS uses strategic planning as a management tool to focus its energy, to ensure that all stakeholders are working toward the same goals, to assess and adjust its direction in response to a changing environment. The planning process involves intentionally setting goals (i.e., choosing a desired future) and developing an approach to achieving those goals. In being strategic, the ADHS will work with its partners in the MIECHV Program to ensure all stakeholders are clear about objectives, aware of resources, and incorporates both into being consciously responsive to their dynamic community environments. The ADHS' strategic planning will support three key requirements: a definite purpose in mind; an understanding of the environment, particularly of the forces that affect or impede the fulfillment of that purpose; and creativity in developing effective responses to those forces.

The following will be considered as goals for the CQI Plan are developed:

1. To implement quantitative measurement to assess key processes and outcomes
2. To bring HV program managers and staff together to review quantitative data and major challenges to identify problems
3. To carefully prioritize identified problems and set goals for their resolution
4. To achieve measurable improvement in the highest priority areas
5. To meet internal and external reporting requirements

7.7 Program/Service Delivery Effectiveness

Quality of Service Delivery: The MIECHV Program Manager will have responsibility for managing the statewide program. The Model Program Managers (MPM) at each partner site will be responsible for oversight of the home visiting programs at the local level; home visitor training/development; program planning and oversight (including recruitment, retention, and alignment of program to meet community needs); managing the MOU with the ADHS (including reporting); evaluation oversight; department staff training plan oversight; partnership development/advancement. Program fidelity will be measured to ensure programs are being delivered with fidelity to program design. The MPM will work with the External Evaluator to ensure fidelity checklists are completed and reviewed. Reports will be submitted by the MPM to the MIECHV Program Manager as requested. Follow-up on the implementation of recommendations will be done by the MPM and reported to the CQI Team.

Documentation Reviews: Each local site will designate a person to be responsible for oversight of the completion, quality control, and filing of program documentation forms. Incomplete or missing information or data will be reported through the use of a strategy binder checklist used to monitor the accuracy of sign-in sheets and other participant documentation. This person will be responsible for filing the documentation review reports monthly with the MPM and External Evaluator. Follow-up reports on any recommended changes will be made by the MPM to the CQI Team.

Family Satisfaction: Satisfaction surveys will be administered annually to families involved in the home visiting programs in order to measure their satisfaction with program(s) and identification of additional needs. The MPM will be responsible for oversight of the administration of satisfaction surveys. The analysis of data will be done by the External Evaluator and reported to the MPM, MIECHV Program Manager and CQI Team. Follow-up reports on any recommended changes will be made by the MPM to the CQI Team.

Program Fidelity: There are many challenges when implementing evidence-based programs in community settings that must be met to achieve outcomes similar to those found in research studies. One such challenge is to achieve and maintain fidelity to the program model. There is clear evidence that program effectiveness is related to fidelity of implementation such that the more a program is implemented as designed, the stronger the program outcomes. Therefore, program effectiveness may be compromised without consistent implementation and monitoring to ensure fidelity. The quality of MIECHV Program implementation/delivery and the level of fidelity will be measured through a program fidelity checklist form, parent satisfaction survey items focused on process items such as parent's rapport and alliance with the home visitor and any model specific tools. A fidelity report will be generated on a quarterly basis. The External Evaluator and the MIECHV Program Manager will conduct random in-home observations on a periodic basis. Quarterly fidelity reports will be filed with the MPM for each partner site and recommendations made following the review of the report and delivery of information to the CQI Team. The MPM will provide follow-up reports to the CQI Team on the implementation of any recommended changes.

7.8 Reporting CQI Data

1. Process for Aggregating Data

Data collected through various forms will be aggregated or summarized using tables that sum or average the data, whichever is appropriate for the type of data being collected. For example, frequency tables will be established for demographic data and the total number of families by ethnicity/race will be summed and a percentage of each ethnic/racial groups will be provided based on the total. Frequencies and averages (means) will be calculated for individual survey items on program and satisfaction surveys. Again, a table will be established for the survey data and summarized (aggregated) according to the variables being measured. For example, individual ratings on survey items will be averaged and a mean reported. Aggregated data can be reviewed to identify patterns, including:

- Quarterly home visitation record reports
- Annual family satisfaction data
- Annual family / child outcome data
- Annual evaluations of evidence-based programs

Data collected via surveys, observation forms, and other report forms will be entered into databases on a regular basis.

2. Report Formats

The quarterly report format for the CQI Team will follow a standard form. Results will be presented in narrative form with chart work done so everyone can see a picture of the results. The findings will be documented and the next steps that come out of the analyses will be listed.

The Quality Improvement quarterly reports are intended to reflect the status of established QI activities. Additionally, certain established QI activities are intended to monitor operational activities and identify other areas for improvement. Initiatives begun to address newly identified areas become an integral part of the QI processes and should be reflected in the quarterly report. Quarterly QI reports should be reflective of this dynamic process. In order to organize the reporting on this process the ADHS developed a standard outline for reporting. This format allows for standard sections, as well as Plan specific ongoing initiatives.

The following is the recommended format for CQI reports.

CQI Measurement Name: _____ Quarter/Year: _____

Date: _____ Reporter: _____

I. Area of Focus

State the definition of the focus area of improvement

II. Summary of measurement process/methodology

Identify measurement criteria (# reviewed, how reviewed etc.) and instrument used (survey, observation, audit form, etc.)

III. Findings and Interpretation

Provide chart of findings if reasonable – percentages, means, etc, and Interpretation of data (themes identified)

IV. Conclusions

What conclusions are drawn from findings?

V. Recommendations/Action Steps

What recommendations are suggested for improvement and what action steps will be taken?

VI. Actions Taken

What actions have been taken to date toward the desired goal?

VII. Status of Action

What is the status of any actions taken and has any change occurred?

CQI Data Review and Analysis Process

1. Review Data/Reports

Each program site will complete a CQI data collection process form that is specific to their home visiting activities. These plans and the reports generated by the plans will be reviewed on cycles specified in the site-based program implementation plan. The External Evaluator and the MIECHV Program Manager will review and discuss the CQI reports to identify areas of needed improvement

and set priorities for improvement. Those areas that have been selected previously by the CQI Team for improvement will be presented to the CQI Team according to the reporting schedule. For example, data on parent/family satisfaction will be reported quarterly to the CQI Team.

2. Analyze and Interpret Data/Reports

   Data will be collected and analyzed according to the CQI Data Collection Process Plan. Collection methods will be consistent with accepted quality improvement methodology, i.e., surveys, observations, audit forms, interviews, etc. are used as appropriate. Data collection points will be specified in the Plan and occur no less than annually. Data will be entered into a data repository to build, over time, a database that is useful for benchmarking. Descriptive statistics such as means (averages) and frequencies (percentages) will be calculated when quantitative data are available. The first year of collecting data is considered the baseline assessment.

3. Determine Need for Change

   The CQI Team will assess the information collected on the Quality indicator and review the reports submitted during the review cycle. Using the performance indicator (the criterion set in the definition or the goal set by the CQI Team), the need for change will be determined. If for example, the performance indicator for "complete and accurate participant files" is 95% of participant records will be complete and consent forms signed as appropriate by parent and/or guardian, if the quarterly report on this indicator is less than 95%, then the MIECHV Program Manager, after consulting with the Evaluator, will make recommendations to the appropriate site Model Program Manager regarding the need for change in completing participant records to meet the benchmark set for this area. The MPM will take the recommendations back to the staff responsible for maintaining participant records and develop an implementation plan for improvement. Performance feedback is built-in to the plan to improve efficiency of record keeping. The CQI Team will review the results of the next quarter's report and determine whether the improvement process should be continued, modified, or discontinued. The MPM will inform the staff of the results.

4. Re-establish Benchmarks

   The first year of collecting data is considered the baseline assessment and will be used to establish the first set of CQI benchmarks. The CQI Team will review the established CQI benchmarks for quality improvement areas and determine the need to re-establish benchmarks as improvements are made.

5. Communicating Results

   The results of CQI Team's work will be shared through minutes of the CQI meetings with team members, program staff, and key stakeholders. CQI efforts and achievements will be noted in the quarterly report and will include the results of improvement efforts being undertaken.

6. Using Data for Implementing Improvement

   Once the performance of a selected process has been measured, assessed and analyzed, the information gathered by the above performance indicators will be used to identify a continuous quality improvement initiative to be undertaken. The decision to undertake the initiative will be

based on priorities. The purpose for an initiative is to improve the performance of existing operations and/or programs or to design new ones. The model utilized is called Plan-Do-Check-Act (PDCA).

Plan – the first step involves identifying preliminary opportunities for improvement. At this point the focus is to analyze data to identify concerns and to determine anticipated outcomes. Ideas for improving processes are identified. Affected staff or people served are identified, data compiled, and solutions proposed.

Do – This step involves using the proposed solution, and if it proves successful, as determined through measuring and assessing, implementing the solution usually on a trial basis as a new part of the process.

Check – At this stage, data is again collected to compare the results of the new process with those previous ones.

Act – This stage involves making the changes a routine part of the targeted activity; acting to involve others – those who will be affected by the changes, those who cooperation is needed, and those who may benefit from what has been learned. Findings are documented and reported.

7.9 Assessment of the Effectiveness of the CQI Process

The External Evaluator and Model Program Manager will compile a CQI Effectiveness Report at the end of each calendar year unless the Program is advised otherwise by HRSA. The report will be submitted to the MIECHV Program Manager and kept on file by the ADHS, along with the CQI Plan.

The Report will summarize the goals and objectives of the CQI Plan, the quality improvement activities conducted during the past year, including the targeted process, systems and outcomes, the performance indicators utilized, the findings of the measurement, data aggregation, assessment and analysis processes, and the quality improvement initiatives taken in response to the findings.

The CQI Effectiveness Report will contain the following steps:

- Summarize the progress towards meeting the annual goals/objectives.
- For each of the goals, provide a brief summary of progress including progress in relation to training goals.
- Provide a brief summary of the findings for each of the indicators used during the year. These summaries should include both the outcomes of the measurement process and the conclusions and actions taken in response to these outcomes.
- Summarize the progress in relation to the quality initiatives, with a brief description of what activities took place including the results on each indicator.
- Make recommendations based on the evaluation of what actions are necessary to improve the effectiveness of the CQI Plan.
- Include a description of any implication of the quality improvement process for actions to be taken regarding processes, systems or outcomes in the coming year.

Arizona's MIECHV Technical Assistance Needs

The state appreciates and has been fortunate enough to have the capacity to have accessed several of the webinars offered by HRSA and ACF on the topics including implementation, needs assessment, quality assurance and CQI, program evaluation and administration. The state was honored to be asked to participate in the webinar on collaboration and partnership.

While these webinars and regional calls have been very helpful, we are also very comfortable contacting our Project Officer Penny Kyler and Judith Thierry. They have provided us with guidance and support through this process. We anticipate requiring additional support and will notify our Project Officer of our needs.

At this time we would request more assistance with evaluation, specifically benchmarks and constructs and the reporting of data.

Arizona's MIECHV Reporting Requirements

Arizona offers its assurances that the State will comply with the legislative requirement for submission of an annual report to the Secretary regarding the program and activities carried out under the program including State Home Visiting Program Goals and Objectives, Promising Program Update and Implementation of Home Visiting Program in Targeted At-risk Communities, Progress toward Meeting Legislatively Mandated Benchmarks, Home Visiting Program's CQI Efforts and Administration of State Home Visiting Program

Appendix I. Letters of Concurrence

Please note:

The Arizona Department of Health Services is the State's Title V agency and the Single State Agency for Substance Abuse.

The Arizona Department of Economic Security is the State's agency for Title II of the Child Abuse Prevention and Treatment Act (CAPTA), the State's child welfare agency and houses the State's Child Care and Development Fund (CCDF).

Appendix III. Data Collection Forms

Data collection measures and schedule														
			Measure attributes			Data Collection Schedule								
Benchmark1 Improved Maternal and Newborn Health	Name of the instrument	Reliability Validity (Cronbach's)	Who collects measure (e.g. NFP, HFA, ADHS or evaluator)	Participant time required (mins)	Mode of administration	Baseline (~28 wks gestation)	36 wks gestation	2 mo postpartum	6 mo postpartum	12 mo postpartum	18 mo postpartum	24 mo postpartum	30 mo postpartum	36 mo postpartum
Construct 1: Prenatal care														
Definition: Percent of women entering prenatal care by first trimester in the identified high-risk communities. **Progress:** Increase in the percentage of women entering prenatal care by first trimester in subsequent cohorts.	Interviews/Client records	NA	NFP, HFA	10	Self-reported	●	●	●						
Construct 2: Parental use of alcohol, tobacco, or illicit drugs														
Definition: Percent of women reporting using alcohol, cigarettes, and other illicit drugs in past 30 days at time of enrollment. **Progress:** Decrease in the percentage of women reporting use of alcohol, cigarettes, and other illicit drugs in past 30 days at subsequent measurements.	Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST)	0.85-0.87	NFP, HFA	10	Interview/ Survey	●	●	●	●	●	●	●	●	●
Construct 3: Preconception care														
a) **IPI Definition:** Percentage of women having a live birth who had less than 18 months between their previous live birth and the start of the most recent pregnancy. **Progress:** Decrease in the percentage of women conceiving postpartum after enrollment for each cohort.	Interviews/Client records	NA	NFP, HFA	10	Self-reported and medical records	●			●				●	●
b) **Self-rated health Definition:** Percentage of women who report good, very good or excellent health. **Progress:** Increase in the percentage of women reporting good, very good or excellent health at subsequent measurements.	Intake form		NFP, HFA	2	Sel-reported	●	●	●	●				●	●
Construct 4: Inter-birth intervals (Inter-pregnancy intervals)														
IPI Definition: Percentage of women having a live birth who had less than 18 months between their previous live birth and the start of the most recent pregnancy. **Progress:** Decrease in the percentage of women conceiving postpartum after enrollment for each cohort.	Interviews/Client records	NA	NFP, HFA	10	Self-reported and medical records	●		●	●	●	●	●	●	●
Construct 5: Screening for maternal depressive symptoms														
Definition: Percentage of women exhibiting depressive symptoms measured using EDPS.	Edinburgh Postnatal Depression Scale	0.87	NFP, HFA	5	Self-report			●	●					

Data collection measures and schedule															
			Measure attributes			Data Collection Schedule									
Benchmark1 Improved Maternal and Newborn Health	Name of the instrument	Reliability Validity (Cronbach's)	Who collects measure (e.g. NFP, HFA, ADHS or evaluator)	Participant time required (mins)	Mode of administration	Baseline (~28 wks gestation)	36 wks gestation	2 mo postpartum	6 mo postpartum	12 mo postpartum	18 mo postpartum	24 mo postpartum	30 mo postpartum	36 mo postpartum
Progress: Decrease in the percentage of women exhibiting depressive symptoms in subsequent measurements following enrollment.	(EDPS)														
Construct 6: Breastfeeding															
a) **Breastfeeding Definition:** Percentage of who indicated having breastfed their infants following birth until the child was 6 months old. **Progress:** Increase in the percentage of women breastfeeding their infants following postpartum enrollment in subsequent measurements.	Interviews/Client records	NA	NFP, HFA	5	Self-report			●	●					
Construct 6: Breastfeeding															
b) **Exclusive Breastfeeding Definition:** Percentage of who indicated having exclusively breastfed their infants without supplementation following birth until the child was 6 months old. **Progress:** Increase in the percentage of women exclusively breastfeeding their infants following postpartum enrollment in subsequent measurements following enrollment.	Interviews/Client records Intake form	NA	NFP, HFA	5	Self-report			●	●					
Construct 7: Well-child visits															
Definition: Percentage of enrolled children in each cohort in the ages 0 to 35 months who receive well-child visits during the course of the program. **Progress:** Increase in the percentage of children 0 to 35 receiving well-child visits at subsequent measurements following enrollment.	Interviews/Client records Intake form	NA	NFP, HFA	5	Self-report	●		●	●	●	●	●		●
Construct 8: Maternal and child health insurance status															
Definition: Percentage of women and children who are "covered" (i.e. enrolled and being accepted) by health insurance at any given point in time during the course of the program. **Progress:** Increase in the percentage of women and children covered by insurances during subsequent measurements following enrollment.	Interviews/Client records Intake form	NA	NFP, HFA	5	Self-report	●	●	●	●	●	●	●	●	●

Data collection measures and schedule														
			Measure attributes			Data Collection Schedule								
Benchmark 2: Child Injuries, Child Abuse, Neglect, or Maltreatment, and Reduction of Emergency Department Visits	Name of the instrument	Reliability Validity (Cronbach's)	Who collects measure (e.g. NFP, HFA, ADHS or evaluator)	Participant time required (mins)	Mode of administration	Baseline (~28 wks gestation)	36 wks gestation	2 mo postpartum	6 mo postpartum	12 mo postpartum	18 mo postpartum	24 mo postpartum	30 mo postpartum	36 mo postpartum
Construct 1: Visits for children to the emergency department from all causes														
Definition: Percentage of children in each cohort who visited emergency department during the course of the program. **Progress:** Decrease in the percentage of children who visit the emergency department during subsequent measurements following enrollment measured through self-reports and administrative data.	Interviews/Client records Hospital Discharge Data	NA	NFP, HFA, ADHS	NA	Medical Charts ED visit data	●				●			●	●
Construct 2: Visits of mother to the emergency department for all causes														
Definition: Percentage of mothers in each cohort who visited emergency department during the course of the program. **Progress:** Decrease in the percentage of mothers who visit the emergency department during subsequent measurements following enrollment measured through self-reports and administrative data.	Interviews/Client records Hospital Discharge Data	NA	NFP, HFA, ADHS	NA	Medical Charts ED visit data	●				●			●	●
Construct 3: Information provided or training of participants on prevention of child injuries														
Definition: Percentage of families in each cohort who were provided with information on prevention of child injuries. **Progress:** Increase in the percentage of families who were provided information on prevention of child injuries at subsequent measurements following enrollment.	NFP, HFA organization records and client records	NA	EVALUATOR	NA	Self-report	●				●			●	●
Construct 4: Incidence of child injuries requiring medical treatment														
Definition: Incidence of physical injury to children aged 0-14 years by gender in each cohort who sought medical treatment through inpatient hospitalization and/or emergency department during the course of the program expressed as a rate (per 100,000). Progress: Decrease in the incidence of physical injury to children aged 0-14 years by gender in each cohort in subsequent measurements following enrollment.	Interviews/Client records Hospital Discharge Data	NA	NFP, HFA, ADHS	NA	Medical Charts ED visit data	●				●			●	●
Construct 5: Reported suspected maltreatment of children in the program														
Suspected maltreatment is defined as allegations that were screened by Child Protective Services (CPS), but were not necessarily substantiated as maltreatment.	Client records, referrals to Child Protective Services (CPS), and data provided by CPS	NA	EVALUATOR	NA	Data obtained from CPS	●				●			●	●
Construct 6: Reported substantiated maltreatment of children in the program														
Substantiated maltreatment is defined as after allowing for notification and an appeals process an investigation concludes that child abuse or neglect has	Client records, referrals to CPS, and data provided by	NA	EVALUATOR	NA	Data obtained from CPS	●				●			●	●

Data collection measures and schedule														
			Measure attributes			Data Collection Schedule								
Benchmark 2: Child Injuries, Child Abuse, Neglect, or Maltreatment, and Reduction of Emergency Department Visits	Name of the instrument	Reliability Validity (Cronbach's)	Who collects measure (e.g. NFP, HFA, ADHS or evaluator)	Participant time required (mins)	Mode of administration	Baseline (~28 wks gestation)	36 wks gestation	2 mo postpartum	6 mo postpartum	12 mo postpartum	18 mo postpartum	24 mo postpartum	30 mo postpartum	36 mo postpartum
occurred.	CPS													
Construct 7: First-time victims of maltreatment for children in the program														
A first-time victim is defined as a child who has a maltreatment disposition of "victim" and never had a prior disposition of "victim."	Referrals to CPS and data obtained from CPS	NA	EVALUATOR	NA	Data obtained from CPS	●				●			●	●

Data collection measures and schedule															
			Measure attributes			Data Collection Schedule									
Benchmark 3: Improvement of School Readiness and Achievement	Name of the instrument	Reliability Validity (Cronbach's)	Who collects measure (e.g. NFP, HFA, ADHS or evaluator)	Participant time required (mins)	Mode of administration	Baseline (~28 wks gestation)	36 wks gestation	2 mo postpartum	6 mo postpartum	12 mo postpartum	18 mo postpartum	24 mo postpartum	30 mo postpartum	36 mo postpartum
Construct 1: Parent support for children's learning and development															
Definition: Average standardized scores on HFPI, KIPS, HOME, and SHIF scales at intake/enrollment. **Progress:** Increases (effect sizes of 0.10) in the average standardized scores in each cohort in subsequent measurements following enrollment.	on HFPI, KIPS, HOME, and SHIF	HFPI: 0.76-0.86 KIPS: 0.95 HOME & SHIF: 0.74-0.89	NFP, HFA, EVALUATOR	HFPI: 20 KIPS: 20	Interview/ Observation	●		●	●	●	●	●	●	●
Construct 2: Parent knowledge of child development and of their child's development progress															
Definition: Average standardized scores on KIPS and ASQ3 scales at intake/enrollment. **Progress:** Increases (effect sizes of 0.10) in the average standardized scores in each cohort in subsequent measurements following enrollment.	KIPS, ASQ3	KIPS: 0.95	NFP, HFA, EVALUATOR	KIPS: 20	Interview/ Observation	●		●	●	●	●	●	●	●
Construct 3: Parenting behaviors and parent-child relationship															
Definition: Average standardized scores on KIPS and ASQ3 scales at intake/enrollment. **Progress:** Increases (effect sizes of 0.10) in the average standardized scores in each cohort in subsequent measurements following enrollment.	KIPS, ASQ3	KIPS: 0.95	NFP, HFA, EVALUATOR	KIPS: 20	Interview/ Observation	●		●	●	●	●	●	●	●
Construct 4: Parent emotional well-being or parenting stress															
Definition: Average standardized scores on CES-D, PSI, and KIPS at intake/enrollment. **Progress:** Increases (effect sizes of 0.10) in the average standardized scores in each cohort in subsequent measurements following enrollment.	CES-D, PSI, KIPS	CES-D: 0.85 PSI: 0.70-0.83	NFP, HFA, EVALUATOR	30	Self-report	●		●	●	●	●	●	●	●
Construct 5: Child's communication, language, and emergent literacy															
Definition: Percentage of children 4-48 months of age in each cohort who score below 2 SD on the ASQ **Progress:** Decrease in the percentage of children 4-48 months of age in each cohort who score below 2 SD on the ASQ during subsequent measurements following enrollment.	ASQ	NA	NFP, HFA, EVALUATOR	10	Interview/ Observation	●		●	●	●	●	●	●	●
Construct 6: Child's general cognitive skills															
Definition: Percentage of children 4-48 months of age in each cohort who score below 2 SD on the ASQ **Progress:** Decrease in the percentage of children 4-48 months of age in each cohort who score below 2 SD on the ASQ during subsequent measurements following enrollment.	ASQ	NA	NFP, HFA, EVALUATOR	10	Interview/ Observation	●		●	●	●	●	●	●	●

Data collection measures and schedule															
			Measure attributes			Data Collection Schedule									
Benchmark 3: Improvement of School Readiness and Achievement	Name of the instrument	Reliability Validity (Cronbach's)	Who collects measure (e.g. NFP, HFA, ADHS or evaluator)	Participant time required (mins)	Mode of administration	Baseline (~28 wks gestation)	36 wks gestation	2 mo postpartum	6 mo postpartum	12 mo postpartum	18 mo postpartum	24 mo postpartum	30 mo postpartum	36 mo postpartum
Construct 7: Child's positive approach to learning including attention															
Definition: Percentage of children 4-48 months of age in each cohort who score below 2 SD on the ASQ **Progress:** Decrease in the percentage of children 4-48 months of age in each cohort who score below 2 SD on the ASQ during subsequent measurements following enrollment.	ASQ	NA	NFP, HFA, EVALUATOR	10	Interview/ Observation	●		●	●	●	●	●	●	●
Construct 8: Child's social behavior, emotion regulation, and emotional well-being															
Definition: Percentage of children 4-48 months of age in each cohort who score above 2 SD on the ASQ **Progress:** Decrease in the percentage of children 4-48 months of age in each cohort who score above 2 SD on the ASQ during subsequent measurements following enrollment.	ASQ:SE	NA	NFP, HFA, EVALUATOR	10	Interview/ Observation	●		●	●	●	●	●	●	●
Construct 8: Child's physical health and development															
a) ASQ Definition: Percentage of children 4-48 months of age in each cohort who score below 2 SD on the ASQ sub-scales of Gross and Fine Motor Skills. Progress: Decrease in the percentage of children 4-48 months of age in each cohort who score below 2 SD on the ASQ sub-scales of Gross and Fine Motor Skills during subsequent measurements following enrollment. b) BMI Definition: Percentage of children who are 85th percentile and below 95th percentile and are at-risk of becoming obese (i.e. 95th percentile or greater) at intake/enrollment. Progress: Decrease in the percentage of children who are at 85th percentile and below 95th percentile and are at-risk of becoming obese (i.e. 95th percentile or greater) during subsequent measurements following enrollment.	ASQ Interview/Home assessment	NA NA	NFP, HFA	20	Interview/	●		●	●	●	●	●	●	●

Data collection measures and schedule															
			Measure attributes			Data Collection Schedule									
Benchmark 4: Crime or Domestic Violence	Name of the instrument	Reliability Validity (Cronbach's)	Who collects measure (e.g. NFP, HFA, ADHS or evaluator)	Participant time required (mins)	Mode of administration	baseline (~28 wks gestation)	36 wks gestation	2 mo postpartum	6 mo postpartum	12 mo postpartum	18 mo postpartum	24 mo postpartum	30 mo postpartum	36 mo postpartum
Construct 1: Screening for domestic violence															
a) **DV Definition:** Average scores on chronicity for women at intake/enrollment based on CTS-2. **Progress:** Decrease in the annual percentage of women reporting chronicity during subsequent measurements following enrollment measured through CTS-2.	Revised Conflict Tactics Scale (CTS-2)	0.90	NFP, HFA, ADHS	10	Self-report/ Interview	●	●	●	●	●	●	●	●	●
b) **Assault-related injuries**: Annual rate of assault-related injuries for women 15-44 years as available in administrative data (hospital discharge data that includes inpatient and emergency department visits) with first listed diagnosis as an injury (ICD-9-CM codes 800.00-909.20, 910.00-994.90, 995.50-995.59, 995.80-995.85, 909.4, 909.9), and the first listed valid E-Code External Cause of Injury Codes: E960-E969, E979, E999.1 in communities with EBP intervention following enrollment of families. **Progress:** Decrease in the annual rates of assault-related injuries compared 2008 baseline for each specific CHAA (i.e. communities).	Interviews/Client records Hospital Discharge Data				Medical Charts ED visit data	●	●			●		●		●
Construct 2: Of families identified for the presence of domestic violence, number of referrals made to relevant domestic violence services															
Definition: Percentage of participants referred to domestic violence services. **Progress:** Increase in the percentage of participants referred to domestic violence service following assessment of chronicity during subsequent measurements.	Revised Conflict Tactics Scale (CTS-2)	0.90	NFP, HFA, EVALUATOR	10	Self-report/ Interview	●	●	●	●	●	●	●	●	●
Construct 3: Of families identified for the presence of domestic violence, number of families for which a safety plan was completed															
Definition: Percentage of participants who were screened for domestic violence for whom a safety plan was successfully completed. **Progress:** Increase in the percentage of participants who were screened for domestic violence for whom a safety plan was successfully completed during subsequent measurements following enrollment.	Intake	NA	EVALUATOR	30	Self-report/ Interview	●			●		●		●	●

Data collection measures and schedule															
			Measure attributes			Data Collection Schedule									
Benchmark 5: Family Economic Self-Sufficiency	Name of the instrument	Reliability Validity (Cronbach's)	Who collects measure (e.g. NFP, HFA, ADHS or evaluator)	Participant time required (mins)	Mode of administration	baseline (~28 wks gestation)	36 wks gestation	2 mo postpartum	6 mo postpartum	12 mo postpartum	18 mo postpartum	24 mo postpartum	30 mo postpartum	36 mo postpartum
Construct 1: Household income and benefits															
Data will be collected based on each source of income and benefit for each household member through initial intake/enrollment and subsequent measurements.	Intake/Client records	NA	NFP, HFA, EVALUATOR	5	Self-report	●				●		●		●
Construct 2: Employment or education of adult members of the household															
Data will be collected based on each source of income and benefit for each household member through initial intake/enrollment and subsequent measurements.	Intake/Client records	NA	NFP, HFA, EVALUATOR	5	Self-report	●				●		●		●
Construct 3: Health insurance status															
Data will be collected based on each source of income and benefit for each household member through initial intake/enrollment and subsequent measurements.	Intake/Client records	NA	NFP, HFA, EVALUATOR	5	Self-report	●			●	●	●	●	●	●

Data collection measures and schedule														
			Measure attributes			Data Collection Schedule								
Benchmark 6: Coordination and Referrals for Other Community Resources and Supporters	Name of the instrument	Reliability Validity (Cronbach's)	Who collects measure (e.g. NFP, HFA, ADHS or evaluator)	Participant time required (mins)	Mode of administration	Baseline (~28 wks gestation)	36 wks gestation	2 mo postpartum	6 mo postpartum	12 mo postpartum	18 mo postpartum	24 mo postpartum	30 mo postpartum	36 mo postpartum
Construct 1: Number of families identified for necessary services														
Definition: Percentage of families identified as in need of service as identified through EBP-specific assessment tools. **Progress:** Increase in the percentage of families who were randomly selected following enrollment in each cohort having being satisfied with coordination and referral for each EBP as assessed by independent evaluator.	Interview/Client records	NA	NFP, HFA, EVALUATOR	5	Self-report	●			●	●	●	●	●	●
Construct 2: Number of families that required services and received a referral to available community resources														
A referral is defined as the provision of information about another organization that provides services which address identified client needs. The information provided to the participant shall include the name of the organization, phone number, address, description of services available, and assistance with scheduling an appointment and obtaining transportation to access these services.	Interview/Client records	NA	NFP, HFA	5	Self-report	●			●	●	●	●	●	●
Construct 3: MOUs														
Memorandums of Understanding detail and establish a collaborative relationship between organizations/agencies and how these entities will work together to address clients' needs. To facilitate the coordination of services and the provision of referrals to other community resources and supports, the Arizona home visiting program will demonstrate an annual increase in the number of MOUs established with social service agencies in the target communities. Improvement in this construct will be documented by a MOU signed by the home visiting program and social service organization.	# of MOUs	NA	ADHS	NA	Count of MOUs					●		●		●
Construct 4: Information sharing														
The details specifying the type of information to be shared as well as mechanism to ensure client confidentiality will be delineated in Memorandums of Understanding signed by both agencies. To demonstrate an improvement in this construct, the Arizona home visiting program will report an annual increase in the number of MOUs established which include information sharing agreements. Improvement will be demonstrated by counting the total number of signed MOUs with information sharing agreements.	# of MOUs	NA	ADHS	NA	Count of MOUs with information sharing agreements					●		●		●
Construct 5: Number of completed referrals														
The information sharing agreements established with other social service agencies will provide methods for tracking clients' utilization of these services.	Interview/Client records, Data obtained though Information Sharing agreement	NA	NFP, HFA, ADHS	NA	Self-reported, Data obtained from information sharing agreements	●			●	●	●	●	●	●

Family Spirit Table 1. Data collection measures and schedule												
			Measure attributes			Data Collection Schedule						
	Name of the instrument	Reliability (Cronbach's alpha)	Who collects measure	Parti-cipant time required (mins)	Mode of administration	Each Lesson Visit	Baseline (~32 wks gestation)	6 mo postpartum	12 mo postpartum	24 mo postpartum	36 mo postpartum
Benchmark 1: Improved Maternal and Newborn Health												
Prenatal care	VISITATION FORM	NA	FHE	5	INTERVIEW	●					
Prenatal use of alcohol, tobacco, or illicit drugs	VOIT SURVEY	0.70	IE	10	ACASI		●	●	●	●	●
Preconception care	VISITATION FORM	NA	FHE	5	INTERVIEW	●					
Inter-birth intervals	DEMOGRAPHIC FORM	NA	IE	10	INTERVIEW		●	●	●	●	●
Screening for maternal depressive symptoms	CES-D	0.88	IE	10	ACASI		●	●	●	●	●
Breastfeeding	VISITATION FORM	NA	FHE	5	INTERVIEW	●					
Well-child visits	VISITATION FORM	NA	FHE	5	INTERVIEW	●					
Maternal and child health insurance status	DEMOGRAPHIC FORM	NA	IE	10	INTERVIEW		●	●	●	●	●
Benchmark 2: Child Injuries, abuse, neglect, or maltreatment, and reduction of ED visits												
Visits for children to ED from all causes	MED CHART REVIEW	NA	IE	0	CHART REVIEW				●	●	●
Visits of mothers to ED from all causes	MED CHART REVIEW	NA	IE	0	CHART REVIEW				●	●	●
Information provided or training of participants on prevention of child injuries	VISITATION FORM	NA	FHE	0	PROCESS MEASURE	●					
Incidence of child injuries requiring medical treatment	MED CHART REVIEW	NA	IE	0	CHART REVIEW				●	●	●
Reported suspected maltreatment for children (allegations that were screened but not necessarily substantiated)	SOCIAL SERVICES CHART REVIEW*	NA	IE	0	CHART REVIEW				●	●	●
Reported substantiated maltreatment (substantiated/ indicated/alternative response victim) for children	SOCIAL SERVICES CHART REVIEW*	NA	IE	0	CHART REVIEW				●	●	●
First-time victims of maltreatment for children	SOCIAL SERVICES CHART REVIEW*	NA	IE	0	CHART REVIEW				●	●	●
Benchmark 3: Improvements in School Readiness and Achievement												
Parent support for children's learning and development	HOME & SHIF	0.74-0.89	IE	30	OBSERVATION/INTERVIEW				●	●	●
Parent knowledge of child development and of their child's developmental progress	KNOWLEDGE TEST	0.65	IE	15	ACASI		●	●	●	●	●
Parenting behaviors and parent-child relationship	HOME & SHIF PIRGAS	0.74-0.89 0.83	IE	30 15	OBSERVATION/INTERVIEW ACASI				●	●	●
Parent emotional well-being or parenting stress	CES-D PSI	0.88 0.60-0.90	IE	10 10	ACASI			●	●	●	●
Child's communication, language and emergent literacy	ASQ	0.38-0.76	IE	20	OBSERVATION/INTERVIEW			●	●	●	●

Child's general cognitive skills	ASQ	0.38-0.76	IE	20	OBSERVATION/INTERVIEW			●	●	●	●
Child's positive approaches to learning including attention	ASQ ITSEA	0.38-0.76 0.63-0.81	IE	20 15	OBSERVATION/INTERVIEW			●	●	●	●
Child's social behavior, emotion regulation, and emotional well-being	ITSEA	0.63-0.81	IE	15	INTERVIEW			●	●	●	●
Child's physical health and development	ASQ	0.38-0.76	IE	20	OBSERVATION/INTERVIEW			●	●	●	●
Benchmark 4: Crime or Domestic Violence (choose one)												
Screening for DV	ABUSIVE BEHAVIOR INVENTORY	0.70-0.88	IE	10	INTERVIEW		●	●	●	●	●
Of families identified for the presence of DV, number of referrals made to relevant services	VISITATION FORM	NA	FHE	0	PROCESS MEASURE						
Of families identified for the presence of DV, number of families for which a safety plan was completed	VISITATION FORM	NA	FHE	0	PROCESS MEASURE						
Benchmark 5: Family Economic Self-Sufficiency												
Household income and benefits	DEMOGRAPHIC FORM	NA	IE	10	INTERVIEW		●		●	●	●
Employment or education of adult members of the household	DEMOGRAPHIC FORM	NA	IE	10	INTERVIEW		●		●	●	●
Health insurance status	DEMOGRAPHIC FORM	NA	IE	10	INTERVIEW		●		●	●	●
Benchmark 6: Coordination and Referrals for Other Community Resources and Supports												
Number of families identified for necessary services	VISITATION FORM	NA	FHE	0	PROCESS MEASURE	●					
Number of families that required services and received a referral to resources	VISITATION FORM	NA	FHE	0	PROCESS MEASURE	●					
MOUs with other social service agencies in the community	TRACKING LOG	NA	PROJECT COORD.	0	PROCESS MEASURE						
Information sharing: number of agencies with which the home visiting provider has a clear point of contact in the collaborating community that includes regular sharing of information between agencies	TRACKING LOG	NA	PROJECT COORD.	0	PROCESS MEASURE						
Number of completed referrals	VISITATION FORM	NA	FHE	0	PROCESS MEASURE	●					

FHE= Family Health Educator
IE= Independent Evaluator
ACASI (Audio Computer-Assisted Self-Administered Instrument)
*We do not currently have approval from the White Mountain Apache Tribe to report child maltreatment data. In the event that we are not granted this approval, we will work with the Tribe and ADHS to find other means of reporting on this benchmark.

Visitation Form. This is a form completed by the Family Health Educator after each completed home visit with a family. The Visitation Form documents all details of the visit, including duration of visit, lesson topics covered, referrals made, and referrals completed. In addition, part of the form is completed as a structured interview to ask the participant about recent doctor's visits that they and/or their child have attended, current and past breastfeeding practices, any current mental health or domestic violence concerns and related safety planning, and adverse events.

Voices of Indian Teens (VOIT) Survey: Questions about Alcohol and Drugs. *(1)* This is a self-report questionnaire drawn from the alcohol and drugs scales of the Voices of Indian Teens Survey (NIAAA grant R01 AA 08474, Spero Manson PI). Topics include: quantity, frequency and qualitative aspects of alcohol and drug use; age of first use; family history of substance abuse; community, peer, and personal attitudes and beliefs about substance abuse.

Demographic Form. Completed as a structured interview with participants, this measure obtains a broad range of demographic information including age, socioeconomic, educational and employment status, living situation, marital/partner status, gestational age, maternal birth spacing, and contact information.

Center for Epidemiological Studies-Depression Scale (CES-D). *(2-10)* The CES-D is a widely used 20-item self-report depression scale. The measure has a large body of supportive psychometric data on adolescents, American Indians, and expectant and postpartum mothers in our and others' studies.

Medical Chart Reviews. A Medical Chart Review Form is used to collect data from mother's and children's medical records regarding Emergency Department visits and childhood injuries. A medical release form must be signed prior to accessing any medical chart data.

Social Services Chart Reviews. If permission is granted from Tribal Social Services and from the Tribe, a Social Services Chart Review Form will be used to collect data regarding reported suspected maltreatment of children, reported substantiated maltreatment of children, and first-time victims of maltreatment.

Home Observation for Measurement of the Environment (HOME). *(11-12)* The HOME is a widely utilized checklist observational measure of parental behavior, parent-child interaction, and the home environment. From ages 0-3, the HOME consists of 45-items that include six sub-scales: Maternal Responsivity, Acceptance, Learning Materials, Variety (life experiences), Maternal Involvement, and Organization of the Home. From ages 3-6, the HOME consists of a 55-item instrument that includes eight sub-scales: Maternal Responsivity, Acceptance, Learning Materials, Variety, Language Stimulation, Physical Environment, Academic Stimulation, and Modeling. The measure has supportive psychometric properties, and HOME scores have been shown to improve with home visiting interventions.

Supplement to the Home for Impoverished Families (SHIF). *(13)* The SHIF is a 20-item observational measure of parental behavior, parent-child interaction, child's daily routine, and the home environment for children 0-3 (adapted to age 6) living in impoverished settings. The measure is designed to be used in conjunction with the HOME and has high validity and reliability.

Parent Knowledge Test. This instrument is a 30-item self-report multiple-choice test created by the investigator team to coincide with lessons taught in the Family Spirit curriculum and measure cumulative knowledge gains related to lesson objectives. Topics include: substance use, pregnancy,

labor, delivery, nutrition, breastfeeding, parenting, home safety, immunizations, and well baby care.

Parent-Infant Relationship Global Assessment Scale (PIRGAS). *(14-15)* The PIRGAS provides a continuously distributed scale of the quality of the infant-parent relationship, ranging from 'well-adapted' to 'dangerously impaired'. In using the PIRGAS, there are three components of an infant–parent relationship to assess: behavioral quality of the interaction, affective tone and psychological involvement. Nine anchored points define differing levels of relationship adaptation.

Parenting Stress Index (PSI). *(16)* The Parenting Stress Index-Short Form is a 36-item self-report covering the following domains: Parental Distress, Parent-Child Dysfunctional Interaction, Difficult Child.

ASQ Ages and Stages Questionnaire (ASQ). *(17)* This is a parent-report questionnaire used to monitor all domains of child development and screen children for developmental delays during the first 5 years of life. This can be administered as an interactive activity with the mother and child.

Infant Toddler Social Emotional Assessment (ITSEA). *(18-19)* The ITSEA is a 126-item scale that assesses four primary domains of behavior for ages 12-36 months including: Externalizing, Internalizing, Dysregulation, and Competence with three subscale indices: Social Relatedness, Atypical Behaviors, and Maladaptive Behaviors. Psychometric properties are positive.

Abusive Behavior Inventory. *(20)* This is a 30-item scale with 2 subscales that measure the frequency of physical and psychological abusive behaviors. The physical abuse subscale includes 13 items, 2 of which assess sexual abuse. This scale is designed for females with current or former intimate partners.

Tracking Log. Each FHE maintains one electronic Tracking Log which lists all enrolled participants and dates of all scheduled and completed visits. The Project Coordinator maintains a separate Tracking Log which lists all recruitment activities and community partnerships, including inservices, community presentations, and MOUs with community agencies.

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Appendix IV. Organizational Chart