Healthy Families Arizona
Evaluation Report
2003

November 2003

Prepared by:
LeCroy & Milligan Associates, Inc.
620 N. Country Club
Tucson, AZ 85716
(520) 326-5154
FAX (520) 326-5155

Prepared for:
The Arizona Department of Economic Security
Division of Children, Youth & Families
Office of Prevention and Family Support
1789 W. Jefferson, Site Code 940A
Phoenix, Arizona 85007

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Craig W. LeCroy, PhD, and Pat Beauchamp, MSW, were the primary authors of this report. Kerry Milligan, MSSW provided guidance to and oversight of both the evaluation and the creation of this report. The evaluation team was instrumental in the creation of this report. Cindy Jones conducted statistical analyses. Olga Valenzuela and Veronica Urcadez performed data entry and data cleaning. Connie Warren edited and formatted the report.

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Healthy Families Arizona 2003 Evaluation Report Highlights

Program Participants

- 69% of mothers were single
- 85% of families were on AHCCCS
- 15% of infants were born <37 weeks gestation (state average 10%)
- 14% of infants had low birth weight (state average 7%)

Service Delivery

- 2,278 families were served
- 90% (2,043) engaged with the program (4 or more home visits)
- 63% remained in the program 1 year or longer
- Average length of time in program grew to 698 days (595 in 2002)
- 14% terminated due to program completion (10% in 2002)
- Team developed Problem Situation Inventory

Outcomes

- 99.03% of families did not have a substantiated CPS match (comparison group 98.72%)
- Average Parenting Satisfaction Index score improved
- 62% of parents' total stress score improved
- Those with highest stress (above 85th percentile) had most gain
- Immunization rate for infants was 89% (state average 71%)
- 97% of children were linked to a medical doctor
- 14% of mothers had subsequent pregnancies (31% 18 or younger)

Critical Elements

- Evaluation data indicates that the program adheres to Critical Elements

Recommendations

- 2-Month Program Satisfaction Survey should be reviewed
- Continue to emphasize family planning, especially with young mothers

Future Directions

- Longitudinal study should be pursued
- The supervisory relationship should be evaluated as an extension of the Problem Situation Inventory

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Executive Summary

Children belong in families, which, ideally, serve as a sanctuary and a cushion from the world at large. Parents belong to society and are a part of that greater world. Sometimes parents are a channel to the larger society, sometimes they are a shield from it. Ideally, they act as filters, guiding their children and teaching them to avoid the tempting trash.

Louise Hart, a noted psychologist and author, in her book
On the Wings of Self-Esteem

As much as parents seek to guide their children as they attempt to grow into healthy, productive adults, society on occasion has the task to help support the parents in that endeavor. Healthy Families Arizona is a program designed to provide that support, and through its efforts reduce the incidence of child abuse and neglect, provide stability for at-risk families, and grow a new generation of healthy families in the state.

The Healthy Families Arizona Program

Healthy Families Arizona is a home visitation program designed to provide supportive services and education to parents of newborns who might benefit from support to strengthen their families at this crucial time. The goals of the program include:

- Promote positive parent/child interaction
- Improve child health and development
- Prevent child abuse and neglect

All services are voluntary and assistance is typically provided for 12 to 18 months but may be provided for up to five years. Families enter the program based on a two level screening and assessment process. In the hospital after a child's birth, the family can consent to an initial screening, which identifies family, parental, child and community risk factors associated with child abuse and neglect. If the screening is assessed as positive (indicating potential increased needs), the family is referred to a Family Assessment

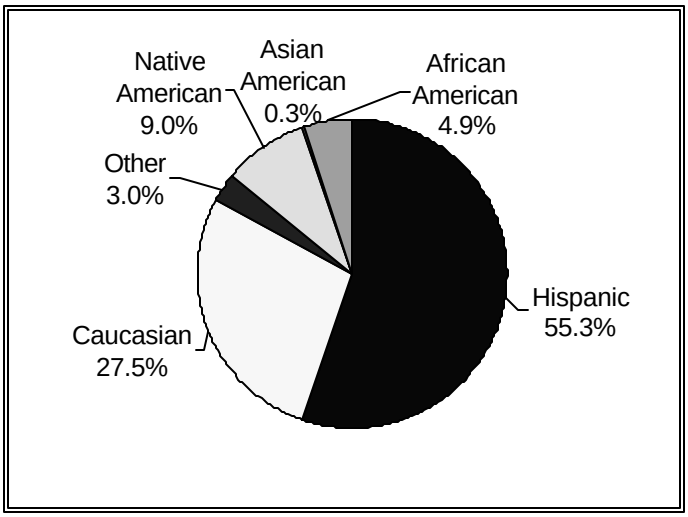
Worker who conducts a more detailed interview and assessment with the family. If the assessment is positive (family may be in need based on risk), the family is offered intensive home visiting services through the Healthy Families Arizona program. Any family who has had or receives a substantiated report of child abuse and/or neglect from Child Protective Services in Arizona will be excluded from the program, as required by law. Since the program is voluntary, the family can withdraw from the program at any time.

After the family is referred to the program and accepts home visitation services, a Family Support Specialist visits the family in their home on a regular basis to provide supportive services and education. The Family Support Specialist seeks to develop a trusting, open, and constructive relationship with the family to meet their individual needs. The core Healthy Families Arizona services are:

- Emotional support
- Assistance in developing positive parenting skills
- Education on child development and nutrition
- Education and assistance in problem solving and coping skills
- Education on preventive health care (immunizations, links to medical doctor)
- Linkages to preschool resources
- Referrals related to education, employment, mental health, and substance abuse services

This report focuses on aggregate data that are summarized across the 23 sites that make up the Healthy Families Arizona program. This report presents the evaluation data for the cohort of participants who received services in the Healthy Families Arizona program between the period of July 1, 2002 and June 30, 2003. This includes all families who received services at any time during the study period regardless of when they entered the program. In this year's report, more extensive site level data can be obtained in the Appendices.

The Families

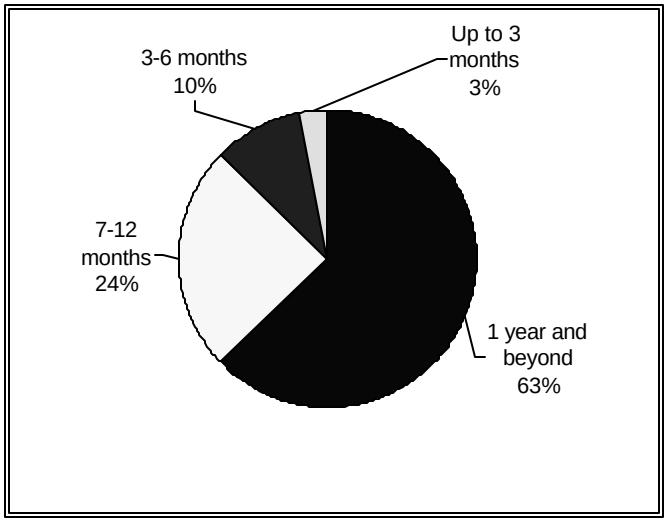


Healthy Families Arizona served a diverse set of program participants who displayed one or more of the risk factors positively associated with potential for child neglect or abuse. Prominent among these were single motherhood, mothers without a high school education, and mothers with late, inadequate, or no prenatal care. A high number of parents scored "severe" on several of the Family Stress Checklist Scales, including coping with a history of child abuse, having low self-esteem and feeling isolated, and dealing with current life stress, including low income, poor housing, and relationship difficulties. Finally, a larger than average number of infants were born early (less than 37 weeks gestation) and with low birth weight—risk factors associated with potential child abuse and neglect.

Risk Factor	Rate
Teen Births (<19)	21.3%
Births to single parents	69.2%
Less than high school education	61.9%
Not employed	85.3%
No health insurance	3.4%
Late or no prenatal care	37.6%
Median yearly income	$9,600

Service Delivery

During the study year, 2,278 families were served and 2,043 remained engaged for at least three months. For those who did become engaged in the program, factors such as marital status, depression, and infant birth weight seem to have had some bearing on the decision. The majority of the engaged families stayed with the program for at least one year, with the average time between enrollment and termination increasing this year to nearly two years (698 days). While the majority of the families terminate because they move or cannot be contacted, an increasing number terminate due to program completion—13.8 percent this year compared to 10.5 percent the previous year. In regard to program satisfaction, over 95 percent of all participants were satisfied with the program.



Additionally, the program team (both evaluation and Technical Assistance/Quality Assurance) worked with the sites to develop a Problem Situation Inventory to use in training and staff development. This effort identified 77 unique situations encountered by home visitors, which were then scored in terms of frequency and difficulty. Finally, analyses were done that yielded five clusters of problems. The goal of this effort is to use these data to develop training modules to prepare the home visitors to better respond to these real life difficulties.

Program Outcomes

Healthy Families Arizona participants had a lower rate of substantiated reports of child neglect and abuse when compared to a group of families eligible for the program but who received less than four home visits.

Group	Percent without substantiated report
Healthy Families Arizona Participants	99.03% (n=1554)
Comparison Group Participants	98.72% (n=234)

The participant families showed significant improvement on all but one subscale on the Parenting Stress Index, and demonstrated greater safety practices during the time they spent in the program. On health-related measures, the infants of participating families were immunized at a rate that exceeds the state standard, were linked to a doctor at a high rate, and most did not use the emergency room in an inappropriate manner.

Immunization period	Percent immunized	Immunization rate for 2-year-olds in Arizona
2 month	95.1%	
4 month	92.8%	
6 month	85.1%	
12 month	92.0%	
Received all 4 in the series	88.8%	71.3%

For this study period, an increased percentage of infants were screened using the Ages and Stages Questionnaire, and those identified with developmental delays were appropriately referred. In regard to maternal life course outcomes, 14.2 percent of the mothers had subsequent pregnancies, with 31.4 percent of those 18 years or younger. In addition, during the period of time they were involved in the program, a progressively higher percentage of mothers became employed, and over one-quarter of those who did not finish high school or obtain a GED did so or were in the process of doing so.

Critical Elements

A review of the data indicates that the Healthy Families Arizona program adheres to the 14 Critical Elements mandated by the state. This is based on a review of the available evaluation data and an interview with the Healthy Families Arizona TA / QA staff. Healthy Families America sees adherence to the critical elements as one way to ensure that the program is operating in accordance with best practices. This review indicates that Healthy Families Arizona continues to operate in this manner.

Conclusions and Recommendations

This year's study indicates that the Healthy Families Arizona program continues to meet the needs of many of the state's at risk families in an effective manner. The program is recruiting the target population, providing services in a manner that results in a 90 percent engagement rate, and continuing to show positive results in multiple indicators. There are two recommendations that result from this evaluation.

- The Initial Parent Satisfaction Questionnaire, administered after the parent has been in the program approximately two months, should be reviewed. Currently, the survey does not provide any differentiation between families who remain engaged and those who do not.

- The program should continue to emphasize family planning. Fourteen percent of the mothers had a subsequent pregnancy while in the program—30 percent of those were 18 or younger.

These two recommendations, along with continued adherence to the Critical Elements, should offer the program the opportunity to continue providing effective services to a population clearly in need.

Introduction

Children belong in families, which, ideally, serve as a sanctuary and a cushion from the world at large. Parents belong to society and are a part of that greater world. Sometimes parents are a channel to the larger society, sometimes they are a shield from it. Ideally, they act as filters, guiding their children and teaching them to avoid the tempting trash.

Louise Hart, a noted psychologist and author, in her book
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In some ways, this statement exemplifies the role parents play in creating healthy families in our society, and ultimately producing productive young adults. Unfortunately, fulfilling that role can be a vexing challenge for some parents. As Kamerman and Kahn (1995) observe:

> *Parents who are stressed or disturbed will have more difficulty in meeting their children's needs. Parents who have little support—from friends, relatives, neighbors, or the community—are more likely to be overburdened by the demands of their babies and to be unable to respond to them adequately. Parents who experience severe poverty or economic insecurity, who cannot satisfy their own basic needs, are likely to have difficulty in responding to their children's needs.*

Stress, isolation, and poverty are prominent risk factors for child abuse and neglect. As much as parents seek to guide their children as they attempt to grow into healthy, productive adults, society on occasion has the task to help support the parents in that endeavor. Healthy Families Arizona is a program designed to provide that support, and through its efforts reduce the incidence of child abuse and neglect, provide stability for at-risk families, and grow a new generation of healthy families in the state.

The Healthy Families Arizona Program

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from support to strengthen their families at this crucial time. The goals of the program include:

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- Improving child health and development
- Preventing child abuse and neglect

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[1] Separate site reports are produced quarterly and provided to each site to provide feedback to the site as a way of enhancing program quality.

In This Report

The Healthy Families Arizona Evaluation Report 2002 (published November 2002) summarized the cumulative evidence from 10 years of evaluation. That summary concluded the convergent data suggest the program was effective based on a number of findings, including:

- replicated evaluations showing improvement from baseline to post assessment periods,
- positive results when using a comparison group on the Parenting Stress Index,
- replication of positive gains and positive results from a comparison group using the Child Abuse Potential Inventory,
- findings showing the comparison group getting worse on most measures while the Healthy Families participants were showing improvements,
- findings showing immunization rates higher than the statewide average, and
- findings that consistently show the Healthy Families participants had lower rates of child abuse and neglect when contrasted to a comparison group not receiving the program.

Following a review of the Fiscal Year 2002 data, the report concluded with a series of recommendations based on Gutterman's (2001) practice principles.

This report builds on the previous work by reviewing the Fiscal Year 2002 data in a manner similar to last year. Family demographic data are reviewed in order to assess whether the program is reaching the families it was designed for. Service delivery is discussed in regard to family engagement and retention, and participant satisfaction. In the same section, work completed over the last year regarding development of a problems situation inventory / tool is reviewed. Finally, selected outcome data is reviewed. Building upon the previous year's discussion regarding best practices, the overall program is assessed against the Healthy Families Arizona Critical Elements in the discussion section. These critical elements are seen as a framework for ensuring adherence to best practices.

Program Participants

The Healthy Families Arizona program is designed to reach out to families with multiple stressors. These ***risk factors*** are positively associated with poor child health and development outcomes as well as increased risk for child abuse and neglect (LeCroy & Milligan Associates, 2001). Exhibit 1 highlights the risk factor data for the Fiscal Year 2003 program participants.

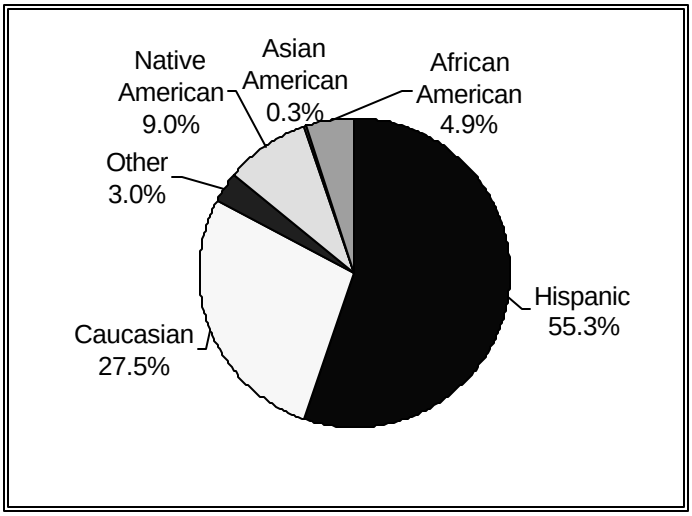
Exhibit 1: Selected risk factors for Health Families Arizona mothers at intake.

Risk Factor	Rate
Teen births (<19)	21.3%
Births to single parents	69.2%
Less than high school education	61.9%
Not employed	85.3%
No health insurance	3.4%
Late or no prenatal care	37.6%
Median yearly income	$9,600

These data illustrate that the screening process is recruiting (and engaging) the population targeted by Healthy Families Arizona. The most notable factors are the high rates of births to single parents and parents without a high school education. While the number of parents without health insurance is low, 85 percent of those with insurance are on Arizona Health Care Cost Containment System (AHCCCS).

The Healthy Families Arizona program also seeks to serve a ***culturally diverse population***. Exhibit 2 details the population served by the various sites across the state.

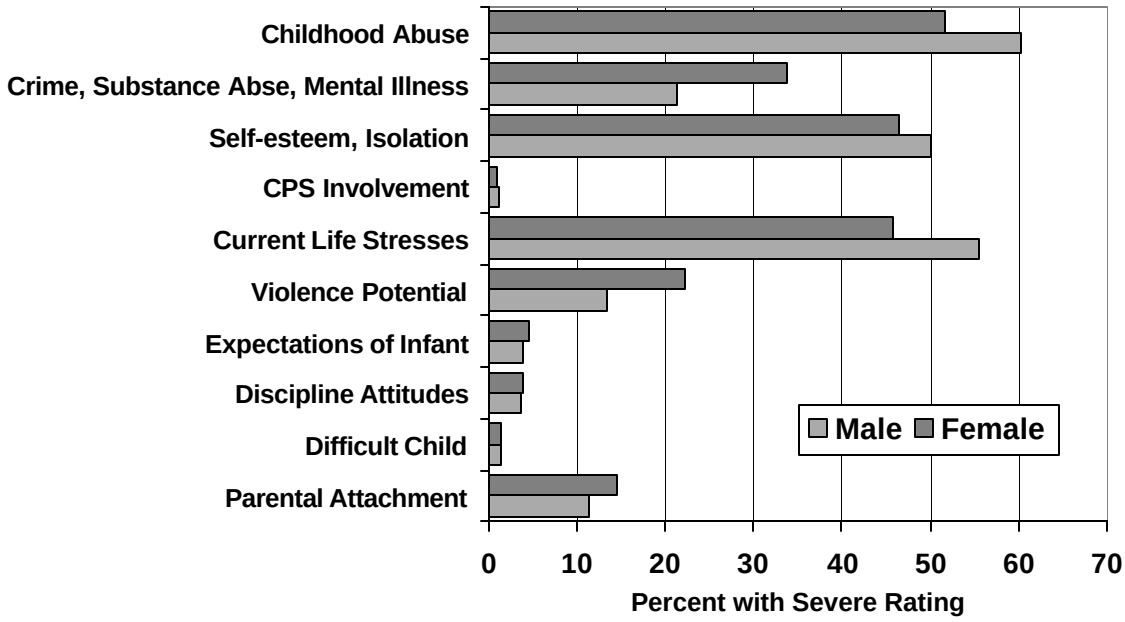
Exhibit 2: Ethnicity of Healthy Families Arizona mothers.



These data are collected by the site and used to ensure that the staff is representative of the population they serve. Site level data regarding program participant ethnicity is found in Appendix A.

In addition to collecting basic demographic data during the initial screening period, the mother and the father—when they are involved—are each assessed using the ***Family Stress Checklist***. This checklist evaluates each parent's level of stress in 10 domains. The data for the parents scoring severe on each of the scales are presented in Exhibit 3.

Exhibit 3: Percentage of parents rated severe on the Family Stress Checklist.



As in previous years, the three most significant stressors are coping with a history of child abuse, having low self-esteem and feeling isolated, and dealing with current life stress, including low income, poor housing, and relationship difficulties.

During the screening process, ***high-risk characteristics*** of infants entering the program are also assessed (see Exhibit 4).

Exhibit 4: Percentage of infants with high-risk characteristics.

Risk Factor	HFAz Rate	State Rate (2001 Data)
Born <37 weeks gestation	15.3%	9.9%
Birth defects	1.3%	NA
Low birth weight	14.0%	7.0%
Positive alcohol screen	0.4%	NA

The percentage of Healthy Families Arizona infants born early (less than 37 weeks gestation) was noticeably higher—15.3 percent—than the statewide average—9.9 percent.[2] The percentage of low birth weight infants in the program is double the state average—14 percent versus seven percent. These risk factors are known to be associated with increased potential for child abuse and neglect. The Healthy Families Arizona home visitors support the needs of these families with high-risk infants by providing support, assessment, and referral from the time of birth onward.

Healthy Families Arizona served a diverse set of program participants who displayed one or more of the risk factors positively associated with potential for child neglect or abuse. Prominent among these were single motherhood; mothers without a high school education; and mothers with late, inadequate, or no prenatal care. A high number of parents scored severe on several of the Family Stress Checklist Scales that included: coping with a history of child abuse; having low self-esteem; feeling isolated; and dealing with current life stress, including low income, poor housing, and relationship difficulties. Finally, a larger than average number of infants were born early (less than 37 weeks gestation) and with low birth weight—risk factors associated with potential child abuse and neglect.

[2] Based on 2001 data from the Department of Health Services Vital Statistics website.

Service Delivery

Two aspects of service delivery will be reviewed in this report. First, data regarding program engagement and retention are reviewed. These data can be viewed as a barometer of the success of the program in meeting its objective of supporting high risk families and reducing the potential for child neglect and abuse. These data form the output of the service delivery effort—they tell the story of what happened. Equally important to the success of the program is the "why" of what happened—why did the parents stay engaged in the program, what did the home visitors do or not do to help keep the families in the program? Part of the answer comes from the families themselves, based on program satisfaction data. That program satisfaction data will be reviewed to help answer the question. One of the issues that effects program satisfaction and, consequently, program retention, is the ability of the home visitors to deal with problem situations that arise in the course of program delivery. These problem situations often limit the ability of the home visitors to provide the services the families need. Over the last year, there has been an effort to develop a tool to help prepare home visitors to deal with the most serious and frequent of these problem situations. This tool will also be reviewed in this section.

The ***total number of families served*** by all Healthy Families Arizona sites during the study period (July 1, 2002 through June 30, 2003) was 2,278**.** The distribution by site is shown in Exhibit 5. The number of families served by the sites is based on the funding level and number of Family Support Specialists at each site. The broad range of services offered by each site continues to be a strength of the program. These services are designed to meet needs ranging from child safety education and infant health needs (immunizations), to basic parenting skills. This strength is evident in the large number of families who stay engaged with the program despite its volunteer nature.

Exhibit 5: Healthy Families Arizona families served by site.

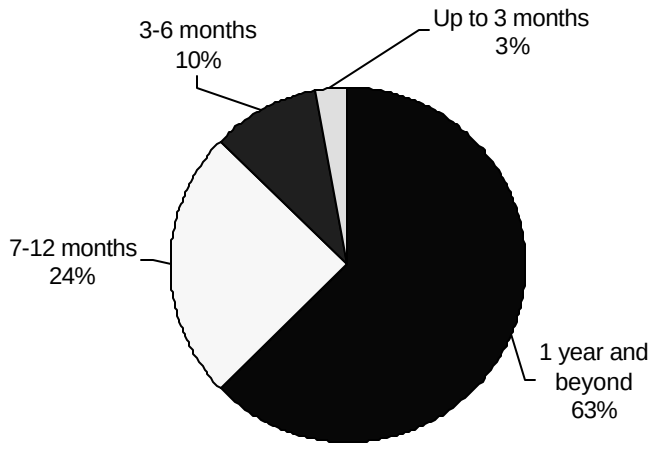
Site and Participants Served		Site and Participants Served	
Cochise County		Coconino County	
Douglas/Bisbee	105	Flagstaff	87
Sierra Vista	87	Page	52
		Tuba City	58
Maricopa County		Mohave County	
Central Phoenix	74	Lake Havasu City	127
East Valley Phoenix	80	Pima County	
Maryvale	105	Casa de los Niños	159
Mesa	115	CODAC	102
South Phoenix	88	La Frontera	152
Southeast Phoenix	97	Pascua Yaqui	42
Sunnyslope	105	Child & Family Resources	63
Pinal County		Santa Cruz County	
Pinal County Department of Public Health	109	Nogales	124
Yuma County		Yavapai County	
Yuma	107	Prescott	162
		Verde Valley	78
TOTAL ALL SITES = 2,278			

Engagement is a critical factor in the success of home visitation programs. Families may enroll in the program, but they are not considered actively engaged until four home visits have been completed. In the current study year, 90 percent (2,043) of the families served by the program became engaged—a slight increase from the previous year.

Looking at ***the difference between those families who engage and those that do not***, there are three factors that seem to differentiate between the two groups. First, approximately 16 percent more of those who did not engage were single parents. Secondly, more of the families who did not engage had a history of or were currently suffering from depression (a 9% difference). Finally, families with low birth weight infants engaged at a higher rate than families with normal weight infants (92.4% versus 89.5%).

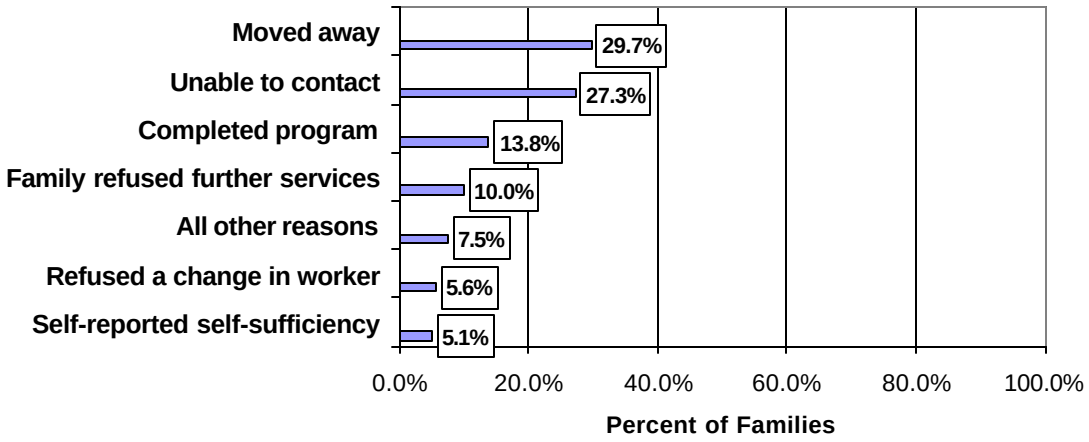
The ***average length of time in the program at termination for engaged families*** is shown in Exhibit 6. The data illustrate a continuing trend toward increased time in the program by families. Only three percent terminated within the first three months—compared to 4 percent previously; 62.8 percent participated for a year or longer—compared to 56 percent previously; and the average length of time in the program prior to termination grew from 595 days to 698 days.

Exhibit 6: Average length of time in program at termination for engaged families.



Understanding why families leave the program is also important. This allows the program providers to better tailor engagement and retention strategies. The data for the families terminating are shown in Exhibit 7. As can be seen, the two main reasons for termination are the family moved away or the family could not be contacted. The data also indicate that the programs continue to show improvement, with 13.8 percent of the families terminated because they completed the program, an increase from 10.5 percent the previous year.

Exhibit 7: Reasons for program termination—engaged families.

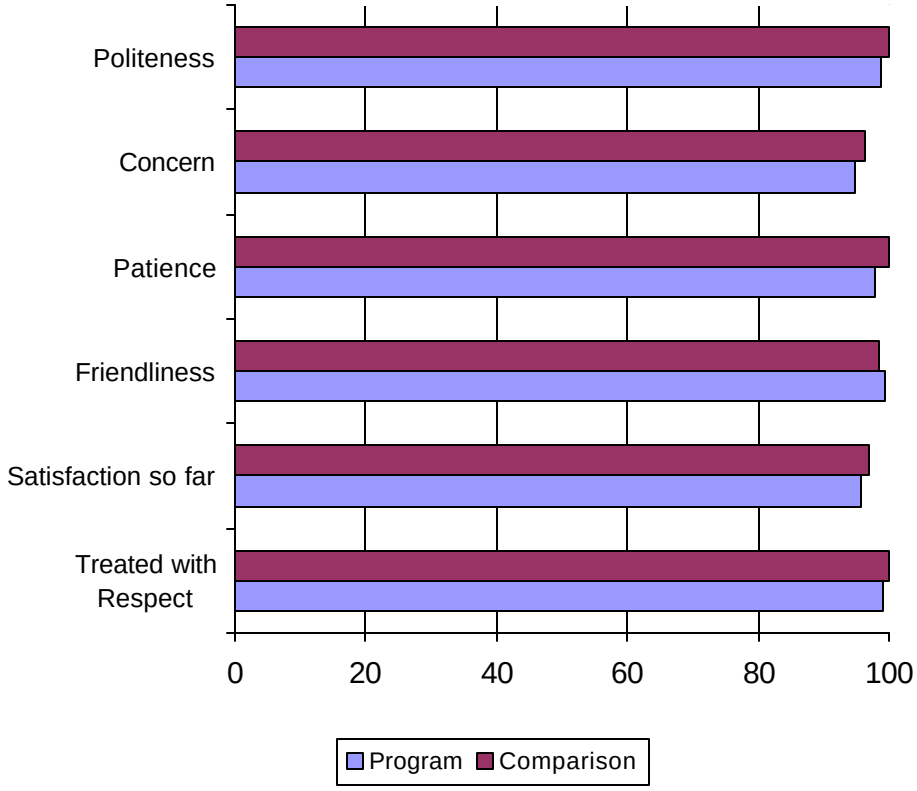


Enrollment in Healthy Families Arizona is voluntary. As such, an important factor in regard to retention is ***participant satisfaction with the program***. In order to monitor this, each of the families is asked to fill out a short program satisfaction survey after two months in the program. In the current year, 1649 parents filled out the 2-month questionnaire—1584 program families and 65 comparison group families.[3] In general, both program families and comparison families were satisfied with the program at the point they responded to the survey. The majority of all respondents felt they were

[3] The comparison group families were those enrolled families who terminated from the program before four home visits were completed.

treated with respect, and although the comparison group's averages were slightly higher on most measures, there were no significant differences between the groups in regard to their perception of the home visitors' politeness, friendliness, concern, or patience. The inability of this instrument to detect any differences between those who engage and those who do not suggests that the instrument should be reviewed to determine if any changes could be made to make it more useful to program staff.

Exhibit 8: Participant satisfaction responses from the two-month Initial Parent Satisfaction Questionnaire.



Engagement, retention, and program satisfaction are all indicators of the effectiveness of service delivery. In a sense, they provide information on the output of the home visitors' efforts in program delivery—good delivery

yields higher levels of engagement, retention, and program satisfaction. Much of the success of the Arizona Healthy Families program along these lines lies in the efforts to enhance the capabilities of the home visitors through a strong quality assurance/technical assistance (QA/TA) process. To further enhance that process, the evaluation team, working with the QA/TA team, developed a tool to help home visitors better handle problematic situations they encounter with the families assigned to them.

A home visitor is likely to face a number of critical decisions during the course of program delivery. She goes to the home and finds the mother is simply not motivated to participate in the child development curriculum that day. What does she do? Should she continue with the delivery of the curriculum or set aside the work and address the mother's lack of motivation? These day-to-day issues have received scant attention. Home visiting programs rely on the home visitors to build relationships and work effectively with families. If the home visitors can't deliver the program because of a problematic situation, then there is no reason to believe the program would have an effect.

Yet, staffing is recognized as a critical part of the success of any home visitation program. Gomby (1999) notes that a home visitor's role is critical:

> "Home visitors must have the personal skills to establish rapport with families, the organizational skills to deliver the home visiting curriculum while still responding to family crises that may arise, the problem-solving skills to address issues that families present in the moment when they are presented, and the cognitive skills to do the paperwork that is required."

Many reviews have, in fact, discussed and recommended staffing issues be addressed by home visiting programs. One of Gutterman's critical practice principles is, "to effectively service families in their homes, workers must structure their work to bound and clarify their focus with families." In this practice principle, he discusses clarifying their role, addressing timing and

scheduling issues, negotiating day-to-day events that happen in the home. In a similar manner, Gomby says programs need to "explore training of workers to increase the quality of services." A beginning point for improving the training and quality of services is to try to understand the difficulties of doing home visitation and the competencies needed to address those difficulties.

The skills and abilities of home visitors are frequently taught on the basis of face validity alone. Indeed, few efforts have been made to empirically identify the skills and competencies of home visitation. To develop the content of supervision and training programs without first analyzing the performance problems of a population defeats the intent of helping home visitors interact effectively with *their* environments. Lewin (1939) argued a long time ago about the importance of the situation in understanding human behavior. He believed that any attempt to understand a person's behavior by studying the individual and not the environment in which he or she functions was necessarily incomplete. Within this framework that acknowledges the environment, Mischel (1968, p. 10) has observed, "the emphasis is on what a person *does* in situations rather than on inferences about what attributes he *has* more globally."

From this conceptualization, one's environment places demands on a person that are experienced as problematic situations. The extent to which a person can effectively address those situations is determined by the skills and competencies he or she has to meet those environmental demands. Problems occur when there is an imbalance between abilities or competencies and demands in the person-in-environment system. Therefore, the task is to match the person's competencies with the situational demands of the environment by establishing a balance in the system either through promotion of competencies to meet the demands, or through decreasing or eliminating the environmental demands. The implication for supervision and training is clear; identified problematic situations provide a framework for designing training and supervision to teach the skills needed to competently interact in those difficult situations.

LeCroy & Milligan Associates elected to address this issue by developing a Problem Situation Inventory for use by the program. A first step in understanding the role of situational variables is the development of a taxonomy of difficult situations. The situational or environmental context is considered important because situations can contain subtle and complex factors that elicit poor performance. While the situations themselves may contain critical information needed to understand how to develop competent responses, a taxonomy may also be useful. Two types of potential taxonomies that can be helpful include the frequency of problem situations and the difficulty of problem situations. Home visitors ought to know how to respond to problem situations that come up more frequently and home visitors ought to be able to respond to difficult situations since it is here that the demands of the situation may exceed their skills and abilities.

The initial step in an effort to develop such a taxonomy is to identify a large, representative sample of common problem situations that are relevant and genuinely problematic for home visitors. These situations should include those specific situations with which individuals in that environment must respond to effectively to be considered "competent" (Goldfried & D'Zurilla, 1969). Furthermore, these situations need to be "problematical" in that how to respond is not immediately apparent.

A large pool of problem situations was generated using a sample of 114 home visitors. Approximately 20 focus groups were conducted to gather the situations. In groups of about 5-8, home visitors were given instructions to identify problem situations. Specifically they were told to: "Make a list of difficult or challenging situations you've encountered, situations where you weren't sure what to do, situations that didn't go well."

These situations were sorted and reviewed so that redundant items were eliminated and similar situations were combined into one. This produced a final list of 77 problem situations. An inventory of these items was created in order to obtain ratings of the frequency and difficulty associated with each problem situation. Five-point Likert scales were used to rate the frequency

and difficulty of the situations. For example, situations were rated from very frequent to rarely, and very difficult to very easy. This inventory of situations was then administered to a sample of 91 home visitors who completed the questionnaire, rating each situation and answering some demographic questions.

The background characteristics of the 91 home visitors are presented in Table 1. All home visitors were female and most were Caucasian (42%), although a large percentage was Hispanic (28.6%). The average age was 35.4 years old and most of the home visitors had some college education. They were fairly experienced, having done home visiting for an average of 3.8 years. The majority (70.4%) of home visitors were themselves mothers.

Table 1. Demographic characteristics of the home visitors.

Characteristic		N	Percent
Ethnicity			
Caucasian		38	42.9
Hispanic		26	28.6
African Am		4	4.4
Asian Am		1	1.1
Native Am		6	6.6
Mixed race		12	13.2
Other		4	4.4
Age			
Mean age	35.4		
SD	10.4		
Schooling			
HS graduate		5	5.9
Some college		33	38.8
college degree		39	45.9
grad degree		8	9.4
Length of time in position			
Mean months	46.2		
SD	48.1		
Have children			
Yes		57	70.4
No		24	29.6

Table 2 presents the top 15 problem situations rated to be difficult based on the mean ratings by home visitors. Perhaps surprisingly, the situation rated as most difficult was "working with limited resources to help parents." Home

visitors are clearly frustrated in their attempts to provide the kinds of services they believe families need. The other situations suggest clear difficulties with parents where substance use is present. Working with uncommitted or unmotivated families also rated high on difficultly. In a similar manner, situations where it seems difficult for them to do their job rated highly such as changing parenting styles and contacting parents. Lastly, a lot of the situations represent some of the more "clinical" aspects of their work with families: substance use, suicide, domestic violence, and crisis situations.

Table 2. Fifteen most difficult situations for home visitors.

	Mean[4]	SD[5]
Most Difficult Situation		
Working with limited resources to help parents	3.58	1.14
Helping parents that threaten to commit suicide	3.34	1.23
Working with families when one person is under the influence	3.34	1.33
Working in the homes during the summer heat	3.31	1.26
Working with families when someone gives drugs or alcohol to children	3.31	1.26
Responding to threats or dangerous behavior directed at you	3.19	1.46
Working with uncommitted families	3.09	1.10
Working with families that aren't motivated	3.08	1.13
Dealing with family members who show up under the influence	3.00	1.27
Inability to contact parents	2.99	1.13
Working with parents to change their parenting style	2.98	1.13
Working with family members who are not motivated because of alcohol or drug problems	2.96	1.12
Working with families who are in constant crisis	2.92	1.00
Providing services in unsafe homes	2.89	1.23
Addressing domestic violence	2.87	1.08

[4] The "average" score for that item across all workers who took the survey.

[5] The Standard Deviation, an indicator of the range of scores on that particular item.

Table 3 presents the top 15 problem situations rated to occur most frequently by home visitors. The number one most frequent difficulty, "working in homes during the summer heat" is a problem situation most likely to be unique to Arizona. Many of the situations that were rated as frequent reflect some of the fundamental aspects of doing home visitation such as work with teenage mothers, keeping the environment confidential, selecting activities for the home visit, working with parents whose decisions you don't agree with, working with unmotivated families, and working with parents' emotional feelings like sadness. In many respects, these situations represent a broad diversity of problem situations that occur with a high level of frequency.

Table 3. Fifteen most frequent situations for home visitors.

	Mean	SD
Most Frequent Situation		
Working in homes during the summer heat	3.97	1.26
Working with limited resources to help parents	3.52	1.21
Working with teenage mothers	3.48	1.11
Trying to create a confidential environment	3.22	1.42
Knowing what activities to do in a home visit	3.22	1.6
Working with parents whose decisions you don't agree with	3.19	1.18
Working with families that aren't motivated	3.19	1.18
Working with parents' emotional feelings like sadness	3.18	1.10
Helping families when they are experiencing a crisis	3.08	1.08
Working with uncommitted family members	3.07	1.23
Working with parents who have different values	3.04	1.28
Working with immature clients	3.04	1.16
Working with parents who are in denial about their problems	2.98	1.24
Trying to collaborate with other agencies	2.98	1.24
Inability to contact clients to set appointments	2.98	1.30

It is also noteworthy to examine items that are both rated high on difficulty and rated high on frequency. These problem situations include:

- working with families who are in a constant crisis,
- working with limited resources to help parents,
- working with uncommitted family members,
- working with families that aren't motivated, and
- working in the homes during the summer heat.

After having conducted the focus groups and refining the situations into the inventory, the level of truly "difficult" situations that home visitors faced became more prominent. Perhaps because during the focus group process we heard very specific examples of difficulties that home visitors had faced. Because of this it was decided to ask home visitors direct questions about their experience with three critical problems home visitors face: domestic violence, substance abuse, and mental illness. Table 4 presents data on the percent of home visitors who have experienced these problems in the last year and in the last 30 days. As the table reveals, these serious issues are fairly common, with over 80% of the home visitors having seen families with these issues in the last year. When asked about the occurrence of these issues in the last 30 days, over 60% of the home visitors had experienced working with families on these issues. On average, the home visitors worked with approximately five families with these problems in the last year, and two in the last 30 days.

Table 4. Percent of home visitors addressing serious difficulties.

	In the last year	In the last 30 days
Domestic Violence	81.8%	64.6%
Substance Abuse	82.7%	67.5%
Mental Illness	86.7%	78.5%

Additional analyses were used to look at the various situations to determine if the situations could be grouped into common themes or clusters. This resulted in five identified clusters:

- lack of clinical skill,
- addressing family difficulties,
- addressing parenting difficulties,
- personal issues, and
- lack of experience.

These clusters could be used as a framework for training modules that address the problem situations identified by this effort. They could also be used to help home visitors better understand their own training needs and enable tailored training to address those needs.

The taxonomy developed during this effort provides a structure for designing supervision and training to teach the skills and competencies needed to satisfactorily interact in a variety of difficult situations. (Too often training and supervision focuses on characteristics deemed important to home visitation rather then empirically derived contextual situations). The difficulty ratings could be used to conceptualize training with more of a focus on: working with difficult family issues; addressing domestic violence, substance abuse, and mental illness; and motivating families. The frequency ratings provide a very direct agenda for training, for example:

- working with limited resources to help parents,
- working with teenage mothers,
- trying to create a confidential environment,
- knowing what activities to do in a home visit,
- working with parents whose decisions you don't agree with,
- working with families that aren't motivated,
- working with parent's emotional feelings like sadness, and
- helping families when they are experiencing a crisis.

A training program based on the data developed during this effort has the potential to yield significant benefits to the Healthy Families Arizona program. Enabling the home visitors to deal effectively with the problem situations can reduce their own stress. The family gets the help it needs in dealing with the problem, reducing stress and allowing them to move forward in the more routine aspects of parenting. In the end, the quality of services provided by the home visitors will be enhanced by this collective effort.

During the study year, 2,278 families were served and 2,043 remained engaged for at least three months. For those who did become engaged in the program, factors such as marital status, depression, and infant birth weight seem to have had some bearing on the decision. The majority of the engaged families stayed with the program for at least one year, with the average time between enrollment and termination increasing this year to nearly two years (698 days). While the majority of the families terminate because they move or cannot be contacted, an increasing number terminate due to program completion—13.8 percent this year compared to 10.5 percent the previous year. In regard to program satisfaction, over 95 percent of all participants were satisfied with the program. Additionally, the program team (both evaluation and TA/QA) worked with the sites to develop a Problem Situation Inventory. This effort identified 77 unique situations, which were then scored in terms of frequency and difficulty. Finally, analyses were done that yielded five clusters of problems. The goal of this effort is to use these data to develop training modules to prepare the home visitors to better able to respond to these real life difficulties.

Program Outcomes

Healthy Families Arizona continues to collect outcome data on a number of outcome indicators in order to evaluate program effectiveness. These indicators include program impact on child abuse and neglect, parental stress and competence, safety practices in the home, medical and social service use, and employment and educational attainment.

Many practitioners look to ***the incidence of child abuse and neglect*** as an indicator of program impact. However, reports of child abuse and neglect are unlikely to be good measures of program impact for several reasons, including:

- child abuse and neglect are low occurring events, and even small changes can appear to be significant when they are not;
- many incidents of child abuse and neglect go unreported, calling into question the reliability of the measure;
- increased surveillance of families who are involved in community programs such as Healthy Families Arizona may lead to increased reporting.

For these reasons, caution must be used when coming to conclusions regarding program impact based on child abuse and neglect data.

Exhibit 9 presents the data regarding child abuse and neglect reports for the families participating in the Healthy Families Arizona program. Data for two groups are presented—the Healthy Families Arizona program families and a comparison group. The program group consists of families who have had at least four or more home visits and the comparison group consists of families who dropped out prior to completing at least four visits. The results are based on all families who were active in the program during the study period of July 1, 2002 to June 30, 2003 with at least six months time in the program. As seen in the exhibit, both groups had high rates of families with no substantiated reports. There is no practical difference between the two rates.

Exhibit 9: Percent of child abuse and neglect incidences in program and comparison groups.

Group	Percent without substantiated report
Healthy Families Arizona Participants	99.03% (n=1554)
Comparison Group Participants	98.72% (n=234)

Reducing ***parental stress*** is one of the primary indicators for the success of the Healthy Families Arizona program due to the relationship between parental stress and child abuse and neglect. Healthy Families Arizona uses the Parenting Stress Index (Abidin, 1995) to assess total stress and data regarding seven subscales—sense of competence, parental attachment, feeling restricted in one's role, depression, isolation, distractibility, and mood. This instrument is a reliable and valid measure used extensively in research and evaluation.

Exhibit 10 shows the scores for each of the subscales and the total stress score for baseline data (pretest) and subsequent tests at six, 12, and 18 months. As illustrated in the exhibit, the total parenting stress score shows significant change across all time intervals. The sense of competence, feeling restricted in role, depression, isolation, and mood subscales all showed increases across all time intervals, and the parental attachment subscale showed increases in the first two intervals—baseline to six months and baseline to 12 months.[6] Only the distractibility showed no significant differences, which may be due to the low reliability of the scale. Definitions of the subscales and additional statistical details can be found in Appendix B.

[6] For the group that took the 18-month PSI there was a small positive change in scores from baseline to 18 months, but the change was not large enough to be statistically significant.

Exhibit 10: Parenting Stress Index Findings.

	Time Period		
Subscale	Baseline to 6 months	Baseline to 12 months	Baseline to 18 months
Sense of Competence	**Significant Improvement** t=7.72, p<.000	**Significant Improvement** t=7.07, p<.000	**Significant Improvement** t=4.60, p<.0001
Parental Attachment	**Significant Improvement** t=3.62, p<.000	**Significant Improvement** t=4.29, p<.000	**No Significant Improvement** t=1.26, p>0.05
Feeling Restricted in Role	**Significant Improvement** t=3.13, p<.002	**Significant Improvement** t=3.27, p<.001	**Significant Improvement** t=4.02, p<.000
Depression	**Significant Improvement** t=4.82, p<.000	**Significant Improvement** t=569, p<.000	**Significant Improvement** t=2.78, p<.01
Isolation	**Significant Improvement** t=3.56, p<.000	**Significant Improvement** t=3.97, p<.000	**Significant Improvement** t=3.49, p<.001
Distractibility	**No Significant Improvement** t=4.99, p>0.05	**No Significant Improvement** t=1.15, p>0.05	**No Significant Improvement** t=1.15, p>0.05
Mood	**Significant Improvement** t=9.00, p<.000	**Significant Improvement** t=6.36, p<.000	**Significant Improvement** t=2.61, p=0.01
Total Stress Score	**Significant Improvement** t=7.25, p<.000	**Significant Improvement** t=7.55, p<.000	**Significant Improvement** t=4.74, p<.000

During the study year, parents were administered the baseline (2-month) Parent Stress Index (PSI) and a 6-month PSI. A review of the distribution of the scores shows that the average score on the 2-month PSI was 135.5. For

those parents taking both the 2-month PSI and the 6-month PSI, 62 percent showed improvement in the total stress score on the 6-month PSI. However, looking at those parents who scored above the 85th percentile on the 2-month PSI—those considered to be at highest stress —70 percent showed improvement at the 6-month point. In addition, the average improvement for that group was 17 points compared to only 4 points for those scoring below the 85th percentile. This indicates that the program has a greater effect in regard to reducing stress for those scoring highest on the instrument and, according to the author of the instrument, at greater risk to develop dysfunctional parenting patterns.

On a more basic level, ***improved safety practices in the home*** provide a direct indication of the program impact. By being in the parents' home environment, home visitors have an advantage over other parenting programs. Home visitors can demonstrate good safety practices in the home, and then directly observe the parents' use of these practices over time, rather than depend on parental self-report. Based on the child safety checklist, the data show that most families follow sound safety procedures and that in some cases, increase use of safety practices over time.

Exhibit 11 details two of the items tracked on the child safety checklist—outlets covered and poisons being locked. Increases in use of safety practices can be seen across all three assessment periods—2, 6, and 12 months. Other indicators include appropriate use of car seats, the securing of scissors, knives, lighters and matches, water safety, outside supervision, food storage, and a listing of emergency phone numbers. At the two-month assessment, these other safety practices were all being actively used by over 90 percent of the participants.

Exhibit 11: Percent of safety practices implemented.

	2 Month	6 Month	12 Month
Outlets Covered	49.8%	61.1%	75.5%
Poisons Locked	84.8%	87.4%	93.1%

One of the goals of Healthy Families Arizona is to ensure that ***all the families receive adequate medical care***. There are two measures that can be used to assess this goal. The ***immunization rate for the children*** is the first of these. Exhibit 12 shows this rate for the infants of families enrolled in Healthy Families Arizona in the current study year.

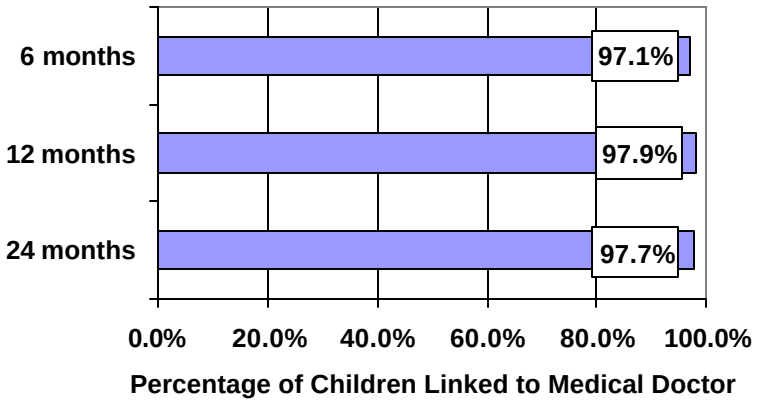
Exhibit 12: Immunization rate of Healthy Families Arizona children

Immunization period	Percent immunized	Immunization rate for 2-year-olds in Arizona
2 month	95.1%	
4 month	92.8%	
6 month	85.1%	
12 month	92.0%	
Received all 4 in the series	88.8%	71.3%

In comparison with the overall state rate, the families in the Healthy Families Arizona program are doing well, in spite of the fact that they represent a high-risk group perceived as less likely to receive immunizations. There is also an improvement in the immunization rate when compared to the 2001 Healthy Families Arizona families. For example, the percentage of infants receiving all four immunizations in the series increased from 83.9 percent to 88.8 percent. All the monthly measures showed similar increases.

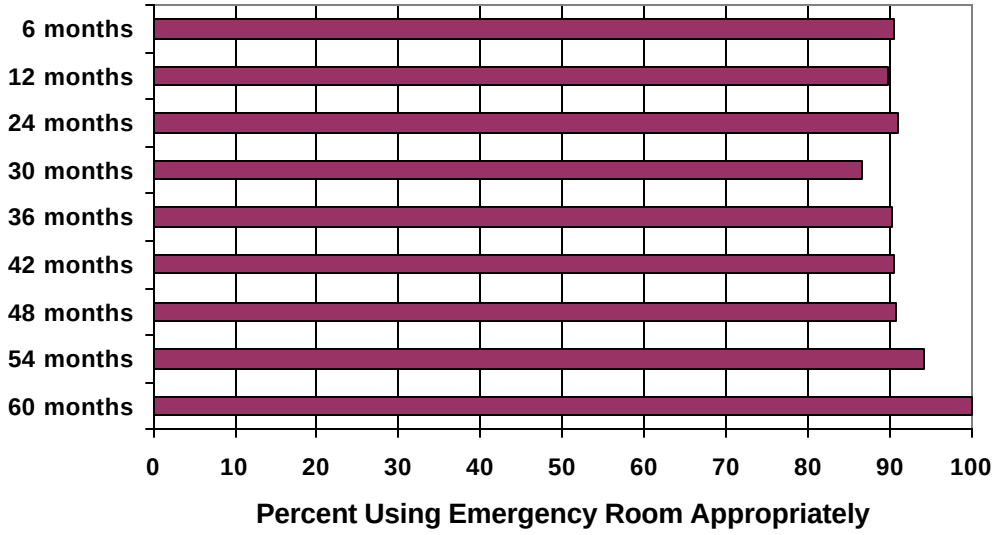
A second way to look at the goal of ensuring the families receive adequate medical care is to look at the ***percentage of children linked to a medical doctor***. The data are shown in Exhibit 13. While there is no comparison data available, this does indicate that the program is meeting one of its critical goals—ensuring adequate medical care for its participants. The Healthy Families Arizona program has emphasized timely immunization of the infants in the program. Data regarding the immunization rate and the linkage to a doctor are reported regularly to the sites via the Healthy Families Arizona Quarterly Family Data Report, which is used by the sites as an on-going quality assurance tool. These data allow the sites to work with families not yet achieving these milestones to do so—an effort that can have a positive effect on healthy families and healthy children.

Exhibit 13: Percentage of children linked to a medical doctor.



A related outcome addresses one concern from the health providers regarding program participants—***inappropriate use of the emergency room***. As can be seen in the exhibit below, a significant majority of participants use the emergency room only after obtaining a doctor's referral.

Exhibit 14: Percent of Healthy Families Arizona participants who make appropriate use of the emergency room.



Another goal of the Healthy Families Arizona program is the ***promotion of healthy child development***. Home visitors attempt to administer the Ages and Stages Questionnaire to all of their families in order to assess the children's developmental status. The information obtained allows the home visitors to help parents learn new ways in which they can encourage proper stimulation for growth and development of their child. At the 4-month point, 66.4 percent of the families completed the questionnaire—a 10-percentage point increase from the previous year. At the 6-month point, 75.5 percent of the families completed the questionnaire—a 15-percentage point increase from the previous year. In a manner similar to the medical issues, the quarterly reports to the sites help supervisors and staff focus on the need to administer the Ages and Stages Questionnaire with all families on a timely basis.

In addition to encouraging healthy child development, the questionnaire provides for the ***early detection of developmental delays***. This early

detection allows for referral to appropriate follow-up services such as the Arizona Early Intervention Program (AzEIP), or another intervention program. Exhibit 15 displays the information regarding the percentage of children screened positive for developmental delays. Almost all of the children identified were referred to follow-up services.

Exhibit 15: Developmental delay from 4 to 36 months.

Developmental delay at 4 months	12.3%
Developmental delay at 12 months	4.1%
Developmental delay at 24 months	19.5%
Developmental delay at 36 months	21.2%

Another risk for these families is the ***potential for alcohol and drug problems***, which is strongly linked to child abuse and neglect. The Healthy Families Arizona program provides an initial screening to families in an effort to help determine who may need to seek alcohol or drug treatment. Those who are identified are referred to appropriate treatment programs when possible, but availability of treatment programs in many Arizona communities is limited. While only a small number of those screen positive[7] (Exhibit 16), a referral to treatment could be instrumental in reducing the risk for child neglect and abuse.

Exhibit 16: Percentage of families who screened positive for alcohol and drug problems.

2 months (N=35)	6.3%
6 months (N=16)	7.8%
12 months (N=22)	4.6%
18 months (N=12)	4.6%

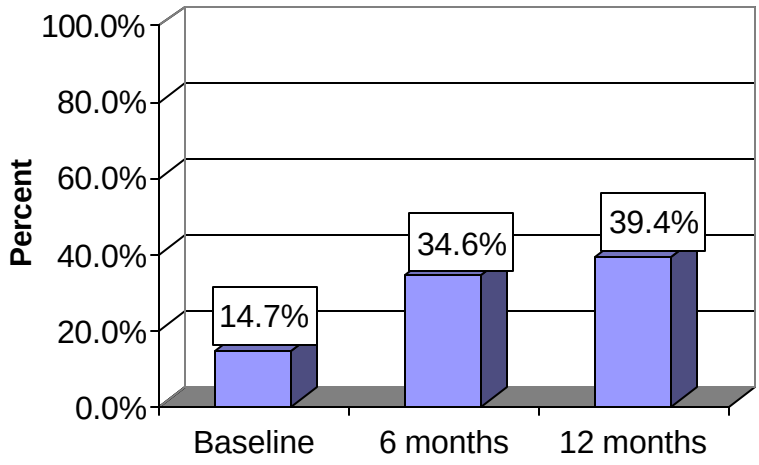
[7] The screen is a self-report instrument that may result in under-reporting.

While the Healthy Families Arizona program focuses on parent-child interactions, the program can also benefit ***maternal life outcomes*** such as subsequent pregnancies, education, and employment.

During the study period, 14.2 percent of the participants reported ***subsequent pregnancies***. Of these, 31.4 percent were 18 years or younger. In terms of how quickly they became pregnant, 33.0 percent did so within one year, 45.9 percent became pregnant within 1 to 2 years, and 21.1 percent became pregnant over two years later.

Exhibit 17 shows the percentage ***employment status*** of mothers actively engaged in the program at various points in the program.

Exhibit 17: Mother's employment status.



Another positive outcome in this area is the number of mothers who continued to be involved in educational programs while being served by Healthy Families Arizona. For mothers that were involved in the program at the six month point, 10 percent were enrolled full-time in school, 6 percent were enrolled part-time, 9 percent had obtained their high school diploma or GED during the six months they were enrolled, and 1 percent had obtained a college degree.

Healthy Families Arizona participants had a lower rate of substantiated reports of child neglect and abuse when compared to a group of families eligible for the program but who received less than four home visits. The participant families showed significant improvement at the 12 month point on all but one subscale on the Parenting Stress Index, and demonstrated greater safety practices during the time they spent in the program. On health related measures, the infants of participating families were immunized at a rate that exceeds the state standard, they were linked to a doctor at a high rate, and most did not use the emergency room in an inappropriate manner. For this study period, an increased percentage of infants were screened using the Ages and Stages Questionnaire, and those identified with developmental delays were appropriately referred. In regard to maternal life course outcomes, while only 14.2 percent of the mothers had subsequent pregnancies, 31.4 percent of those were 18 years or younger. In addition, during the period of time they were involved in the program, a progressively higher percentage of mothers became employed, and one-quarter of those who did not finish high school or obtain a GED did so or were in the process of doing so.

Critical Elements

The previous year's report focused on Gutterman's (2001) best practices as an organizing tool for the findings and recommendations. An alternative way of viewing the program is to look at adherence to the Critical Factors mandated by the state. Healthy Families America takes the position that this framework of critical elements "represent quality standards and ensure the program's adherence to best practices in home visitation" (PCA, 2002). In effect, the critical elements are a tool to be used to ensure that the best practices are adhered to. In the following review, those elements for which there is applicable evaluation data are assessed. The rationale cited for each of the critical elements is based on Prevent Child Abuse America's literature review of their critical elements (2001).

Intake at birth (3 month maximum chronological age of infants at intake)

This element addresses the benefits of early intervention with families at risk. These benefits include early linkage with appropriate medical care, the ability to enhance the bonding between the child and parents, and facilitating a strong bond and respectful relationship between the parents and the home visitor. Of the 2043 families actively engaged in Healthy Families Arizona during the study period, 99.5 percent were enrolled within three months.

The Healthy Families Arizona Screen and the Parent Survey (Family Stress Checklist), a standardized risk assessment tool, will be used to systematically identify families at risk for poor outcomes from defined areas.

The use of a standard instrument ensures that the program is reaching the families for which it is designed. In addition, it provides the home visitor with insight into strengths, weaknesses, and risk factors of the families they are working with. All of the families enrolled in Healthy Families Arizona had both the screen and the Family Stress Checklist administered. The assessment specifically identifies issues known to be risk factors for potential child neglect and abuse. The data indicate that the families involved in the

program exhibit high percentages of single parent families, families with low income, parents with less than a high school education, and unemployed parents.

Program participation is voluntary and services will be offered to eligible families in a positive and supportive manner. Outreach services will be provided up to three months for the purpose of re-engaging an enrolled family to an appropriate service level. If a family requests closure, their case will be closed and no further outreach will be attempted.

Programs based on voluntary acceptance of services are generally more effective. In addition, voluntary programs empower the parents—they feel they are part of the solution rather than feeling a solution is being forced on them. By providing extended outreach, families who are initially reluctant to accept services may later enroll as they see the benefits of the program and recognize the increased stress associated with having a newborn. Healthy Families Arizona is a voluntary program. The data indicate that the families who enroll see the home visitors in a positive, supportive light. For example, in a satisfaction survey administered two months following enrollment, 95 percent of the families saw the worker as concerned about their welfare and 99 percent of the families viewed the home visitor as friendly, patient, and polite. This positive assessment offers evidence that the program is provided in a positive, supportive manner.

Home visitation is the core service for all families. Intensity of services will vary based on family needs, moving gradually from weekly to quarterly home visits as families become more self sufficient. Program services are available for up to five years.

The provision of intensive services allow for establishment of trust between the program families and the home visitors. At birth, the families' needs are greatest. As time passes and parents become more comfortable with their role, the need lessens, although continued service allows the program to address new challenges as they arise. The Healthy Families Arizona program

uses a multi-level system to address this critical element. As families come into the program, they are visited weekly. Over time, the visits are reduced to bi-monthly and quarterly. For example, for families in the current year, 70 percent of the families who had been in the program nine months were at Level 1 (weekly visits), and 18 percent were at level two (twice monthly visits).[8] For families in the program 18 months, only 24 percent were on Level 1, 58 percent were on Level 2, and five percent were on Level 3 (quarterly visits). At 36 months, only 8 percent remained on Level 1, 46 percent were on Level 2, and 38 percent were on Level 3. This illustrates not only that the program complies with the element of basing intensity on need, but also the ability of the program to provide services over an extended length of time.

Services shall be culturally sensitive and materials should reflect the cultural, linguistic, geographic, racial and ethnic diversity of the population served.

Cultural context is one of the determining factors in regard to needs, beliefs, and practices. Failure to address cultural context may inhibit the home visitor's ability to establish relationships with the family, limiting their ability to work together to address the problems the family faces. There are two approaches to reviewing adherence to this element. One is to look at diversity among the home visitors. While there is not a one-to-one match of ethnicities between participant families and home visitors, the home visitors do reflect the overall population diversity within the state. Importantly, when surveyed, virtually 100 percent of the families indicated that the home visitor spoke their language, services were provided based on their language and culture, and that materials were provided in their own language. Clearly, the families' opinion is that the program does provide services in a culturally relevant manner.

[8] The remaining families were either on outreach or at pre-designated special levels.

Services shall be family centered, culturally sensitive, and focus on enhancing parent-child interaction, child development, and family functioning.

Enhancing parent-child interaction, providing information on normal child development and helping the family function in an effective manner all help reduce the stress the parent feels with a new infant. This in turn helps decrease the potential for child neglect and abuse. As mention previously, the families feel that the program is respectful of their culture, and delivered in a culturally relevant manner. In addition, many of the services used by the families are specific to this critical element. For example, looking at the service data for the 12-month point:

- 84% of the families received the Model Bonding / Parent Child curriculum,
- 95% received child development education,
- 81% were provided emotional support, and
- 62% were given the Life Coping Skills curriculum.

The program provides a variety of services that focus on the family and helps prepare the parents to deal appropriately with their children.

Services shall address linking families to health care systems with an emphasis on prevention (immunizations, primary care physicians and well baby care). Depending on need, the families may be linked to services such as financial, food and housing assistance programs, child care, job training programs, family support centers, substance abuse treatment programs, domestic violence shelters, and school readiness programs (Head Start, at-risk preschool, family literacy).

Many of the families involved in the Healthy Families Arizona program have wide-ranging needs. Focusing on health care early in the program has numerous benefits, including prevention of future health related problems, increased comfort levels when working with other social support systems,

and increased potential for a good educational experience on the part of the child. As reported earlier in the report, the rate of immunizations was higher than the state average and over 97 percent of the infants were linked to a primary care physician at the 6, 12, and 18 month periods. The families enrolled in the program used a large array of services. These included:

- crisis intervention (30% of families at the 12 month point),
- case management services (45%),
- transportation (15%),
- information and referral (74%),
- parent groups (29%),
- literacy programs (28%), and
- playgroups (20%).

In addition, for those families with substance abuse issues/concerns, educational materials were provided and referrals were made to outside support services. All of these services assist the families in dealing with the stress of dealing with unfortunate life situations while at the same time trying to raise an infant.

The evaluation does not collect information on the remaining critical elements, which are largely associated with staffing, training, and quality assurance. However, the Healthy Families Arizona's last Credentialing process revealed that the programs also adhere to Critical Elements 8 through 14. Continued adherence was confirmed in an interview with the Healthy Families Arizona TA/QA staff.

A review of the data indicates that the Healthy Families Arizona program adheres to the 14 Critical Elements mandated by the state. This is based on a review of the available evaluation data and an interview with the Healthy Families Arizona TA/QA staff. Healthy Families America sees adherence to the critical elements as one way to ensure that the program is operating in accordance with best practices. This review indicates that Healthy Families Arizona continues to operate in this manner.

Conclusions and Recommendations

The Healthy Families Arizona program continues to meet the needs of many of the state's at risk families in an effective manner. The program served a population reflective of the state's diversity. These families entered the program with a number of risk factors, including a high percentage of teenage parents, many single parent families, high rates of unemployment, low income, and many cases where pre-natal care was non-existent or late. Cases of low-weight births and early births exceeded the state averages. Many of these families also had histories of childhood abuse, substance abuse, and other mental health problems, and suffered from low self-esteem, isolation, and stress from daily living. In summary, the program is serving its target population—families at-risk.

In regard to service delivery, two important indicators are the engagement rate—the percentage of families who receive at least four home visits—and the average length of time in the program at termination. Both of these indicators showed increases from the previous year—engagement rose to 90 percent and the average length of time in the program grew from 595 days to 698 days. This is part of a continuing trend over the last several years, and reflects the emphasis the program staff has placed on engagement and retention. Another indicator of effective program delivery is participant satisfaction. Based on results of a survey given after the family has been in the program two months, program satisfaction is high—exceeding 95 percent on all the questions asked—for engaged families and a small group of families who did not remain enrolled in the program. The fact that there was no difference between the engaged group and the non-engaged group suggests that the survey may need to be revised to better capture why the non-engaged group did not stay with the program.

Looking at outcomes, the Healthy Families Arizona program continues to have very low rates of substantiated reports of child abuse or neglect, although this measure has limited utility due the uncertain nature of child abuse and neglect reporting data. The parents in the program are given the

Parenting Stress Index at a number of points in the program. The total stress scores showed significant improvement from the baseline score across the 6-month, 12-month, and 18-month intervals. Of the parents who took both a baseline and 6-month PSI, 62 percent showed an improvement in their total stress score. Importantly, of those parents scoring at or above the 85th percentile on the baseline measure, 70 percent showed improvement at the six-month point. This differential effect provides some evidence that the program is increasingly effective for those parents at the greatest risk as measured by the PSI.

There are a number of other outcome measures that indicate that the program is working. Increased child safety is seen in the gains in the child safety checklist over time. The overall immunization rate is substantially higher than the state rate, and reflects an increase from previous years. A very high rate of the children are linked to a medical doctor, and a substantial number are screened for developmental delays by the Family Support Specialists.

Maternal life outcomes are also tracked. During the study period, 14.2 percent of the mothers had subsequent pregnancies. Of those who did become pregnant, 31 percent were 18 or younger, and 33 percent became pregnant within one year. These data suggest a need to continue to emphasize family planning, especially with the teenage mothers.

Finally, a review of the data indicates that the Healthy Families Arizona program adheres to the 14 Critical Elements mandated by the state. This is based on a review of the available evaluation data and an interview with the Healthy Families Arizona TA / QA staff. Adherence to the critical elements is an indicator that the program is operating along best practice lines.

Based on this evaluation, two recommendations are made.

First, ***the program satisfaction survey should be reviewed.*** Ideally, the survey should provide information that allows the program staff to differentiate between those who are likely to engage and those who are not, and

information on the reasons why. The current instrument does not provide that kind of data.

Second, ***the program should continue to emphasize family planning, especially with young mothers.*** Fourteen percent of the program participants had subsequent pregnancies while enrolled in the program. One-third of them were by mothers 18 or younger.

These two recommendations, along with continued adherence to the Critical Elements, should offer the program the opportunity to continue providing effective services to a population clearly in need.

Future Considerations for Program Improvement and Program Evaluation

Looking to the future, there are several avenues to explore to continue improving the evaluation and consequently, strengthening the program.

Greater understanding of outcomes and the program components leading to outcomes would be gained from a longitudinal study.

In the recent *Emerging Practices in the Prevention of Child Abuse* (Caliber, 2003), the need to expand existing knowledge about the effectiveness of prevention is the overriding theme. The report specifically states, "Existing knowledge about the efficacy of prevention in the field of child maltreatment is limited; clearly, all the major prevention models and strategies could benefit from more rigorous study" (p. 1).

Healthy Families Arizona was selected by the Emerging Practices in the Prevention of Child Abuse and Neglect in 2003 (Caliber Associates, 2003) in the "Effective Programs Category for Programs with Noteworthy Aspects" for its independent comprehensive evaluation, its management information system, and for involving and retaining fathers in the program. Healthy Families Arizona was selected by National Center for Children in Poverty,

Columbia University as one of 25 noteworthy programs for its use of standardized instrumentation to monitor child development, parental stressors, and coping skills, incorporating a Training and Quality Assurance Team, and developing an extensive data tracking system to ensure effectiveness and quality. Because of these independent reviews, past evaluations, successful credentialing from Healthy Families America, its well developed quality assurance program, and its long term implementation, the Healthy Families Arizona program is an ideal program to implement the type of rigorous study called for by the Caliber Associates report. For example, ***readiness to learn*** is emerging as a key variable in positive youth development. The Healthy Families Arizona program would be ideal for the exploration of the contribution to learning readiness by home visitation programs.

Evaluations of other Healthy Families programs that have used more rigorous designs have been in states (Hawaii and Alaska) with very different cultural and geographic characteristics making generalization difficult. Arizona has a large Hispanic population, the fastest growing ethnic group in the United States, and is an ideal setting for a rigorous evaluation. ***The Healthy Families Arizona program shows strong readiness for a longitudinal study*** and great potential for utilizing the results for program improvement, policy development and knowledge for the field.

Further examination of the supervisory relationship would yield important information to guide training of home visitors, and a deeper understanding of the impact of the home visitor behaviors on positive outcomes for families.

Increased attention has been paid to home visitor qualities and qualifications. A recent study (Korfmacher, et al., 1999) found higher rates of program retention for nurse home visitors than for non-college degreed paraprofessional home visitors. However, as McGuigan et al. (2003) noted, it remains unclear how home visitors with other educational degrees (Masters and Bachelors), might influence retention rates. Healthy Families Arizona is

an excellent site to contribute to this knowledge because it has about 50% of its workers with college degrees, and 50% without degrees. As Duggan et al. (2000) notes, supervision of the home visitor has been absent from most studies and could be an important factor (Wallach & Lister, 1995). A recent study (McGuigan et al., 2003) examined retention and found that the amount of time of supervision predicted client retention.

A deeper examination of the qualities, approach and challenges of the supervisory relationship would complement the evaluation information gained during the 2003 evaluation regarding problematic and challenging situations faced by home visitors.

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Appendix A

Site Level Data

- Age of Child at Entry
- Days to Termination
- Reason for Termination
- Health Insurance at Intake
- Late or No Prenatal Care or Poor Compliance at Intake
- Ethnicity of Mother
- Gestational Age
- Low Birth Weight
- Yearly Income
- Family Stress Checklist Score

Age of Child at Entry by Site

(Age in days)

Site	Mean (Age in Days)	Standard Deviation	Number
Douglas/Bisbee	15.74	15.92	93
Central Phoenix	28.48	22.78	73
Maryvale (Phoenix)	19.54	13.98	92
South Phoenix	23.46	22.74	76
East Valley (Phoenix)	22.26	22.33	68
Nogales	13.75	17.13	112
Page	19.89	19.46	45
Casa de los Niños (Tucson)	21.06	18.25	138
CODAC (Tucson)	18.91	18.88	90
La Frontera (Tucson)	18.86	19.85	145
La Hacienda (Tucson)	20.76	23.22	59
Sierra Vista	12.72	14.78	75
Tuba City	14.66	18.38	53
Verde Valley	10.46	12.54	70
Yuma	18.89	16.77	93
Pascua Yaqui	38.88	28.10	40
Lake Havasu City	24.29	17.59	120
Flagstaff	17.28	21.22	78
Sunnyslope (Phoenix)	25.87	20.42	91
Prescott	20.99	19.06	145
Casa Grande	17.91	22.33	85
Mesa	19.55	14.88	97
Southeast Phoenix	20.97	17.56	91
Total	19.91	19.42	2029

Days to Termination by Site
(For terminated clients)

Site	Mean (Days to termination)	Standard Deviation	Number
Douglas/Bisbee	1266.65	704.08	20
Central Phoenix	896.33	512.21	24
Maryvale (Phoenix)	815.43	523.38	35
South Phoenix	675.92	564.92	28
East Valley (Phoenix)	592.53	388.07	19
Nogales	976.32	772.55	31
Page	956.47	769.06	17
Casa de los Niños (Tucson)	540.79	390.05	47
CODAC (Tucson)	696.42	475.19	19
La Frontera (Tucson)	768.53	497.36	47
La Hacienda (Tucson)	894.14	389.16	22
Sierra Vista	552.65	505.96	31
Tuba City	870.83	598.06	23
Verde Valley	469.00	549.57	17
Yuma	640.88	570.26	32
Pascua Yaqui	833.20	808.61	5
Lake Havasu City	772.57	612.36	54
Flagstaff	591.56	451.78	16
Sunnyslope (Phoenix)	748.64	405.16	33
Prescott	362.19	187.91	42
Casa Grande	356.59	295.86	22
Mesa	667.00	428.71	23
Southeast Phoenix	494.91	254.69	32
Total	698.69	541.65	639

Reason for Termination by Site
(Number and Percent within Site)

Site	Moved Away	Unable to contact	Completed Program
Douglas/Bisbee	45.0% (9)	15.0% (3)	35.0% (7)
Central Phoenix	20.8% (5)	25% (6)	12.5% (3)
Maryvale (Phoenix)	28.1% (9)	31.3% (10)	9.4% (3)
South Phoenix	24.0% (6)	48.0% (12)	12.0% (3)
East Valley (Phoenix)	33.3% (6)	44.4% (8)	5.6% (1)
Nogales	25.8% (8)	12.9% (4)	41.9% (13)
Page	18.8% (3)	25.0% (4)	18.8% (3)
Casa de los Niños (Tucson)	8.5% (4)	46.8% (22)	4.3% (2)
CODAC (Tucson)	26.3% (5)	31.6% (6)	15.8% (3)
La Frontera (Tucson)	19.6% (9)	34.8% (16)	21.7% (10)
La Hacienda (Tucson)	31.8% (7)	18.2% (4)	18.2% (4)
Sierra Vista	48.3% (14)	6.9% (2)	13.8% (4)
Tuba City	22.7% (5)	18.2% (4)	22.7% (5)
Verde Valley	41.2% (7)	29.4% (9)	11.8% (2)
Yuma	34.4% (11)	18.8% (6)	21.9% (7)
Pascua Yaqui	60.0% (3)	0	20.0% (1)
Lake Havasu City	37.0% (20)	14.8% (8)	16.7% (9)
Flagstaff	71.4% (10)	0	0
Sunnyslope (Phoenix)	24.2% (8)	21.2% (7)	6.1% (2)
Prescott	35.7% (15)	31.0% (13)	0
Casa Grande	54.5% (12)	27.3% (6)	0
Mesa	19.0% (4)	47.6% (10)	19.0% (4)
Southeast Phoenix	16.1% (5)	45.2% (14)	0
Total	29.7% (185)	27.3% (170)	13.8% (86)

Health Insurance by Site at Intake
(Number and Percent within Site)

Site	None	AHCCCS	Private
Douglas/Bisbee	2.9% (3)	92.2% (95)	4.9% (5)
Central Phoenix	4.5% (4)	83% (73)	11.4% (10)
Maryvale (Phoenix)	3.7% (3)	84.1% (69)	9.8% (8)
South Phoenix	0	64% (87.7)	9.6% (7)
East Valley (Phoenix)	4.6% (3)	80% (52)	15.4% (10)
Nogales	15.2% (16)	81% (85)	1% (1)
Page	6.1% (3)	91.8% (45)	2% (1)
Casa de los Niños (Tucson)	1.7% (2)	74.8% (89)	18.5% (22)
CODAC (Tucson)	2.9% (3)	83.3% (85)	11.8% (12)
La Frontera (Tucson)	5.4% (7)	82.3% (107)	10.8% (14)
Devereux (Tucson)	1.7% (2)	78.6% (92)	13.7% (16)
Sierra Vista	2.1% (2)	76.8% (73)	16.8% (16)
Tuba City	25% (14)	71.4% (40)	3.6% (2)
Verde Valley	0	94.7% (71)	5.3% (4)
Yuma	7.5% (7)	86% (80)	2.2% (2)
Pascua Yaqui	0	76.9% (30)	7.7% (3)
Lake Havasu City	3.3% (4)	85% (102)	10.8% (13)
Flagstaff	6.8% (5)	89.2% (66)	4.1% (3)
Sunnyslope (Phoenix)	6.3% (6)	75.8% (72)	16.8% (16)
Prescott	5% (6)	79.8% (95)	7.6% (9)
Casa Grande	2.1% (2)	83% (78)	14.9% (14)
Mesa	4.3% (4)	75.3% (70)	16.1% (15)
Southeast Phoenix	4.8% (5)	83.7% (87)	11.5% (12)
Total	4.8% (101)	82.3% (1720)	10.3% (215)

Late or No Prenatal Care or Poor Compliance at Intake by Site (Number and Percent within Site)

	The participant received no or late prenatal care or showed poor compliance with prenatal care		
Site	**True**	**False**	**Unknown**
Douglas/Bisbee	40.9% (38)	54.8% (51)	4.3% (4)
Central Phoenix	26.4% (19)	72.2% (52)	1.4% (1)
Maryvale (Phoenix)	34.4% (32)	62.4% (58)	3.2% (3)
South Phoenix	32.9% (24)	67.1% (51)	0
East Valley (Phoenix)	35.8% (24)	58.2% (39)	6.0% (4)
Nogales	62.8% (71)	31.9% (36)	5.3% (6)
Page	38.6% (17)	61.4% (27)	0
Casa de los Niños (Tucson)	27.9% (39)	63.6% (89)	8.6% (12)
CODAC (Tucson)	32.2% (29)	62.2% (56)	5.6% (5)
La Frontera (Tucson)	32.9% (48)	62.3% (91)	4.8% (7)
La Hacienda (Tucson)	41.4% (24)	55.2% (32)	3.4% (2)
Sierra Vista	36.5% (27)	62.2% (91)	1.4% (1)
Tuba City	38.9% (21)	59.3% (32)	1.9% (1)
Verde Valley	55.1% (38)	44.9% (31)	0
Yuma	45.7% (42)	54.3% (50)	0
Pascua Yaqui	20.0% (8)	77.5% (31)	2.5% (1)
Lake Havasu City	40.0% (48)	60.0% (72)	0
Flagstaff	34.6% (27)	65.4% (51)	0
Sunnyslope (Phoenix)	41.8% (38)	57.1% (52)	1.1% (1)
Prescott	36.8% (53)	59.0% (85)	4.2% (6)
Casa Grande	39.5% (34)	60.5% (52)	0
Mesa	28.9% (28)	68.0% (66)	3.1% (3)
Southeast Phoenix	35.2% (32)	64.8% (59)	0
Total	37.6% (762)	59.6% (1209)	2.8% (57)

Ethnicity of Mother by Site
(Number and Percent within Site)

Site	Caucasian	Hispanic	African American	Asian American	Native American	Other
Douglas/Bisbee	12.9% (12)	87.1% (81)	0	0	0	0
Central Phoenix	27.4% (20)	45.2% (33)	16.4% (12)	1.4% (1)	2.7% (2)	6.8% (5)
Maryvale (Phoenix)	25.0% (23)	65.2% (60)	5.4% (5)	0	1.1% (1)	3.3% (3)
South Phoenix	21.1% (16)	57.9% (44)	17.1% (13)	1.3% (1)	2.6% (2)	0
East Valley (Phoenix)	39.7% (27)	41.2% (28)	13.2% (9)	0	0	5.9% (4)
Nogales	0	100% (113)	0	0	0	0
Page	4.4% (2)	2.2% (1)	0	0	91.1% (41)	2.2% (1)
Casa de los Niños (Tucson)	26.1% (36)	60.1% (83)	5.1% (7)	0.7% (1)	4.3% (6)	3.6% (5)
CODAC (Tucson)	10.0% (9)	82.2% (74)	3.3% (3)	0	0	4.4% (4)
La Frontera (Tucson)	13.7% (20)	76.7% (112)	4.1% (6)	0.7% (1)	3.4% (5)	1.4% (2)
La Hacienda (Tucson)	13.6% (8)	81.4% (48)	1.7% (1)	0	1.7% (1)	1.7% (1)

Sierra Vista	45.3% (34)	41.3% (31)	6.7% (5)	0	0	6.7% (5)
Tuba City	0	0	0	0	100% (54)	0
Verde Valley	61.4% (43)	34.3% (24)	0	0	4.3% (3)	0
Yuma	6.6% (6)	92.3% (84)	1.1% (1)	0	0	0
Pascua Yaqui	0	12.5% (5)	0	0	57.5% (23)	30.0% (12)
Lake Havasu City	51.7% (62)	45.0% (54)	0	0	0.8% (1)	2.5% (3)
Flagstaff	18.8% (15)	41.3% (33)	1.3% (1)	0	38.8% (31)	0
Sunnyslope (Phoenix)	35.9% (33)	47.8% (44)	10.9% (10)	0	2.2% (2)	3.3% (3)
Prescott	69.0% (100)	29.7% (43)	0	0.7% (1)	0.7% (1)	0
Casa Grande	27.9% (24)	55.8% (48)	8.1% (7)	0	3.5% (3)	4.7% (4)
Mesa	51.0% (50)	31.6% (31)	6.1% (6)	1.0% (1)	6.1% (6)	4.1% (4)
Southeast Phoenix	20.9% (19)	57.1% (52)	15.4% (14)	0	1.1% (1)	5.5% (5)
Total	27.5% (559)	55.3% (1126)	4.9% (100)	0.3% (6)	9.0% (183)	3.6% (61)

Gestational Age by Site
(Number and Percent within Site)

	Was the gestational age less than 37 weeks?	
Site	**No**	**Yes**
Douglas/Bisbee	90.1% (82)	9.9% (9)
Central Phoenix	65.7% (44)	34.3% (23)
Maryvale (Phoenix)	75.0% (63)	25.0% (21)
South Phoenix	89.7% (61)	10.3% (7)
East Valley (Phoenix)	81.8% (54)	18.2% (12)
Nogales	91.1% (102)	8.9% (10)
Page	88.6% (39)	11.4% (5)
Casa de los Niños (Tucson)	82.3% (102)	17.7% (22)
CODAC (Tucson)	88.1% (74)	11.9% (10)
La Frontera (Tucson)	78.4% (105)	21.6% (29)
La Hacienda (Tucson)	85.2% (46)	14.8% (8)
Sierra Vista	95.4% (62)	4.6% (3)
Tuba City	85.1% (40)	14.9% (7)
Verde Valley	87.1% (61)	12.9% (9)
Yuma	91.1% (82)	8.9% (8)
Pascua Yaqui	97.2% (35)	2.8% (1)
Lake Havasu City	82.8% (82)	17.2% (17)
Flagstaff	85.1% (63)	14.9% (11)
Sunnyslope (Phoenix)	80.5% (70)	19.5% (17)
Prescott	91.5% (129)	8.5% (12)
Casa Grande	88.0 % (73)	12.0% (10)
Mesa	73.7% (70)	26.3% (25)
Southeast Phoenix	82.9% (68)	17.1% (14)
Total	84.7% (1607)	15.3% (290)

Low Birth Weight by Site
(Number and Percent within Site)

	Did the child have low birth weight (less than 2500 grams or 88 ounces)?	
Site	**No**	**Yes**
Douglas/Bisbee	81.7% (76)	18.3% (17)
Central Phoenix	70.8% (51)	29.2% (21)
Maryvale (Phoenix)	76.3% (71)	23.7% (22)
South Phoenix	86.8% (66)	13.2% (10)
East Valley (Phoenix)	77.9% (53)	22.1% (15)
Nogales	89.4% (101)	10.6% (12)
Page	93.3% (42)	6.7% (3)
Casa de los Niños (Tucson)	87.1% (122)	12.9% (18)
CODAC (Tucson)	86.8% (79)	13.2% (12)
La Frontera (Tucson)	82.8% (120)	17.2 (25)
La Hacienda (Tucson)	93.2% (55)	6.8% (4)
Sierra Vista	90.7% (68)	9.3% (7)
Tuba City	86.8% (46)	13.2% (7)
Verde Valley	89.9% (62)	10.1% (7)
Yuma	93.5% (86)	6.5% (6)
Pascua Yaqui	97.6% (40)	2.4% (1)
Lake Havasu City	84.0% (100)	16.0% (19)
Flagstaff	79.7% (63)	20.3% (16)
Sunnyslope (Phoenix)	84.8% (78)	15.2% (14)
Prescott	95.1% (137)	4.9% (7)
Casa Grande	94.2% (81)	5.8% (5)
Mesa	73.5% (72)	26.5% (26)
Southeast Phoenix	87.9% (80)	12.1% (11)
Total	86.0% (1749)	14.0% (285)

Yearly Income by Site

Site	Mean Yearly Income	Standard Deviation	Number
Douglas/Bisbee	$9453.89	6426.13	85
Central Phoenix	$11237.29	12201.30	52
Maryvale (Phoenix)	$11367.06	9158.79	72
South Phoenix	$8558.14	9434.05	58
East Valley (Phoenix)	$14763.78	20265.16	50
Nogales	$10499.85	6831.93	110
Page	$7383.18	8971.13	39
Casa de los Niños (Tucson)	$11062.21	10707.66	108
CODAC (Tucson)	$12732.06	13416.96	69
La Frontera (Tucson)	$10425.05	6585.07	114
La Hacienda (Tucson)	$11843.39	7076.46	41
Sierra Vista	$6824.41	7694.68	68
Tuba City	$12822.11	15404.26	46
Verde Valley	$9730.98	8138.32	63
Yuma	$7071.26	5616.16	81
Pascua Yaqui	$8506.76	6625.17	37
Lake Havasu City	$14382.88	13605.80	113
Flagstaff	$10885.31	11309.17	72
Sunnyslope (Phoenix)	$12519.22	19398.12	65
Prescott	$15761.51	13548.98	45
Casa Grande	$9846.61	8284.20	51
Mesa	$10133.74	10504.70	68
Southeast Phoenix	$11162.83	11591.96	65
Total	$10836.15	11100.17	1572

Family Stress Checklist Score by Site

Site	Mean Score	Percent of mothers whose FSC score was greater than 40	Number of mothers whose FSC score was greater than 40
Douglas/Bisbee	39.02	53.8%	50
Central Phoenix	37.88	42.5%	31
Maryvale (Phoenix)	37.85	51.6%	48
South Phoenix	38.75	52.6%	40
East Valley (Phoenix)	37.94	47.1%	32
Nogales	34.03	25.7%	29
Page	35.56	40.0%	18
Casa de los Niños (Tucson)	38.29	53.9%	76
CODAC (Tucson)	35.00	34.1%	31
La Frontera (Tucson)	37.81	46.6%	68
La Hacienda (Tucson)	36.12	35.6%	21
Sierra Vista	39.93	50.7%	38
Tuba City	30.65	11.1%	6
Verde Valley	34.07	30.0%	21
Yuma	37.37	43.0%	40
Pascua Yaqui	34.02	31.7%	13
Lake Havasu City	36.68	40.8%	49
Flagstaff	37.75	46.3%	37
Sunnyslope (Phoenix)	39.24	48.9%	45
Prescott	43.79	62.8%	91
Casa Grande	33.55	33.7%	29
Mesa	36.96	44.9%	44
Southeast Phoenix	35.77	42.9%	39
Total	37.28	43.9%	896

Appendix B

Parenting Stress Index Information

Reliabilities for Current Study

Subscale	*Alpha*
Competence	.70
Attachment	.60
Restricted Role	.74
Depression	.78
Isolation	.73
Distractibility	.50
Mood	.67

Change in Parenting Stress Index Subscales Scores from baseline to 6 months

Subscale	Baseline		6 months		Significance
	Mean	SD	Mean	SD	t
Competence	31.5	6.2	29.7	6.2	7.17***
Attachment	12.9	3.6	12.4	3.7	3.62***
Restricted role	19.6	5.3	18.9	5.5	3.13*
Depression	20.8	6.1	19.7	6.1	4.82***
Isolation	14.5	4.7	13.8	4.8	3.56***
Mood	10.4	3.0	9.1	2.9	9.01***

Note: * p<.01, ** p<.001, *** p<.000, dependent t-tests, SD=Standard Deviation. Test is significant when applying a Bonferroni correction.

Change in Total Parenting Index Scores from baseline to 6 months

Subscale	Baseline		6 months		Significance
	Mean	SD	Mean	SD	t
Total Stress Score	137.0	25.5	128.9	24.9	7.25***

*** p<.000

Change in Parenting Stress Index from baseline to 12 months

Subscale	Baseline		12 months		Significance
	Mean	SD	Mean	SD	t
Competence	31.6	6.2	29.3	6.0	7.07***
Attachment	12.8	3.6	12.0	3.4	4.29***
Restricted role	19.5	5.2	18.6	5.2	3.27**
Depression	20.9	6.1	19.2	5.9	5.69***
Isolation	14.5	4.5	13.6	4.5	3.97***
Mood	10.5	3.0	9.4	2.9	6.36***

Note: * p<.01, ** p<.001, *** p<.000, dependent t-tests, SD=Standard Deviation. Test is significant when applying a Bonferroni correction.

Change in Total Parenting Index Scores from baseline to 12 months.

Subscale	Baseline		12 months		Significance
	Mean	SD	Mean	SD	t
Total Stress Score	135.5	23.4	127.3	23.5	7.55***

*** p<.000

Change in Parenting Stress Index from baseline to 18 months

Subscale	Baseline		18 months		Significance
	Mean	SD	Mean	SD	t
Competence	31.6	6.5	29.4	6.4	4.60***
Attachment	12.8	3.8	12.4	3.6	1.26
Restricted role	19.4	5.2	17.9	5.6	4.02***
Depression	20.6	6.5	19.5	6.4	2.78*
Isolation	14.7	4.6	13.6	4.7	3.49**
Mood	10.3	3.1	9.6	3.0	2.60*

Note: * p<.01, ** p<.001, *** p<.000, dependent t-tests, SD=Standard Deviation. Tests are significant when applying a Bonferroni correction.

Change in Total Parenting Index Scores from baseline to 18 months.

Subscale	Baseline		18 months		Significance
	Mean	SD	Mean	SD	t
Total Stress Score	135.0	24.5	126.8	26.9	4.74***

*** p<.000

Range and Reliability of the Parenting Stress Index (*PSI*)
(Selected subscales for original reliabilities analysis)

Subscales	Range[a]	Alpha Coefficient	Administration
Sense of Competence	13 - 65	.77	Administered at 3 weeks, 6 months, and 18 months
Parental Attachment	7 - 35	.64	
Role Restriction	7 - 35	.74	
Depression	9 - 45	.75	
Social Isolation	6 - 30	.69	
Mood	5 - 25	.70	
Distractibility	9 - 45	.82	
Total Score[b]	78-390	.85	

[a] A higher score on each of the subscales represents a higher degree of stress in that area.

[b] The total score on the *Parenting Stress Index* is computed by summing all of the subscales, with a higher score indicating more stress.

Description of Parenting Stress Index Subscales

Sense of Competence Subscale: Assesses the parent's sense of competence in relation to his or her role as parent. It relates to knowledge of how to manage the child's behavior and comfort in making decisions such as when and how to discipline the child.

Parental Attachment Subscale: Assesses the intrinsic investment the parent has in the role of parent. This subscale was expected to determine the parent's motivation level to fulfill the role of parent.

Restrictive Role Subscale: Assesses the negative impact, losses, and sense of resentment associated with the parent's perceptions of loss of important life roles.

Depression Subscale: Assesses the extent to which the parent's emotional availability to the child is impaired and the extent to which the parent's emotional and physical energy is compromised.

Isolation Subscale: Examines the parent's social isolation and the availability of social support for the role of parent.

Distractibility Subscale: Assesses the degree to which the child displays many of the behaviors associated with Attention Deficit Disorder with Hyperactivity and other behaviors which result in a continuous drain on the parents' energy, which requires not only active parental management but also sustained high states of vigilance.

Mood Subscale: Assesses child characteristics related to excessive crying, withdrawal, and depression. The parent usually experiences these behaviors as anxiety or anger provoking.

Appendix C

Family Stress Checklist

***Family Stress Checklist* Problem Areas and Interpretation (Mother & Father)**

Problem Areas	Range	Interpretation / Administration
I. Childhood history of physical abuse and deprivation.	0, 5, or 10	The *FSC* is a 10 item rating scale. A score of 0 represents normal, 5 represents a mild degree of the problem, and a 10 represents severe, on both the Mother and Father Family Stress Checklist items. The *FSC* is an assessment tool and is administered to the mother through an interview by a Family Assessment Worker from the Healthy Families Arizona Program. The interview takes place shortly after birth, or as near to that time as possible.
II. Substance abuse, mental illness, or criminal history.	0, 5, or 10	
III. Previous or current CPS involvement.	0, 5, or 10	
IV. Self-esteem, available lifelines, possible depression.	0, 5, or 10	
V. Stresses, concerns.	0, 5, or 10	
VI. Potential for violence.	0, 5, or 10	
VII. Expectations of infants' milestones, behaviors.	0, 5, or 10	
VIII. Discipline of infant, toddler, and child.	0, 5, or 10	
IX. Perception of new infant.	0, 5, or 10	
X. Bonding, attachment issues.	0, 5, or 10	
Total Score	0 - 100	A score over 25 is considered medium risk for child abuse and neglect, and a score over 40 is considered high-risk for child abuse.