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Healthy Families Arizona
Evaluation Report 2002

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List of Exhibits

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This evaluation report represents the efforts of many individuals and many collaborating agencies.

Craig LeCroy, Ph.D. was the primary author of this report. The evaluation team was instrumental in the creation of this report. Cindy Jones conducted statistical analyses. Melanie Ruiz, Olga Urcadez, Veronica Urcadez and Vanessa Batt perform data entry and data cleaning. Allyson LaBrue helped with editing and formatting of the report.

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Executive Summary

Imagine a community that exists at the top of a steep mountain. It is a thriving community where people have created a productive and satisfying life. There is only one problem in this community. Occasionally, the children fall off the steep mountain and slide down the hill becoming hurt and sometimes even die. The community came up with a practical solution. They built a hospital at the bottom of the mountain. The hospital was able to help care for the hurt children. A few leaders in the community protested that this was not a good enough solution to the problem. They got together and built a fence around the top of the steep mountain.

Healthy Families Arizona is a child abuse prevention program that attempts to be part of the fence at the top of the steep mountain—before children fall off. As Neil Gutterman (2001, p.3) notes in his recent book, *Stopping child maltreatment before it starts*, "early intervention research have re-ignited the hope of stopping child abuse before it starts...Selected interventions under careful study and specific conditions have shown that the onset of child maltreatment can be averted." Indeed, the early childhood years may provide a "window of opportunity" for early intervention that can impact critical and long lasting changes in parents and families. Major social and health organizations now advocate for home visitation services because of the belief in the potential it has to offer families. For example, Zero to Three, the National Research Council, American Academy of Pediatrics, the Freddie Mac Foundation, and Ronald McDonald Charities are only some of the groups that have supported the effort to promote home visitation.

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, and mental health and substance abuse services.

This report focuses on aggregate data that is 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, 2001 and June 30, 2002. This includes all families who received services at any time during the study period regardless of when they entered the program. Separate site reports are produced quarterly and provided to each site. In this year's report, more extensive site level data can be obtained in the Appendices.

Converging Evidence: A summary of Evaluation Results

In this year's report an examination of the converging evidence was provided to summarize what has been learned to date and reassess the overall impact of Healthy Families.

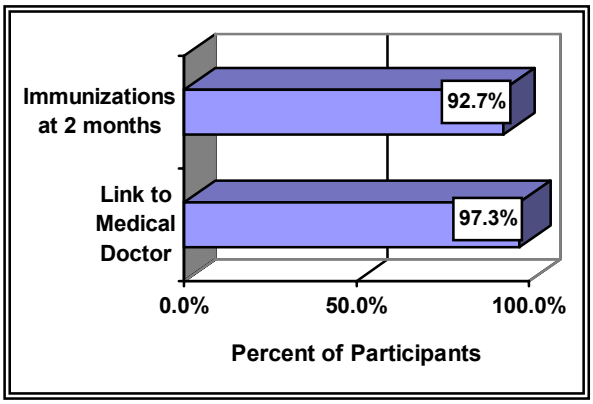
The converging evidence for Healthy Families Arizona suggests that the program is effective. This conclusion is supported by the following findings: replicated evaluations showing improvement from baseline to post assessment periods, positive results when using a comparison group on the *Parenting Stress 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. Other outcomes that add to the cumulative evidence include the qualitative study that documented the perceived value the families report from being involved in the program and twelve years of experience in working toward program improvement showing gains in program implementation such as increased immunization and retention rates over time. Assessing program effectiveness is always a complex process, which requires a balance of good methodology, measures, and program implementation. In the end, a question of effectiveness requires a judgment be made based on an assessment of the data.

Program Outcomes for 2002

The evaluation has assessed program outcomes in the following areas: health and development indicators, parenting effectiveness and competence, child safety, child abuse and neglect, and maternal life course indicators. The outcomes for families served in FY2002 are summarized graphically.

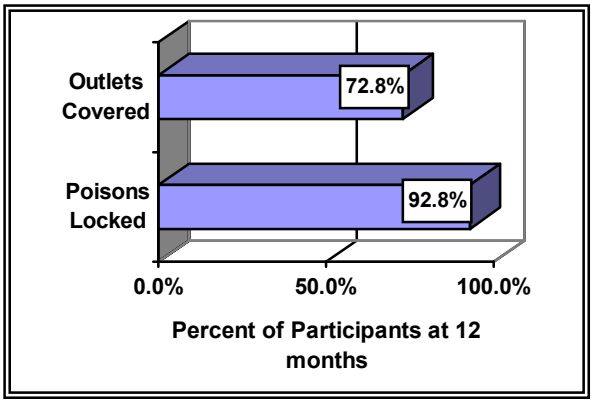
Health Outcomes for Participants

There was a 92.7% immunization rate for participants in the program at the 2-month assessment and at the 6-month assessment 97.3% of families were linked to a medical doctor. In terms of having received all 4 immunizations in the series, 83.9% obtained this compared with the state immunization rate for 2 year olds of 78%.



Child Safety

Enhanced quality of the home environment can be assessed by examination of child safety practices. At a 12-month assessment, almost all families practice many of the recommended child safety procedures. The results for two safety procedures are shown.



Parenting Stress & Competence

Overall parenting effectiveness and competence is evaluated using a standardized parenting stress index. Assessment of participants from baseline to a 6 month, 1 year and 18 month follow up show statistically significant changes on all measures at each assessment period except distractibility which did not have adequate reliability to be used as a reliable measure.

Results on the Parenting Stress Index

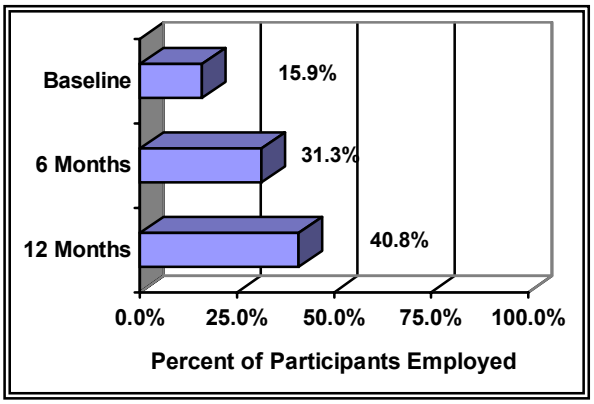
Scale	Improvement
Sense of Competence	Significant
Parental Attachment	Significant
Feeling restricted in role	Significant
Depression	Significant
Isolation	Significant
Mood	Significant
Total Stress	Significant

Child Abuse and Neglect

Child abuse and neglect incidents were examined for program participants and a small comparison group. As in previous years, child abuse and neglect rates continue to be low. In FY2002, 0.7% of program families had subsequent substantiated incidents of child abuse and neglect, meeting the program goal of having no higher than a 5% rate of child abuse and neglect. The comparison group rate of child abuse and neglect was 0.84%.

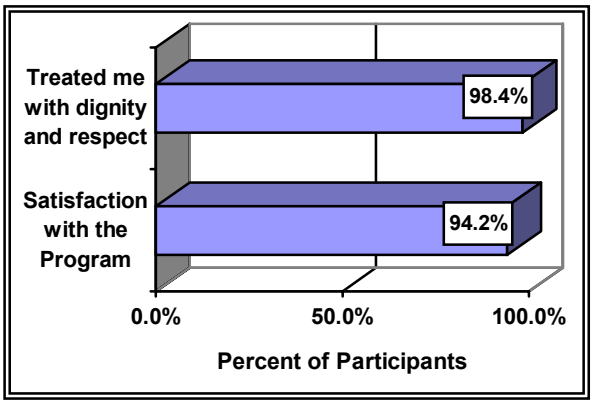
Maternal Life Course

The Healthy Families Arizona program has also been shown to positively influence mothers' life goals and actions. Specifically, many of the participants enroll in school, obtain their GED or seek gainful employment. Mothers' employment outcomes at baseline, 6 and 12 months are shown to the right. Additionally, 17.3% of the mothers were enrolled full-time in school and 5.5% were enrolled part time in school.



Participant Satisfaction

Overall, program participants are very satisfied with the program services they receive. For example, 98.4% agreed or strongly agreed that they were treated with dignity and respect and 94.2% were somewhat satisfied or very satisfied with the program at a 2-month assessment.



Overall, results from multiple outcome indicators suggest the program is providing valuable services and improving the quality of life for participants.

Positive changes in multiple outcome indicators point to the success of the Healthy Families Arizona home visitation program. Many social programs hope to impact only one model goal; Healthy Families Arizona demonstrates positive outcomes across multiple goals: child health and development, quality of home life, reduction in parental stress, low rates of child abuse and neglect and increases in child safety practices.

Introduction

Imagine a community that exists at the top of a steep mountain. It is a thriving community where people have created a productive and satisfying life. There is only one problem in this community. Occasionally, the children fall off the steep mountain and slide down the hill becoming hurt and sometimes even die. The community came up with a practical solution. They built a hospital at the bottom of the mountain. The hospital was able to help care for the hurt children. A few leaders in the community protested that this was not a good enough solution to the problem. They got together and built a fence around the top of the steep mountain.

Healthy Families Arizona is a child abuse prevention program that attempts to be part of the fence at the top of the steep mountain—before children fall off. As Neil Gutterman (2001, p.3) notes in his recent book, *Stopping child maltreatment before it starts*, "early intervention research have re-ignited the hope of stopping child abuse before it starts...Selected interventions under careful study and specific conditions have shown that the onset of child maltreatment can be averted." Indeed, the early childhood years may provide a "window of opportunity" for early intervention that can impact critical and long lasting changes in parents and families.

Support for a national effort that suggests we can stop child abuse before it starts is converging from many sources. An early push came from the United States Advisory Board on Child Abuse and Neglect in 1991, which recommended a nationwide neonatal home visitation program. In 1992 Prevent Child Abuse America launched the Healthy Families America initiative to promote the expansion of home visitation services. Major social and health organizations now advocate for home visitation services because of the belief in the potential it has to offer families. For example, Zero to Three, the National Research Council, American Academy of Pediatrics, the Freddie Mac Foundation, and Ronald McDonald Charities are only some of the groups that have supported the effort to promote home visitation.

In line with the current emphasis at the Federal and state levels, "best practices" and science-based principles have been an important part of the Healthy Families effort. These principles are implemented through the assessment of "critical elements" believed essential for producing the best program outcomes. As the Healthy Families initiative evolved, the critical elements became a way to offer certification to programs that were adhering to practices that were the most likely to lead to positive outcomes. Arizona became the first statewide system to obtain the certification from Prevent Child Abuse America documenting adherence to "best practice" principles. This approach is recommended by Gutterman (2001, p.10) in his careful review of research literature on home visitation:

"For application purposes, emphasizing best practice *principles* rather than whole program models enhances flexibility for programmatic adoption while minimizing overly prescriptive information that might constrain adaptation to specific needs and contexts."

This is a sound approach to building a scientific-based program. However, others have argued for the "model approach" which endorses strict adherence to specific intervention models rather than using research-based conclusions to inform best practice principles. For community-based programs, the best practice model allows for the inclusion of new scientific discoveries and becomes a more dynamic application of knowledge.

In this Report

The Healthy Families Arizona program has been evaluated since 1991 by LeCroy & Milligan Associates, Inc. and several separate reports have been written (See Appendix A for a list of reports). This year's report attempts to examine and summarize the cumulative evidence of the effectiveness of Healthy Families Arizona. Increasing emphasis is being placed on providing site-level data for program improvement and quality as the program evolves into a mature and established program.

This report focuses on aggregate data that is summarized across the 23 sites that make up the Healthy Families Arizona program. Evaluation data are presented for the cohort of participants who received services in the Healthy Families Arizona program between the period of July 1, 2001 and June 30, 2002. This includes all families who received services at any time during the study period regardless of when they entered the program. Separate site reports are produced quarterly and provided to each site. In this year's report, more extensive site level data can be obtained in the Appendices.

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- 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, and mental health and substance abuse services.

Converging Evidence: A Summary of Evaluation Results

Each year an evaluation report is written that summarizes the service and demographic data for the program. This information is used extensively for purposes of *program improvement*. However, increasingly, policy makers and program staff want to know whether the program works or what the *program outcomes* are. This year's report provides additional information about program outcomes by examining the converging evidence that can be summarized from past evaluation reports of the program.

1992-1993 Evaluation Report

Methodology: descriptive analysis of program participants, screening and assessment data, pretest/posttest data on *Parenting Stress Index*, the *HOME observation scale* and child abuse and neglect rates.

Results: *Parenting Stress Index*; Three of 9 subscales were significant at .05 level showing positive change, all of the subscales were significant at the .10 level. *HOME scale*; 2 of the 3 scales significant at the .05 level, one at the .10 level. Child abuse and neglect substantiated rates were 3% covering the years 1992-1993.

Conclusions: Program is targeting at-risk families with a high percentage of past childhood abuse and neglect. Some promising results were obtained in the first year of implementation. This included significant pretest/posttest changes and attaining the program goal of child abuse and neglect rates below 5%. Low numbers affected the ability to document some outcomes.

1992-1994 Evaluation Report

Methodology: descriptive analysis of program participants, screening and assessment data, pretest/posttest data on *Parenting Stress Index*, the *HOME observation scale* and child abuse and neglect rates. Design was strengthened with the addition of a comparison group for the *Parenting Stress Index* and child abuse and neglect reports.

Results: *Parenting Stress Index* scores from baseline to 6 months found 10 out of 11 subscales showed significant positive change. More importantly, when comparisons were made between the treatment and a comparison group, 5 of the 11 scales found significant positive differences favoring the Healthy Families participants. In fact, on all but one scale the comparison group got *worse* and the Healthy Families group got *better*. On the *HOME* measure, results found significant change from pretest to posttest on 3 of the 6 subscales and on the total score. Immunization data found that most immunization shots were up to date for over 50% of the Healthy Families group. The immunization rate for Arizona in 1993 was 46%. Substantiated child abuse and neglect reports were 2.8% for the treatment group and 3.7% for the comparison group which also included one child death.

Conclusions: Results improved in that more *Parenting Stress Index* and *HOME subscales* were found to show significant pretest to posttest changes. A major methodological improvement was the addition of a comparison group that found significant improvement for the treatment group in contrast to the comparison group on some measures. The immunization rates were low for program participants and targeted as an important area for improvement. Child abuse and neglect rates were lower for the treatment group than the comparison group and met the stated program goal of less than 5 percent.

1992-1996 Evaluation Report

Methodology: includes the same methodology as previous report. An addition is the use of the *Child Abuse Potential Inventory* and continued use of a matched comparison group for assessing outcomes in child abuse and neglect rates.

Results: The *Child Abuse Potential Inventory* is primarily a screening tool for assessing child physical abuse. Results from this study found a statistically significant decrease in the average score from baseline to 12 months, indicating a reduced potential for physical abuse. Reductions in three subscales accounted for this change: parental distress, rigidity, and problems with others. Two subscales did not show significant change: problems with families of origin and problems with child and self. Positive results were also found with the *Parenting Stress Index* in that the total score and most of the subscales (e.g., parental attachment, sense of competence) showed significant improvements when assessed from baseline to 6 month and 18 month time periods. Similar to the last evaluation, positive changes were found on the *HOME scale* showing improvement in the total score from baseline to post assessment periods. Immunization data found that most immunization shots were up to date for over 90 to 99% of families enrolled at different time periods. Substantiated child abuse and neglect reports were studied for two groups, the original three sites (referred to as CAP sites) and the expansion sites (referred to as DES sites). For the CAP sites, the child abuse and neglect rate was 4.5% for the treatment group and 8.5% for a comparison group that did not receive services. This result favors the Healthy Families group at a statistically significant level of $p < .10$. For the DES sites, the child abuse and neglect rate was 0.7% for the Healthy Families participants and 2.0% for the comparison participants, a non-significant result. Given important methodological considerations (greater surveillance in treatment group, greater likelihood of being tracked in the system) these results can be interpreted as positive. Although the numbers are small, a further study into the type of abuse that occurred revealed that physical abuse was more frequent for the comparison group than the Healthy Families group.

Conclusions: Greater convergence of effectiveness data emerges from this evaluation. The *Parenting Stress Index* results of previous years is replicated but the additional finding from the *Child Abuse Potential Inventory* adds further evidence that program participants make improvements while in the program. Program implementation appears to improve as immunization rates increase considerably from last years' assessment. Child abuse and neglect rates show significant decreases for the Healthy Families group when contrasted with a comparison group. The overall evaluation begins an increased focus on cross-site comparisons allowing enhanced quality assurance as data was more easily examined for each site. The report finds improvement in retention rates but there remains a need to continue improvements in retention.

1997 Qualitative Interview Study

Methodology: A stratified random sample of 46 mothers was interviewed about their experiences in the program in order to understand program experience from the participants.

Results: Participants reported that the program was seen as: helpful in addressing immediate family needs such as housing and food, providing emotional support with the multiple challenges parents face, and providing useful information about child health and development. Participants were also asked about their experiences with the screening process and it was found that participants perceive the screening as voluntary. Finally, participants reported a strong commitment to the program and

believe the program dramatically affected how they feel about themselves as mothers, feelings about their own sense of self, and their relationships with their children.

Conclusions: This study provided additional data suggesting the participants benefited from what the program has to offer. Consistent with program theory, the participants reported value in the participant-worker relationship. This relationship appears to be the primary mechanism for achieving positive client outcomes.

1992-1998 Evaluation Report

Methodology: descriptive analysis of program participants, screening and assessment data, pretest/posttest data on the *Parenting Stress Index,* the *Child Abuse Potential Inventory* and the HOME observation scale. Evaluation design is strengthened with the addition of a comparison group for the *Child Abuse Potential Inventory*. Because of a state-level change to the computerized CHILDS system of data collection, this report did not include an analysis of child abuse and neglect rates.

Results: Assessment using the *Child Abuse Potential Inventory* showed some positive outcomes. In particular, baseline to post test at 12 months showed significant improvement in 4 of the 7 subscales: abuse, distress, rigidity, and problems with others. More importantly, an analysis was conducted to compare the change in scores between the Healthy Families participants and a comparison group of individuals who did not receive treatment. The Healthy Families group reduced their potential for abuse significantly more than the comparison group. Noteworthy was the finding that the comparison subjects actually increased their abuse potential as shown by an increase rather than a decrease on the abuse subscale. The *Parenting Stress Index* findings replicated the earlier reports showing 10 of 11 subscales had significant gains for the participants. This cohort was also compared with the earlier comparison group using the Parenting Stress Index. Results found significance between group differences favoring the Healthy Families participants. The results for the *HOME scale* also found significant gains for participants at 12 month and 2 year assessments for the total score and most of the subscales. Immunization rates assessed at three time periods were again higher than what has been typically reported for statewide immunization rates.

Conclusions: This report added to the evidence of effectiveness by finding improvements with the *Child Abuse Potential Inventory*. Especially significant was the greater between group differences in the Healthy Families group on abuse potential when compared to a no-treatment group. Also important was the replication of positive findings from the *Parenting Stress Index*. Critical program changes included the beginning efforts to systematically assess and intervene with families that have substance abuse problems. The program also showed improvement in the retention of families and that has been a major implementation issue. New efforts were also initiated to include fathers and expand outreach to strengthen the family focus of the program and the program began to collect participant satisfaction data.

Healthy Families Evaluation Reports 2000 and 2001

Methodology: The last two reports from years 2000 and 2001 are combined because their methodology and results are quite similar. In these reports, the focus shifted from an extensive examination of outcomes to an examination on program improvement based on site-level data. After extensive analysis of multiple measures and outcomes, the program evaluation was refined using a smaller set of measures consisting primarily of the *Parenting Stress Index*, child safety in the home, and immunization rates. The program continues to monitor participant

data based on the screening tool, child development and referral for delays, links to medical doctors, maternal life outcomes such as employment and education and parent satisfaction with the program. These data are used primarily for program improvement.

Results: Data from both years replicate the earlier findings from the *Parenting Stress Index* showing improvement from baseline to 6, 12 and 18-month assessments. Data on child safety show increases from baseline to assessment but increases are small because most parents are practicing safety habits prior to assessment. Immunization rates have remained stable and are consistently higher than comparable statewide data. In both years the rate of child abuse and neglect remained very low. For example, in 2001 the child abuse and neglect rate was 0.8% for the Healthy Families group and 1.7% for the comparison group.

Conclusions: Program results continue to be documented by the gains shown in the *Parenting Stress Index*, increases in immunization rates (and higher rates than statewide averages), small increases in child safety practices in the home, and low child abuse and neglect rates.

What is the evidence for program effectiveness based on the evaluation studies completed?

The converging evidence for Healthy Families Arizona suggests that the program is effective. This conclusion is supported by the following findings: 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. Other outcomes that add to the cumulative evidence include the qualitative study that documented the perceived value the families report from being involved in the program, the cost benefit study which found that cost savings can be documented, and twelve years of experience in working toward program improvement showing gains in program implementation such as increased immunization and retention rates over time. Assessing program effectiveness is always a complex process, which requires a balance of good methodology, measures, and program implementation. In the end, a question of effectiveness requires a judgment be made based on an assessment of the data.

Implementation Update 2002

There have been no new requirements added to the program during the last three years. However, the Healthy Families state system has developed new implementation strategies. First, a series of small focus groups was held to discover the barriers and challenges that hinder home visitors from focusing on parent-child relationships and child development. From these focus groups, a staff situational questionnaire was developed, implemented and analyzed identifying which situations occur the most frequently and are the most difficult to address. Training is being developed around each of these issues and will be implemented through the Training Institutes. Support for staff in dealing with these issues will be systemic and all aspects of the state system are being analyzed.

Training efforts have been focused on developing the skills of the supervisors and program managers across the state. Advanced supervision training has been scheduled each quarter. Consultants have been included in the training to provide regional interim support monthly as supervisors integrate new supervisory skills into practice. Reflective, responsive supervision is seen as key to successful program outcomes.

Thirdly, in an effort to reach out and include fathers in service delivery, a state Fatherhood Involvement Committee has been established. This committee defined active father/male involvement, methods staff could use to reach out to fathers, and training content to be included during the Training Institute and on site visits. Initial data were gathered to determine father/male involvement as a baseline and will be reviewed on a regular basis.

In order to integrate early intervention services for children with special needs, Healthy Families Arizona developed policies and procedures that were reviewed and agreed to by the Arizona Early Intervention Program (AzEIP). These procedures will facilitate the referral process to therapy and other services for children with special needs. Additionally, semi-annual training has been institutionalized for staff administering the Ages and Stages Questionnaire, a child developmental screen.

Finally, in August 2002, Healthy Families Arizona applied for and was awarded the Western Regional Resource Center of Excellence. This center will provide training and technical assistance to the western states in all areas of Healthy Families program implementation. Arizona is one of two regions awarded the contract due to the quality of our statewide system.

Program Participants

What risk factors are associated with Healthy Families Arizona program participants?

The graph shows that the kinds of families recruited to participate in the Healthy Families Arizona program are participants with clearly identifiable risk factors. These risk factors are associated with poor child development outcomes and child abuse and neglect. Important to any prevention program is the ability to target an at-risk population to deliver services. In examining the Healthy Families Arizona screening process, it is evident that the program is identifying a proper target population for services.

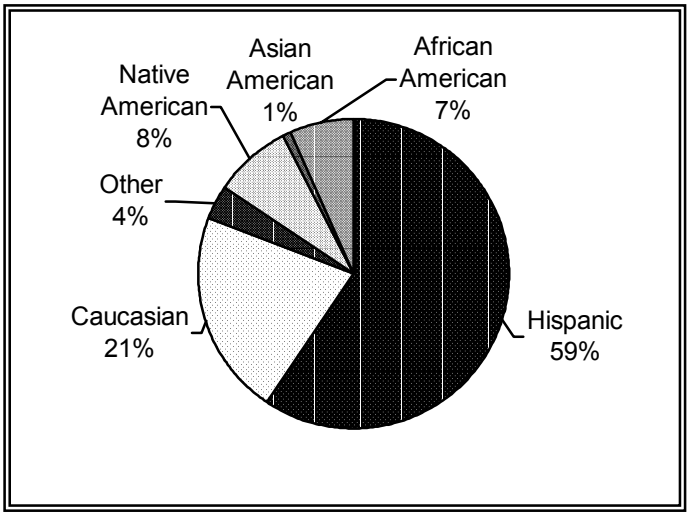
Exhibit 1. Selected risk factors for Healthy Families mothers at intake

Risk Factors	Number
Teen Births (<19 years old)	38.5%
Births to single parents	70.8%
Less than high school education	62.9%
Not employed	17%
No health insurance	4.8%
Late or no prenatal care	38%
Median yearly income	$9,600

What is the ethnicity of the mothers served by the Healthy Families Arizona program?

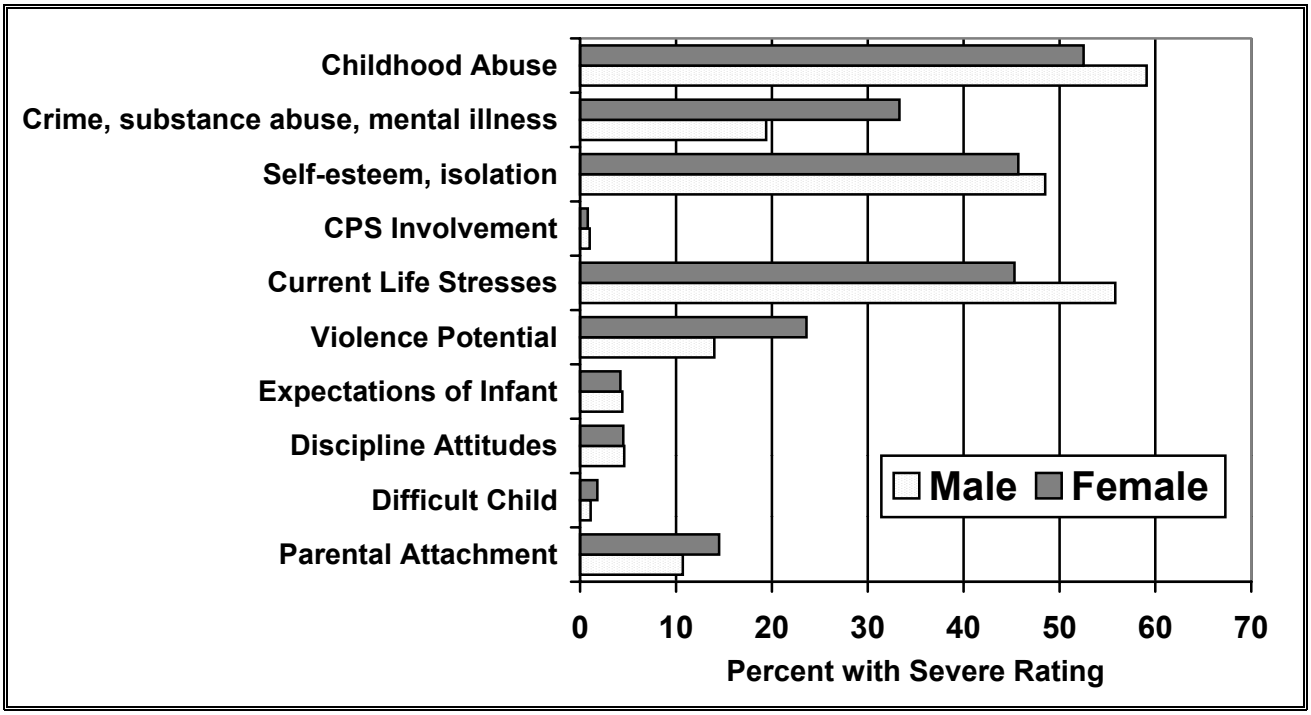
The Healthy Families Arizona program seeks to serve a culturally diverse number of participants in the state. Each site (see site level data in the Appendices) does an analysis of its community and ensures that staff are representative of the ethnic groups in the community. Staff are also trained in cultural competency.

Exhibit 2. Ethnicity of Healthy Families Mothers



What percentage of mothers and fathers obtain a rating of severe on the Family Stress Checklist items?

Exhibit 3. Percentage of Mothers and Fathers Rated Severe on the Family Stress Checklist Items



During the initial assessment period, mothers and fathers are rated using the Family Stress Checklist. The above graph shows the three greatest stressors in families' lives: coping with a history of child abuse, feeling low and isolated, and difficulty in coping with major stresses such as low income, poor housing, and relationship difficulties.

What percentage of infants has high-risk characteristics?

Exhibit 4. Percentage of infants with high-risk characteristics

Risk Factor	Percent
Born <37 weeks gestation	15.1%
Birth defects	1.1%
Low birth weight	14.2%
Positive alcohol screen	0.4%

The initial screening and assessment process identifies the risk characteristics of infants entering the program. Many of these risk characteristics are associated with increased risk for child abuse and neglect. The screening process helps workers provide tailored services to help families that have infants who may need special attention.

Service Delivery

What number of participants does each county and site serve?

Exhibit 5. Number of participants served by county, by site

Site and Participants Served		Site and Participants Served	
Cochise County		Coconino County	
Douglas/Bisbee	112	Flagstaff	82
Sierra Vista	111	Page	50
		Tuba City	60
Maricopa County		Mohave County	
Central Phoenix	95	Lake Havasu City	129
East Valley Phoenix	79		
Maryvale	89	Pima County	
Mesa	110	Casa de los Niños	129
South Phoenix	78	CODAC	120
Southeast Phoenix	120	Devereux	121
Sunnyslope	119	La Frontera	138
		Pascua Yaqui	42
Pinal County		Santa Cruz County	
Pinal County Department Of Public Health	110	Nogales	122
Yuma County		Yavapai County	
Yuma	104	Prescott	142
		Verde Valley	85
TOTAL ALL SITES = 2,347			

The number of participants served across all sites for the study time period (July 1, 2001 – June 30, 2002) totals 2,347. Sites serve different numbers of families depending on their funding level and number of Family Support Specialists at the site. Enrollment and participation in the program remains a program strength in that services are delivered to meet a broad range of needs such as child safety in the home, immunizations, and parenting skills to a large number of families. In spite of the volunteer nature of the program, recruitment and participation remains high (over 90% of the families who are offered the program, accept services).

What is the length of time in the program at termination for engaged families?

In the home visitation field, a factor that has taken on increasing importance is the process of actively engaging families in the services. Families may enroll in the program but are not actively engaged until four home visits have been completed. In this year's study, the percentage of families who were actively engaged was 89.4%, therefore only about 10% terminated the program prior to the four home visits. Exhibit 6 describes the actual length of time that families participated in the program before termination. Only 4% terminated the program at 3 months, which is a vast improvement over last year when 11.1% terminated at 3 months. Over half of the families participate for a year or longer. The average length of days in the program increased from 498 days in last year's study to 595 days in this year's study. In summary, Healthy Families Arizona has documented 3 years of steady improvement in the engagement and retention of families.

Exhibit 6. Length of time in the program at termination for engaged families

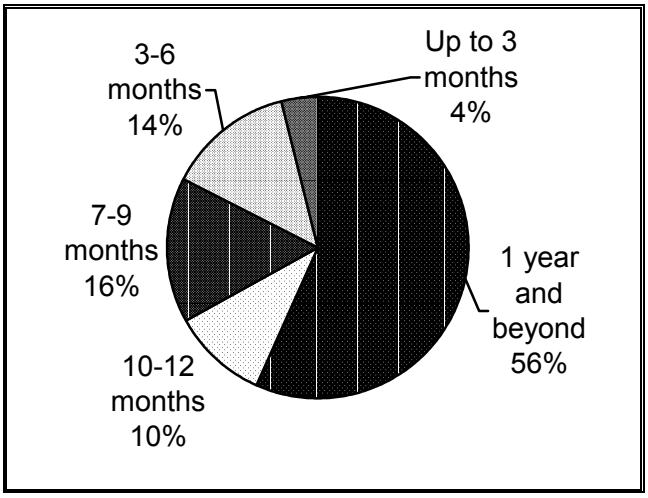
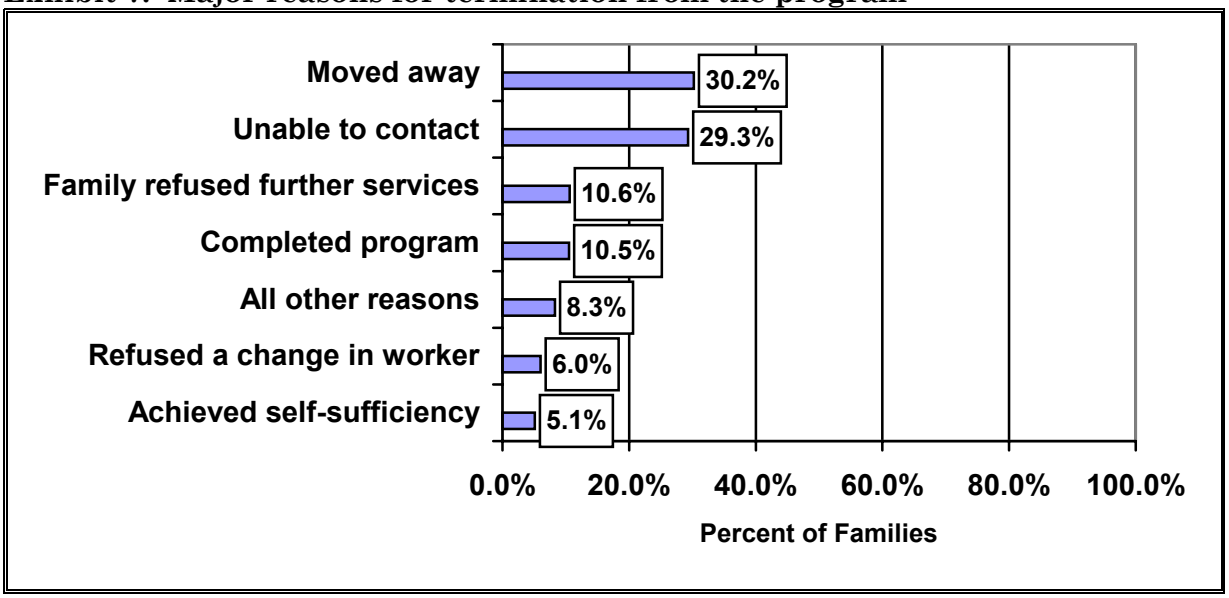


Exhibit 7. Major reasons for termination from the program



In order to better understand how participants move in and out of the program, Healthy Families Arizona collects data on the reasons for termination in the program. Exhibit 7 presents this information. As can be seen, the main reasons for termination are being unable to contact the family and family moved away. Noteworthy is that in last year's study 5.7% had completed the program as a reason for termination and this year the percentage is up to 10.5%.

How do families who do not engage differ from those that do?

This is an important question because it provides information about which families may need extra attention and help to stay engaged in the program. Several factors were examined to see if differences between the engaged and non-engaged families were present. The results reveal that most factors did not show a difference such as: age of the mother, Family Stress Checklist score, ethnicity of the mother, low birth weight of the infant, and household size. Only two factors could be considered to be meaningfully different: about 5% more early terminators where single parents and 5% of the early terminators were more likely to have had only a chart screen as opposed to a verbal screen at initial intake. Overall, it does not appear that any one set of risk factors are more likely to lead to early termination from the program.

Program Outcomes for 2002

Healthy Families Arizona has continued to collect outcome data to examine program effectiveness. This section reports on multiple outcome indicators to study the overall impact of the program on parental stress and competence, child abuse and neglect, safety practices in the home, medical and social service use, and employment and educational attainment.

Do Healthy Families Arizona participants show reductions in stress after participating in the program?

One of the primary outcome indicators for the success of the Healthy Families Arizona program has been a measure of parental stress. This is because parental stress is related to increases in child abuse and neglect. The Parenting Stress Index (Abdin, 1995) is a reliable and valid measure used extensively in research and evaluation studies. This index provides data on the total amount of stress and information on seven subscales: sense of competence, parental attachment, feeling restricted in one's role, depression, isolation, distractibility, and mood. As the exhibit shows, significant pretest to posttest changes occurred for every subscale at 6 months and all but one subscale at 12 and 18 months. Furthermore, the total parenting stress score shows significant change across all time periods.

Exhibit 8. Parenting Stress Index Findings

Subscale	Time Period		
	Baseline to 6 months	Baseline to 12 months	Baseline to 18 months
Sense of Competence	**Significant Improvement** t=9.28, p<.000	**Significant Improvement** t=7.07, p<.000	**Significant Improvement** t=3.25, p<.001
Parental Attachment	**Significant Improvement** t=5.83, p<.000	**Significant Improvement** t=4.26, p<.000	**Significant Improvement** t=2.97, p<.003
Feeling restricted in role	**Significant Improvement** t=3.60, p<.000	**Significant Improvement** t=4.46, p<.000	**Significant Improvement** t=3.57, p<.000
Depression	**Significant Improvement** t=4.85, p<.000	**Significant Improvement** t=5.05, p<.000	**Significant Improvement** t=3.93, p<.000
Isolation	**Significant Improvement** t=4.57, p<.000	**Significant Improvement** t=4.47, p<.000	**Significant Improvement** t=3.20, p<.002
Distractibility	**Significant Improvement** t=2.66, p<.000	**No Significant Improvement** t=0.10, p>0.05	**No Significant Improvement** t=0.10, p>0.05
Mood	**Significant Improvement** t=11.88, p<.000	**Significant Improvement** t=6.90, p<.000	**Significant Improvement** t=3.06, p<.002
Total Stress Score	**Significant Improvement** t=9.63, p<.000	**Significant Improvement** t=6.82, p<.000	**Significant Improvement** t=4.48, p<.000

Note: See Appendix B for statistical details. Most reliabilities for the subscales were adequate, distractibility has an alpha of .47 which may explain why results were not significant for this scale. Definitions of each subscale can be found in Appendix B.

Child Abuse and Neglect Outcomes

Is there a difference in the rate of child abuse and neglect when comparing treatment and comparison groups?

A common expectation of program impact is examination of the incidence of child abuse and neglect reports from the families who participate in the program. These data are presented in Exhibit 9, although reports of child abuse and neglect are unlikely to be a good measure of program impact. This is because of several factors: child abuse and neglect are low occurring events, many incidents (perhaps up to one third) of child abuse and neglect go unreported, and increased community involvement with the family (e.g., mandatory reporting by physicians) may lead to increased reporting which can suggest the misleading conclusion that the program has no impact.

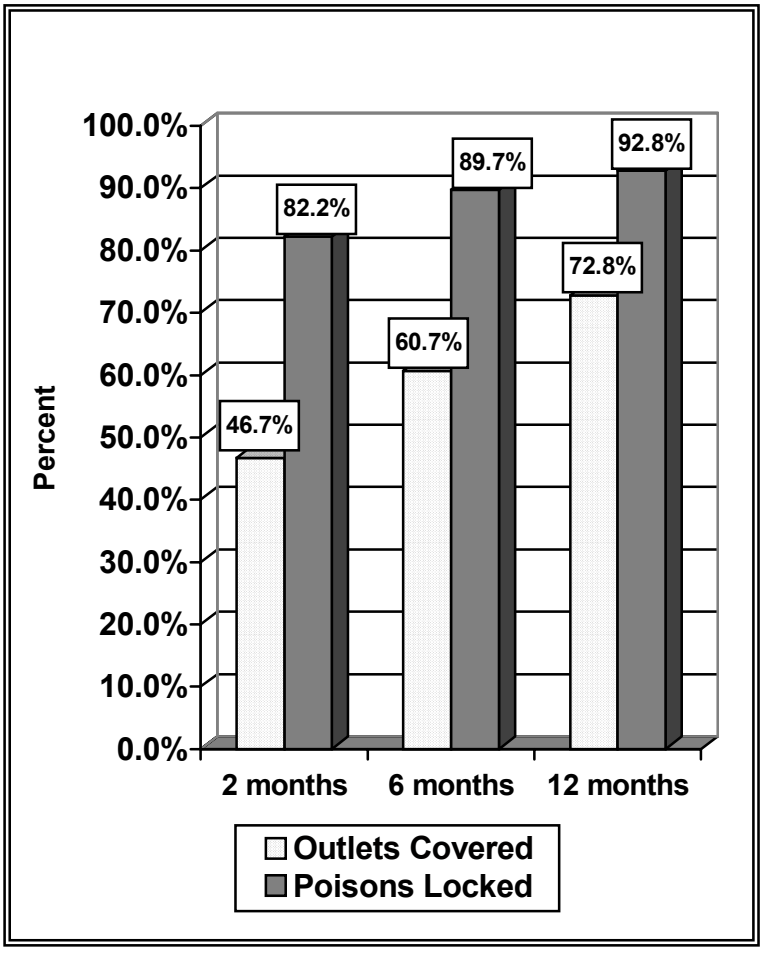
Exhibit 9. Percent of child abuse and neglect cases in treatment and comparison groups

Group	CPS Match Rate
Healthy Families Participants	0.76%
Comparison Group Participants	0.84%

Exhibit 9 summarizes the percent of child abuse and neglect reports from two groups: the Healthy Families treatment group and a comparison group. The treatment group consists of families who have had at least four or more home visits (sufficient time to expect a program impact) and the comparison group consists of families who dropped out and did not complete at least four visits. The results are based on all families who entered the program during the study period of July 1, 2001 to June 30, 2002. Both groups had a very small percentage of matches when compared with the CHILDS registry. There were no significant differences between the groups and it is difficult to detect such differences when the rates are so small.

Do Healthy Families Arizona participants show increases in child safety after participating in the program?

Exhibit 10. Percent of safety practices implemented



Since home visitors are in the parent's home environment, they are in an excellent position to improve the safety of the family's home. Data obtained from a child safety checklist show that most homes follow safety procedures and that on some indicators, child safety increases over time.

This exhibit shows that on two safety measures, outlets covered and poisons being locked, increases can be detected from the 2 month, 6 month and 12 month assessment. Other safety indicators are also assessed including: smoke alarms, car seats, scissors and knives, lighters and matches, water safety, emergency phone numbers, outside supervision, and food storage. At the 2-month assessment, these other safety practices were all being actively used with over 90% of the participants.

Do Healthy Families Arizona child participants show increased levels of immunization after participating in the program?

One goal of the Healthy Families program is to ensure that all families receive appropriate medical care. An assessment of this can be conducted by looking at the rate of immunizations that the children receive. Exhibit 11 shows the percentage of immunizations at different time periods.

Overall, program children do receive the required immunizations and, when compared with ADHS (2001) data, Healthy Families Arizona children do fairly well. This is especially noteworthy when considering that the program participants represent a high-risk group (less likely to get immunizations) and the state rate for immunization of 2 year olds is 78% (including both high-risk and low-risk groups).

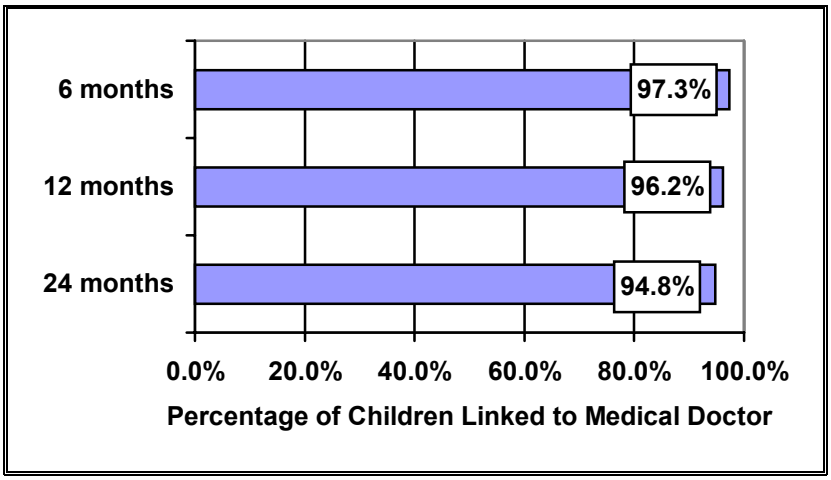
Exhibit 11. Rate of immunization by Healthy Families participants

Immunization period	Percent immunized	Immunization rate for 2-year-olds in Arizona (OAG, 1999)
2 month	92.7%	
4 month	86.9%	
6 month	76.6%	
12 month	86.6%	
Received all 4 in the series	83.9%	78%

What percent of Healthy Families program children get linked to a medical doctor?

Exhibit 12 shows the percentage of families that are linked to a medical doctor, a critical goal of the program.

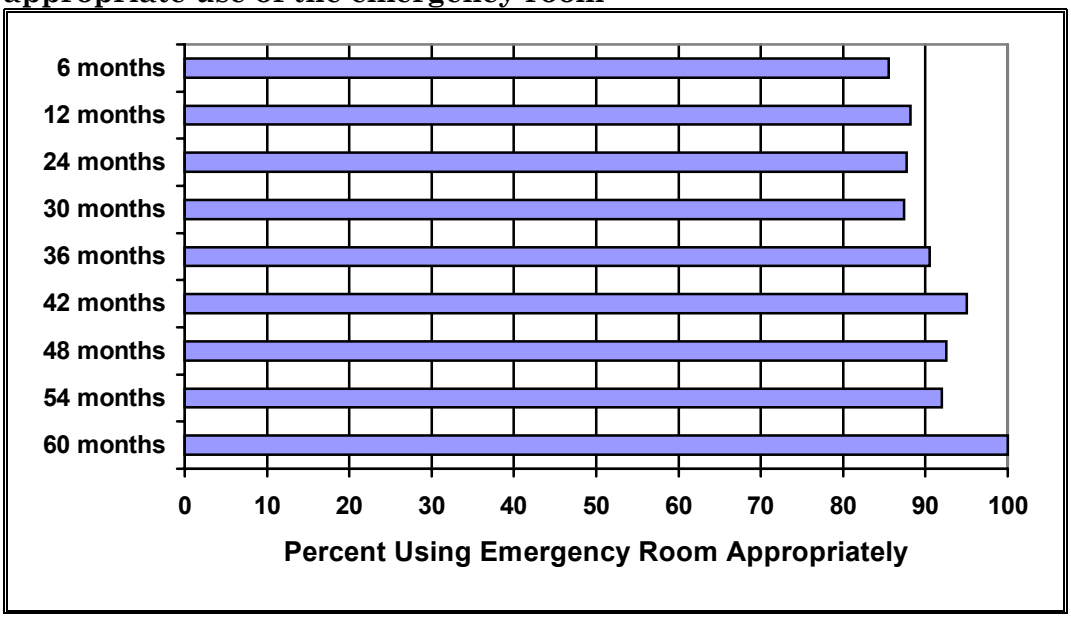
Exhibit 12. Percentage of children linked to a medical doctor at 6, 12, and 24 months



What percent of Healthy Families participants make appropriate use of the emergency room?

Data were also collected on emergency room use. A concern from health providers has been the inappropriate use of the emergency room for routine health care. Exhibit 13 shows a trend for an increasing number of participants who use the emergency room only when having obtained a doctors' referral.

Exhibit 13. Percent of Healthy Families participants who make appropriate use of the emergency room



What percent of families are detected to have children with developmental delays?

The Healthy Families program seeks to monitor and promote healthy child development. Families that are in the program are offered developmental screening to assess their child's developmental status. Both the parents and the home visitors are learning ways to encourage proper stimulation for growth and development and can then use this information. Home visitors attempt to administer the Ages and Stages Questionnaire to all their families. At the 4-month time period, 55.8% of families had been administered the questionnaire, at the 6-month time period, 60.2% of the families had been administered the questionnaire.

Exhibit 14. Developmental delay from 4 to 36 months

Developmental delay at 4 months	11.3%
Developmental delay at 12 months	4.2%
Developmental delay at 24 months	13.8%
Developmental delay at 36 months	7.5%

Infants whose development is delayed are referred to early intervention services. Another major service that the program offers parents is early detection of such problems. Exhibit 14 shows the percent of developmental delays detected across four time periods. In almost all cases, children who were detected for delays were referred to appropriate follow-up services such as early intervention, AzEIP, or an intervention program.

What percent of families have alcohol and drug problems?

High-risk families can have serious difficulties with alcohol and drug problems. The Healthy Families program is able to provide screening and referral for families who need to seek alcohol and drug treatment. Exhibit 15 shows the percentage of families who screened positive for alcohol and drug problems across four time periods.

Exhibit 15. Percentage of families who screened positive for alcohol and drug problems

2 months (N=35)	6.8%
6 months (N=16)	3.7%
12 months (N=22)	5.7%
18 months (N=12)	4.5%

While only a small number of participants are identified, those who are identified are referred to treatment. Given the strong connection between substance abuse and child abuse and neglect, getting even a few families into treatment could have a significant impact.

Maternal Life Course Outcomes

Although the Healthy Families program focuses on parent-child interaction as a primary goal, it can also bring benefits with regard to maternal life course outcomes such as subsequent pregnancies, education and employment.

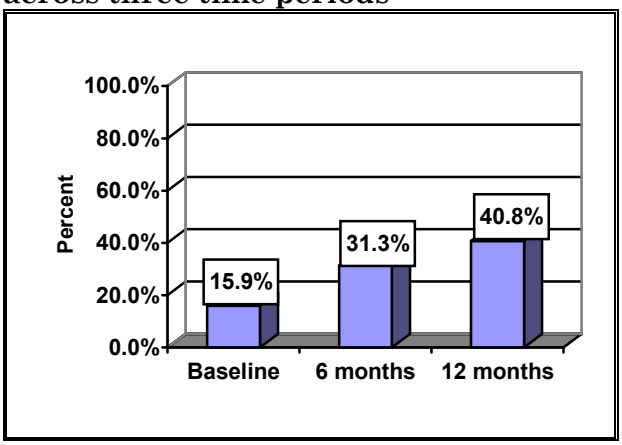
What percentage of mothers have subsequent pregnancies?

Subsequent pregnancies were reported by 12.1% (N=254) of the participants while involved in the program. Of these mothers, 36% were 18 years or younger. In terms of how quickly they got pregnant, 36.1% did so within one year, the majority (43.4%) did so within 1-2 years.

Do Healthy Families Arizona participants show increases in employment after participating in the program?

Exhibit 16 shows the percent change in employment status for mothers actively engaged in the program at baseline, 6 months and 12 months.

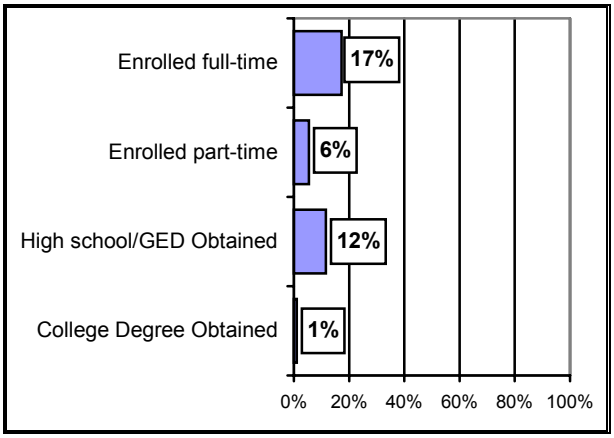
Exhibit 16. Mother's employment status across three time periods



What percentages of Healthy Families Arizona participants become enrolled in school while participating in the program?

Exhibit 17 shows small but consistent involvement in educational programs while participants are involved in the program.

Exhibit 17. School enrollment status of mothers at 6 months



Participant Satisfaction

One aspect of program implementation, especially with a voluntary program like Healthy Families, is the satisfaction family members express about their participation. All Healthy Families program sites undertake an evaluation of both the program and staff after approximately 2 months of program involvement. Exhibit 18 shows that 98% of all participants returning a survey (N=557) agreed or strongly agreed that they had been treated with respect and dignity. In terms of program involvement, Exhibit 19 shows that 94% of the families were somewhat satisfied or very satisfied with the program.

Exhibit 18. Responses to "The Healthy Families staff who offered me program services treated me with respect and dignity."

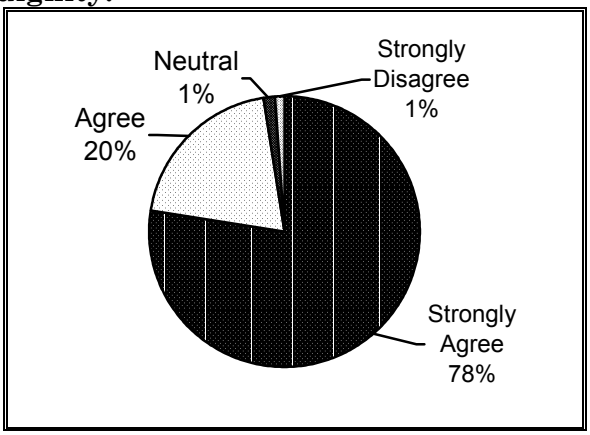
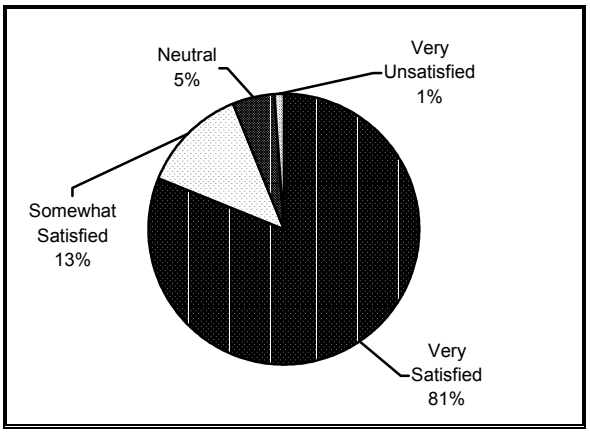
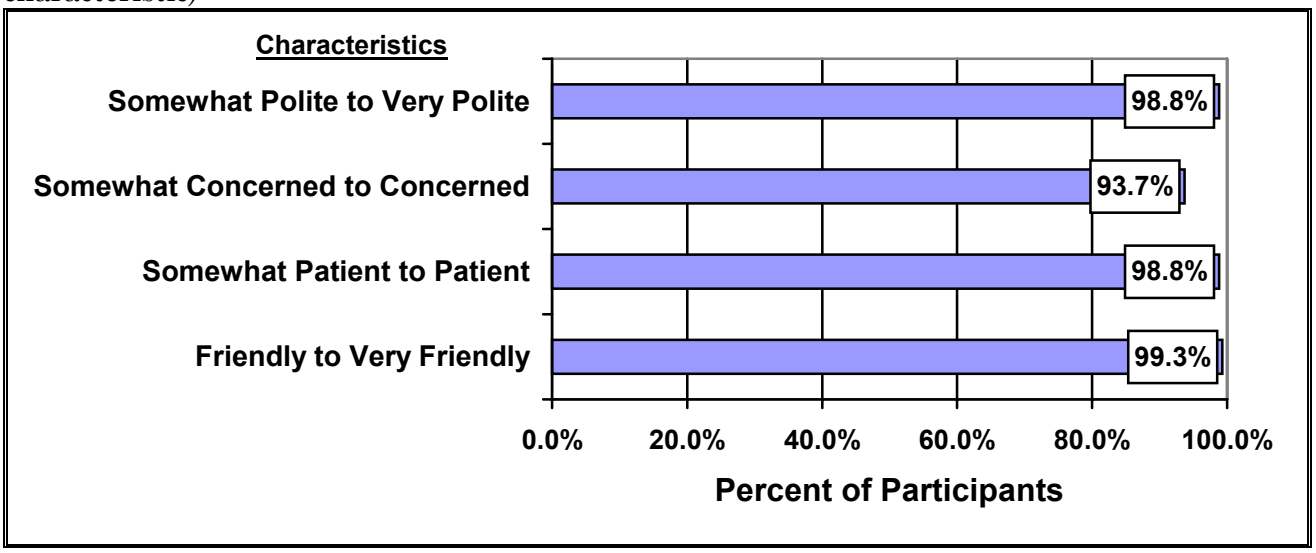


Exhibit 19. Responses to "How did you feel about the program so far?"



Finally, Exhibit 20 describes various worker characteristics, such as polite or friendly, and the data show that almost 100% of workers are rated in a positive manner.

Exhibit 20. How would you describe the Healthy Families worker who first offered you program services? (On a five point scale, shown are the two highest options for each characteristic)



Recommendations

In order to continue to focus Healthy Families programming on factors that are likely to lead to the greatest outcomes, this year's recommendations are based on an assessment of practice principles recently established by Neil Gutterman (2001) in his extensive review of home visitation research.

Practice principle 1: *To effectively serve families in their homes, workers must structure their work to clarify their focus with families.*

This practice principle concerns the implementation of the home visitation services. Because the evaluation has had a primary focus on outcome evaluation, not much attention has been paid in several years to the process of doing home visitation. However, an ongoing issue in implementation of services has always been clarifying the role of the home visitor. Therefore, a recommendation is to continue efforts at role clarification to help re-focus home visitors on their key functions with families. An additional assessment may be helpful in identifying any further issues around how to structure and clarify roles with families.

Practice principle 2: *Early home visitation programs should adapt and/or adopt parenting educational curricula with clear objectives, structured protocols that directly address those objectives and do so in ways that are compatible with and respectful of the families' own cultural and individual contexts.*

It is encouraging to note that ongoing work has been done in the implementation of the Healthy Families Arizona program to refine and examine the use of curricula. In fact, a recent analysis of data attempted to examine the impacts of using the *Growing Great Kids, Portage*, and other varied curriculum. This practice principle suggests a further need to assess the use of existing curricula in each site. Furthermore, whatever curricula are used should be evaluated for clear objectives and accompanying protocols for implementation. In areas where the curricula do not have clear protocols, they should be developed. Also, the recent study of difficult situations for home visitors in the Healthy Families Arizona program could be used as a starting point for developing clearer protocols to respond to those situations.

Practice principle 4: *Programs do not appear to increase their advantage by deploying multidisciplinary teams, either with regard to outcomes related to child maltreatment or with regard to cost efficiency.*

Healthy Families Arizona does not employ a multidisciplinary team by design so this practice principle is already in place.

Practice principle 5: *Programs that deliver, in practice, at least moderately intensive services–biweekly or more frequently–are linked with more favorable family participation and child maltreatment-related outcomes than those providing less intensive services. This trend holds for the frequency of services usually delivered, not for the frequency planned to be delivered.*

The Healthy Families Arizona program has continued to work on and has improved the engagement and retention rate of families. More intensive models of limited duration appear to hold greater promise for positive outcomes, where families are more likely to be engaged and involved in services, in comparison to approaches with less intensive services and longer service horizons. This practice principle suggests more effort might be made in ensuring an intensely delivered service. Since this is deemed an important practice principle, supervisors should

consider program intensity when addressing how workers can respond to families with greater needs.

This practice principle also directs attention to prenatal initiated services that are associated with more favorable engagement and retention rates and reported outcomes. Furthermore, services initiated at the prenatal stage hold the opportunity to address significant problems that shape the in-uterus environment and that later heighten risk for both maltreatment and for a host of poor developmental outcomes. Currently, prenatal initiated services by Healthy Families Arizona are legislatively restricted.

References

Abdin, R. L. (1995). *The parenting stress index.* Odessa, FL: Psychological Assessment Resources.

Gutterman, N. (2001). *Stopping child maltreatment before it starts*. Thousand Oaks, CA: SAGE Publications.

Office of the Auditor General Report (1999). Department of Health Services: Bureau of Epidemiology and Disease Control Services.

Appendix A.

List of Healthy Families Arizona Reports Prepared by LeCroy & Milligan Associates, Inc. (formerly LAM & Associates)

1) Implementation Study: Arizona Healthy Start/Families – (published 1993)

2) Arizona Healthy Families Outcome Evaluation Report for 1992-1993 Families – (published 1993)

3) Arizona Healthy Families: First Year Outcome Evaluation Report – (published 1994)

4) Healthy Families Arizona Evaluation Report for Tucson, Prescott and Casa Grande Sites 1992-1994 – (published 1996)

5) Qualitative Interview Study of Healthy Families Arizona – (published 1997)

6) Healthy Families Arizona Evaluation Report 1992-1996 (all sites) – (published 1997)

7) Healthy Families Arizona Evaluation Report, 1992-1998 (all sites) – (published 1999)

8) Healthy Families Arizona Evaluation Report, 2000 (published 2000)

9) Healthy Families Arizona Evaluation Report, 2001 (published 2001)

Appendix B

Parenting Stress Index Information

Reliabilities for Current Study

Subscale	Alpha
Competence	.73
Attachment	.62
Restricted Role	.72
Depression	.78
Isolation	.73
Distractability	.48
Mood	.69

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

Subscale	Baseline		6 months		Significance
	Mean	SD	Mean	SD	t
Competence	31.6	6.2	29.6	6.1	9.28
Attachment	12.9	3.8	12.19	3.5	5.83
Restricted role	19.97	4.9	19.25	5.2	3.60
Depression	20.56	6.0	19.52	6.1	4.85
Isolation	14.58	4.5	13.82	4.6	4.57
Mood	10.65	3.2	9.15	2.9	11.88

Note: * p<.01, ** p<.001, *** p<.000, dependent t-tests, SD=Standard Deviation. Test are significant when applying a Bonferroni correction. N's vary from 689 to 696.

Change in Total Parenting Index Scores from baseline to 6 months

Subscale	Baseline		6 months		Significance
	Mean	SD	Mean	SD	t
Total Stress Score (N=684)	136.4	24.0	128.90	25.1	6.82

*** p<.000

Appendix B Continued:

Change in Parenting Stress Index from baseline to 12 months

Subscale	Baseline		12 months		Significance
	Mean	SD	Mean	SD	t
Competence	31.58	6.2	29.4	5.9	7.07
Attachment	13.04	3.9	12.30	3.7	4.26
Restricted role	19.98	5.0	18.77	5.6	4.46
Depression	20.82	6.3	19.38	6.2	5.05
Isolation	14.66	4.7	13.61	4.8	4.47
Mood	10.68	3.3	9.52	2.9	6.90

Note: * p<.01, ** p<.001, *** p<.000, dependent t-tests, SD=Standard Deviation. Test are significant when applying a Bonferroni correction. N's range from 454-461.

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

Subscale	Baseline		12 months		Significance
	Mean	SD	Mean	SD	t
Total Stress Score (N=453)	136.44	24.0	128.9	25.1	6.82

*** p<.000

Appendix B Continued:

Change in Parenting Stress Index from baseline to 18 months

Subscale	Baseline		18 months		Significance
	Mean	SD	Mean	SD	t
Competence	31.08	6.2	29.66	6.2	3.25
Attachment	13.02	3.9	12.26	3.2	2.97
Restricted role	20.14	5.0	18.69	5.7	3.59
Depression	20.70	6.0	19.0	5.8	3.93
Isolation	14.4	4.5	13.34	4.6	3.20
Mood	10.62	3.3	9.72	3.2	3.06

Note: * p<.01, ** p<.001, *** p<.000, dependent t-tests, SD=Standard Deviation. Test are significant when applying a Bonferroni correction. N's range from 239-242

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

Subscale	Baseline		18 months		Significance
	Mean	SD	Mean	SD	t
Total Stress Score (N=239)	136.76		127.78	25.47	4.48

*** 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.

Appendix B Continued:

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.

Appendix D
Site Level Data

Age of Child at Entry
Days to Termination
Reason for Termination
Mothers' Education
Fathers' Education
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	17.88	17.81	104
Central Phoenix	27.10	21.58	88
Maryvale (Phoenix)	21.23	15.57	82
South Phoenix	21.95	21.21	73
East Valley (Phoenix)	21.75	18.16	64
Nogales	12.21	15.76	104
Page	21.18	19.41	49
Casa de los Niños (Tucson)	20.82	15.16	119
CODAC (Tucson)	17.90	20.12	105
La Frontera (Tucson)	17.04	14.23	131
Devereux (Tucson)	17.96	20.86	117
Sierra Vista	13.48	17.57	94
Tuba City	11.71	14.19	55
Verde Valley	10.17	10.74	75
Yuma	16.63	14.95	93
Pascua Yaqui	43.65	30.58	40
Lake Havasu City	25.06	19.14	120
Flagstaff	14.51	20.50	74
Sunnyslope (Phoenix)	24.79	19.82	94
Prescott	20.89	19.62	119
Casa Grande	18.82	19.97	93
Mesa	20.29	14.96	93
Southeast Phoenix	19.25	14.27	105
Total	19.37	18.75	2091

Days to Termination by Site
(For terminated clients)

Site	Mean (Days to termination)	Standard Deviation	Number
Douglas/Bisbee	873.82	664.61	28
Central Phoenix	809.92	649.34	25
Maryvale (Phoenix)	555.08	497.03	25
South Phoenix	618.25	536.53	28
East Valley (Phoenix)	592.55	413.04	31
Nogales	909.23	655.79	26
Page	615.44	540.98	16
Casa de los Niños (Tucson)	585.84	431.97	49
CODAC (Tucson)	781.02	547.03	43
La Frontera (Tucson)	767.28	623.66	32
Devereux (Tucson)	662.39	457.02	28
Sierra Vista	378.48	289.30	50
Tuba City	607.54	553.26	13
Verde Valley	638.72	588.75	29
Yuma	765.89	540.81	27
Pascua Yaqui	310.71	477.37	7
Lake Havasu City	487.19	507.02	36
Flagstaff	421.91	345.67	23
Sunnyslope (Phoenix)	507.57	520.38	30
Prescott	328.11	285.15	27
Casa Grande	455.14	285.68	36
Mesa	401.64	350.81	28
Southeast Phoenix	346.34	200.03	32
Total	595.50	508.88	669

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

Site	Moved Away	Unable to contact	Family refused further services
Douglas/Bisbee	39.3% (11)	3.6% (1)	7.1% (2)
Central Phoenix	44% (11)	20% (5)	0
Maryvale (Phoenix)	28% (7)	28% (7)	12% (3)
South Phoenix	18.6% (8)	53.6% (15)	3.6% (1)
East Valley (Phoenix)	12.9% (4)	41.9% (13)	6.5% (2)
Nogales	38.5% (10)	11.5% (3)	26.9% (7)
Page	43.8% (7)	18.8% (3)	18.8% (3)
Casa de los Niños (Tucson)	26.5% (13)	36.7% (18)	2% (1)
CODAC (Tucson)	16.3% (7)	30.2% (13)	11.6% (5)
La Frontera (Tucson)	28.1% (9)	21.9% (7)	9.4% (3)
Devereux (Tucson)	17.9% (5)	25% (7)	7.1% (2)
Sierra Vista	36% (18)	42% (21)	6% (3)
Tuba City	30.8% (4)	7.7% (1)	15.4% (2)
Verde Valley	41.4% (12)	24.1% (7)	3.4% (1)
Yuma	37% (10)	22.2% (6)	7.4% (2)
Pascua Yaqui	14.3% (1)	0	0
Lake Havasu City	41.7% (15)	16.7% (6)	13.9% (5)
Flagstaff	34.8% (8)	30.4% (7)	21.7% (5)
Sunnyslope (Phoenix)	26.7% (8)	30% (9)	16.7% (5)
Prescott	33.3% (9)	44.4% (12)	7.4% (2)
Casa Grande	41.7% (15)	25% (9)	11.1% (4)
Mesa	21.4% (6)	25% (7)	21.4% (6)
Southeast Phoenix	12.5% (4)	59.4% (19)	21.9% (7)
Total	30.2% (202)	29.3% (196)	10.6% (71)

Mothers' Education by Site
(Number and Percent within Site)

Site	Middle School (less than 9th)	Some High School	High School Graduate	Post High School
Douglas/Bisbee	23.1% (24)	46.2% (48)	22.1% (23)	8.7% (9)
Central Phoenix	29.5% (23)	42.3% (33)	19.2% (15)	9% (7)
Maryvale (Phoenix)	24% (18)	38.7% (29)	34.7% (26)	2.7% (2)
South Phoenix	20.6% (14)	50% (34)	23.5% (16)	5.9% (4)
East Valley (Phoenix)	7.3% (4)	50.9% (28)	23.6% (13)	18.2% (10)
Nogales	25.3% (20)	57% (45)	16.5% (13)	1.3% (1)
Page	13.3% (4)	56.7% (17)	23.3% (7)	6.7% (2)
Casa de los Niños (Tucson)	9.7% (10)	46.6% (48)	33% (34)	10.7% (11)
CODAC (Tucson)	19.8% (20)	39.6% (40)	33.7% (34)	6.9% (7)
La Frontera (Tucson)	23.4% (30)	46.9% (60)	24.2% (31)	5.5% (7)
Devereux (Tucson)	18.2% (20)	37.3% (41)	36.4% (40)	8.2% (9)
Sierra Vista	12.2% (11)	45.6% (41)	41.1% (37)	1.1% (1)
Tuba City	1.8% (1)	39.3% (22)	41.1% (23)	17.9% (10)
Verde Valley	17.4% (12)	43.5% (30)	27.5% (19)	11.6% (8)
Yuma	27.6% (24)	35.6% (31)	27.6% (24)	9.2% (8)
Pascua Yaqui	28.6% (10)	48.6% (17)	20% (7)	2.9% (1)
Lake Havasu City	17.1% (18)	35.2% (37)	41.9% (44)	5.7% (6)
Flagstaff	21% (13)	33.9% (21)	33.9% (21)	11.3% (7)
Sunnyslope (Phoenix)	15.3% (13)	40% (34)	35.3% (30)	9.4% (8)
Prescott	15.7% (13)	50.6% (42)	21.7% (18)	12% (10)
Casa Grande	20.7% (19)	54.3% (50)	23.9% (22)	1.1% (1)
Mesa	6.3% (5)	45% (36)	26.3% (21)	22.5% (18)
Southeast Phoenix	13.5% (13)	55.2% (53)	24% (23)	7.3% (7)
Total	18.1% (339)	44.7% (837)	28.9% (541)	8.2% (154)

Fathers' Education by Site
(Number and Percent within Site)

Site	Middle School (less than 9th)	Some High School	High School Graduate	Post High School
Douglas/Bisbee	7.3% (6)	47.6% (39)	36.6% (30)	8.5% (7)
Central Phoenix	19.3% (11)	42.1% (24)	35.1% (20)	3.5% (2)
Maryvale (Phoenix)	8.6% (5)	56.9% (33)	31% (18)	3.4% (2)
South Phoenix	29.1% (16)	38.2% (21)	30.9% (17)	1.8% (1)
East Valley (Phoenix)	2.4% (1)	47.6% (20)	33.3% (14)	16.7% (7)
Nogales	20.6% (14)	54.4% (37)	19.1% (13)	5.9% (4)
Page	4.2% (1)	54.2% (13)	37.5% (9)	4.2% (1)
Casa de los Niños (Tucson)	12.8% (11)	39.5% (34)	40.7% (35)	7% (6)
CODAC (Tucson)	18.2% (14)	40.3% (31)	37.7% (29)	3.9% (3)
La Frontera (Tucson)	18.2% (20)	43.6% (48)	33.6% (37)	4.5% (5)
Devereux (Tucson)	8.7% (8)	46.7% (43)	38% (29)	6.5% (6)
Sierra Vista	7% (4)	38.6% (21)	50.9% (37)	5.3% (3)
Tuba City	2% (1)	43.1% (22)	49% (25)	5.9% (3)
Verde Valley	12.3% (7)	38.6% (22)	40.4% (23)	8.8% (5)
Yuma	20% (15)	44% (33)	21.3% (16)	14.7% (11)
Pascua Yaqui	16.7% (4)	62.5% (15)	20.8% (5)	0
Lake Havasu City	17.2% (16)	36.6% (34)	44.1% (41)	2.2% (2)
Flagstaff	26.7% (12)	37.8% (17)	26.7% (12)	8.9% (4)
Sunnyslope (Phoenix)	12.7% (8)	36.5% (23)	44.4% (28)	6.3% (4)
Prescott	10.2% (6)	52.5% (31)	15.3% (9)	22% (13)
Casa Grande	16.4% (12)	45.2% (33)	38.4% (28)	0
Mesa	0	44.6% (25)	35.7% (20)	19.6% (11)
Southeast Phoenix	6.9% (4)	51.7% (30)	39.7% (23)	1.7% (1)
Total	13.4% (196)	44.4% (649)	35.3% (516)	6.9% (101)

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	41.3% (43)	54.8% (57)	3.8% (4)
Central Phoenix	39.1% (34)	57.5% (50)	3.4% (3)
Maryvale (Phoenix)	33.7% (28)	63.9% (53)	2.4% (2)
South Phoenix	35.6% (26)	61.6% (45)	2.7% (2)
East Valley (Phoenix)	23.4% (15)	68.8% (44)	7.8% (5)
Nogales	61% (64)	33.3% (35)	5.7% (6)
Page	43.8% (21)	56.3% (27)	0
Casa de los Niños (Tucson)	29.2% (35)	58.3% (70)	12.5% (15)
CODAC (Tucson)	38.1% (40)	56.2% (59)	5.7% (6)
La Frontera (Tucson)	38.9% (51)	58% (76)	3.1% (4)
Devereux (Tucson)	30.2% (35)	62.1% (72)	7.8% (9)
Sierra Vista	41.5% (39)	57.4% (54)	1.1% (1)
Tuba City	46.4% (26)	51.8% (29)	1.8% (1)
Verde Valley	47.3% (35)	52.7% (39)	0
Yuma	41.3% (38)	58.7% (54)	0
Pascua Yaqui	21.1% (8)	76.3% (29)	2.6% (1)
Lake Havasu City	32.5% (39)	67.5% (81)	0
Flagstaff	38.4% (28)	60.3% (44)	1.4% (1)
Sunnyslope (Phoenix)	40% (38)	56.8% (54)	3.2% (3)
Prescott	42% (50)	54.6% (65)	3.4% (4)
Casa Grande	35.5% (33)	63.4% (59)	1.1% (1)
Mesa	33.7% (31)	60.9% (56)	5.4% (5)
Southeast Phoenix	34.3% (36)	62.9% (66)	2.9% (3)
Total	38% (793)	58.4% (1218)	3.6% (76)

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

Site	Caucasian	Hispanic	African American	Asian American	Native American	Other
Douglas/Bisbee	14.4% (15)	85.6% (89)	0	0	0	0
Central Phoenix	18.4% (16)	59.8% (52)	8% (7)	0	2.3% (2)	11.5% (10)
Maryvale (Phoenix)	31.7% (26)	58.5% (48)	6.1% (5)	0	0	3.7% (3)
South Phoenix	11% (8)	65.8% (48)	16.4% (12)	1.4% (1)	4.1% (3)	1.4% (1)
East Valley (Phoenix)	50.8% (33)	35.4% (23)	4.6% (3)	1.5% (1)	0	7.7% (5)
Nogales	0	100% (105)	0	0	0	0
Page	6.1% (3)	4.1% (2)	0	2% (1)	85.7% (42)	2% (1)
Casa de los Niños (Tucson)	25.4% (30)	61% (72)	4.2% (5)	0.8% (1)	6.8% (8)	1.7% (2)
CODAC (Tucson)	6.7% (7)	80% (84)	7.6% (8)	0	0	5.7% (6)
La Frontera (Tucson)	12.2% (16)	78.6% (103)	3.8% (5)	0.8% (1)	3.1% (4)	1.5% (2)
Devereux (Tucson)	24.8% (29)	64.1% (75)	2.6% (3)	1.7% (2)	3.4% (4)	3.4% (4)
Sierra Vista	52.7% (49)	31.2% (29)	10.8% (10)	0	0	5.4% (5)
Tuba City	1.8% (1)	0	0	0	98.2% (55)	0
Verde Valley	65.3% (49)	25.3% (19)	0	0	9.3% (7)	0
Yuma	8.8% (8)	87.9% (80)	2.2% (2)	0	1.1% (1)	0
Pascua Yaqui	0	10.5% (4)	2.6% (1)	0	55.3% (21)	31.6% (38)
Lake Havasu City	55% (66)	40.8% (49)	0.8% (1)	0	0.8% (1)	2.5% (3)
Flagstaff	20.5% (15)	43.8% (32)	1.4% 91)	0	32.9% (24)	1.4% (1)
Sunnyslope (Phoenix)	44.2% (42)	41.1% (39)	9.5% (9)	1.1% (1)	2.1% (2)	2.1% (2)
Prescott	73.1% (87)	26.9% (32)	0	0	0	0
Casa Grande	27.7% (26)	56.4% (53)	8.5% (8)	0	3.2% (3)	4.3% (4)
Mesa	57% (53)	24.7% (23)	5.4% (5)	0	5.4% (5)	7.5% (7)
Southeast Phoenix	16.2% (17)	51.4% (54)	24.8% (26)	0	1% (1)	6.7% (7)
Total	28.5% (596)	53.4% (1115)	5.3% (111)	0.4% (8)	8.8% (183)	3.6% (75)

Gestational Age by Site
(Number and Percent within Site)

	Was the gestational age less than 37 weeks?	
Site	**No**	**Yes**
Douglas/Bisbee	89.2% (91)	10.8% (11)
Central Phoenix	67.1% (57)	32.9% (28)
Maryvale (Phoenix)	78.8% (63)	21.3% (17)
South Phoenix	92.4% (61)	7.6% (5)
East Valley (Phoenix)	79.7% (51)	20.3% (13)
Nogales	92.3% (96)	7.7% (8)
Page	87.2% (41)	12.8% (6)
Casa de los Niños (Tucson)	80.4% (86)	19.6% (21)
CODAC (Tucson)	88.8% (79)	11.2% (10)
La Frontera (Tucson)	81.3% (100)	18.7% (23)
Devereux (Tucson)	82.1% (87)	17.9% (19)
Sierra Vista	91.8% (78)	8.2% (7)
Tuba City	80.9% (38)	19.1% (9)
Verde Valley	93.3% (70)	6.7% (5)
Yuma	87.8% (79)	12.2% (11)
Pascua Yaqui	97.1% (33)	2.9% (1)
Lake Havasu City	85.9% (79)	14.1% (13)
Flagstaff	84.6% (55)	15.4% (10)
Sunnyslope (Phoenix)	83% (73)	17% (15)
Prescott	91.5% (107)	8.5% (10)
Casa Grande	81.5 % (75)	18.5% (17)
Mesa	78% (71)	22% (20)
Southeast Phoenix	85.6% (83)	14.4% (14)
Total	84.9% (1653)	15.1% (293)

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	82.7% (86)	17.3% (18)
Central Phoenix	69.3% (61)	30.7% (27)
Maryvale (Phoenix)	80.5% (66)	19.5% (16)
South Phoenix	84.7% (61)	15.3% (11)
East Valley (Phoenix)	76.9% (50)	23.1% (15)
Nogales	91.4% (96)	8.6% (9)
Page	85.7% (42)	14.3% (7)
Casa de los Niños (Tucson)	85.7% (102)	14.3% (17)
CODAC (Tucson)	84.8% (89)	15.2% (16)
La Frontera (Tucson)	85.3% (110)	14.75 (19)
Devereux (Tucson)	87.2% (102)	12.8% (15)
Sierra Vista	87.4% (83)	12.6% (12)
Tuba City	90.9% (50)	9.1% (5)
Verde Valley	94.7% (71)	5.3% (4)
Yuma	92.4% (85)	7.6% (7)
Pascua Yaqui	97.5% (39)	2.5% (1)
Lake Havasu City	87.4% (104)	12.6% (15)
Flagstaff	79.5% (58)	20.5% (15)
Sunnyslope (Phoenix)	83% (78)	17% (16)
Prescott	95.7% (112)	4.3% (5)
Casa Grande	87.2% (82)	12.8% (12)
Mesa	75.3% (70)	24.7% (23)
Southeast Phoenix	89.5% (94)	10.5% (11)
Total	85.8% (1791)	14.2% (296)

Yearly Income by Site

Site	Mean Yearly Income	Standard Deviation	Number
Douglas/Bisbee	$9325.25	7438.07	93
Central Phoenix	$11171.36	10529.50	56
Maryvale (Phoenix)	$10534.60	8256.56	67
South Phoenix	$9363.40	8103.32	60
East Valley (Phoenix)	$18329.49	20597.03	41
Nogales	$11250.45	8422.57	103
Page	$8121.00	7492.00	44
Casa de los Niños (Tucson)	$14422.49	11405.28	97
CODAC (Tucson)	$13172.14	12958.05	79
La Frontera (Tucson)	$10964.46	6514.70	96
Devereux (Tucson)	$10814.11	7378.44	93
Sierra Vista	$7242.98	14329.18	86
Tuba City	$13602.98	18804.42	49
Verde Valley	$8969.52	6440.61	66
Yuma	$8079.90	5431.36	80
Pascua Yaqui	$8618.50	6609.40	36
Lake Havasu City	$13227.62	8987.39	105
Flagstaff	$10672.45	11549.97	66
Sunnyslope (Phoenix)	$12342.25	13631.41	71
Prescott	$15080.18	10798.91	44
Casa Grande	$10374.22	7951.74	54
Mesa	$13320.76	12374.59	62
Southeast Phoenix	$10911.32	11061.71	59
Total	$11217.82	10749.18	1607

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	39.13	54.8%	57
Central Phoenix	36.21	38.6%	34
Maryvale (Phoenix)	38.86	56.6%	47
South Phoenix	37.95	47.9%	35
East Valley (Phoenix)	35.62	38.5%	25
Nogales	33.24	24.8%	26
Page	35.20	38.8%	19
Casa de los Niños (Tucson)	38.82	48.3%	58
CODAC (Tucson)	35.48	35.2%	37
La Frontera (Tucson)	37.25	44.3%	58
Devereux (Tucson)	39.36	53.8%	63
Sierra Vista	40.63	52.6%	50
Tuba City	30.71	12.5%	7
Verde Valley	35.60	34.7%	26
Yuma	38.28	43%	40
Pascua Yaqui	34.38	30%	12
Lake Havasu City	35.25	32.5%	39
Flagstaff	38.38	44.6%	33
Sunnyslope (Phoenix)	38.74	49.5%	47
Prescott	43.74	58.8%	70
Casa Grande	33.56	34%	32
Mesa	33.68	38.7%	36
Southeast Phoenix	37.10	45.7%	48
Total	37.15	42.8%	899