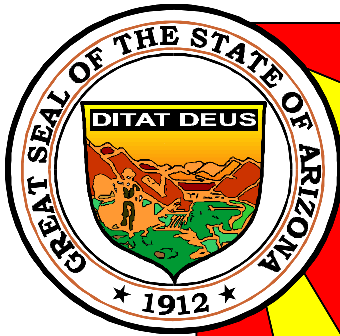
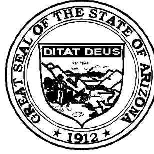


State of Arizona Office of the Auditor General

ANNUAL EVALUATION

HEALTHY FAMILIES PILOT PROGRAM

Report to the Arizona Legislature
By Douglas R. Norton
Auditor General
January 1998
Report # 98-1



DOUGLAS R. NORTON, CPA
AUDITOR GENERAL

STATE OF ARIZONA
OFFICE OF THE
AUDITOR GENERAL

DEBRA K. DAVENPORT, CPA
DEPUTY AUDITOR GENERAL

January 29, 1998

Members of the Arizona Legislature

The Honorable Jane Dee Hull, Governor

Dr. Linda J. Blessing, Director
Arizona Department of Economic Security

Transmitted herewith is a report of the Auditor General, An Evaluation of the Healthy Families Pilot Program. The evaluation was conducted pursuant to the provisions of Laws 1994, Ninth S.S., Ch. 1, §9.

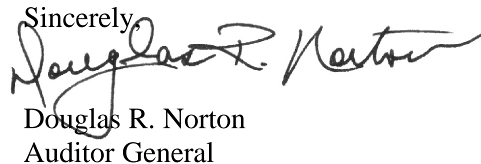
This is the third in a series of reports to be issued on the Healthy Families Pilot Program. The report addresses the Program's outcomes and impacts. We found the Healthy Families Pilot Program has reduced the rates of child abuse and neglect. Specifically, reductions in child abuse and neglect were found for parents with more than one child and for parents who stay in the Program for at least six months. However, analyses of the child abuse and neglect data for first- time parents and for parents with prior histories of abuse or neglect are inconclusive. In addition to the direct impact the Program has had for children by reducing child abuse and neglect, Healthy Families has been successful at improving children's home environments and their health care. Parents in the Program are also found to benefit by increased self-sufficiency, resulting in a reduction in their reliance on public assistance programs. The Program is found to have some offsetting financial benefits that, in the short term, reduce its cost to taxpayers by more than 50 percent. The Program's long term benefits could not be estimated at this time, but could further offset its initial costs.

As outlined in its response, the Department of Economic Security agrees with all the findings and recommendations. The recommendations focus on ways the Department of Economic Security and the Healthy Families Pilot Program contractors can improve their delivery of services to program participants.

My staff and I will be pleased to discuss or clarify items in the report.

This report will be released to the public on January 30, 1998.

Sincerely,



Douglas R. Norton
Auditor General

Enclosure

2910 NORTH 44th STREET • SUITE 410 • PHOENIX, ARIZONA 85018 • (602) 553-0333 • FAX (602) 553-0051

SUMMARY

The Office of the Auditor General has completed the final in a series of three annual evaluations of the Healthy Families Pilot Program. This evaluation was conducted pursuant to the provisions of Laws 1994, Ninth S.S., Ch. 1, §9. This final evaluation provides information regarding the Program's effectiveness.

The Healthy Families Pilot Program is based on the premise that child abuse can be prevented by improving parent-child bonding, developing parents' coping skills, providing emotional support and assistance during family crises, and helping parents develop appropriate behaviors. Participation is voluntary and uses the home visit model based on Hawaii's nationally recognized Healthy Start Program. The Program is community based, enrolling the families of newborns and potentially serving them through the child's fifth birthday.

The Arizona Department of Economic Security is responsible for administering the Healthy Families Pilot Program. A total of 1,952 families was enrolled in the Program from January 1995 through June 1997. Due to attrition, 897 families were receiving some level of service on June 30, 1997.

Healthy Families Appears to Reduce Child Abuse. However, Results Vary by Type of Participant and Length of Enrollment

(See pages 9 through 14)

Overall, the Healthy Families Program appears to reduce the likelihood of substantiated reports of abuse or neglect, but the impact varies by participant type and by the length of time participants are enrolled.

Almost 95 percent of the Healthy Families participants are free of substantiated Child Protective Services (CPS) reports of abuse or neglect. Almost 97 percent of families who received at least six months of services had no substantiated CPS reports. The 97 percent contrasts to 92 percent for comparison group families for a similar time period. Families with no prior CPS reports and more than one child had rates of abuse or neglect of 3.3 percent, in contrast to 8.5 percent for comparison group families. However, the results are inconclusive for first-time parents, who represent approximately 50 percent of the participants, and for the very small number of families with prior history of abuse or neglect. Even after receiving six months of service from Healthy Families, 26.9 percent of the families with prior history

of abuse or neglect had at least one additional substantiated CPS report. However, there is no comparable data that would allow for a conclusion as to whether the Program is effective or ineffective in reducing abuse among these families.

The Program's benefits for high-risk families and families with a history of substantiated incidents of abuse and neglect are not clear. However, until it is determined if families with a history of abuse benefit from Healthy Families, the Program should increase the intensity of services for these participants in an effort to reduce their rates of abuse and neglect.

Finally, Program staff should more clearly focus on abuse and neglect prevention as the goal of the Program and receive additional ongoing training on techniques to identify abuse and neglect and effectively address such problems when they occur. Finally, since the Program is most effective for families who receive at least six months of service, the Program should focus on engaging and retaining families.

Healthy Families Shows Some Success at Improving Home Environment (See pages 15 through 19)

Most Healthy Families participants are providing their children with positive, child-centered nurturing environments. The positive home environments suggest the Program has been successful in creating positive parent-child bonds that may reduce the likelihood of child abuse and neglect. Although Healthy Families services appear to have a positive effect on parent-child relationships, they have no measurable impact on the families' adaptability, cohesiveness, or overall family functioning. The lack of apparent impact may be partly attributable to services focusing primarily on the parent-child relationships rather than the entire family. Staff should continue to focus on improving parent-child relationships. However, since family functioning is not a goal of the national model, and since Healthy Families staff lack the skill level to provide intensive family counseling, the Program may not be able to strengthen overall family relations and improve overall family unity. We suggest the Legislature consider rewording the Program's statutory goals to more closely reflect the Program's emphasis on parent-child relationships.

Healthy Families Improves Children's Health Care and Development (See pages 21 through 26)

Healthy Families is effective in improving the medical care and healthy development of participating children. Immunization rates for children in the Program are higher than community rates. Also, while most children in the Program are developing normally, the

Program's family support specialists are referring families with potentially developmentally delayed children to medical and social services for further assessment and services.

Additionally, family support specialists have made referrals to doctors for almost two-thirds of program participants. The referrals may have increased the likelihood that Healthy Families children had medical "homes" (a medical provider such as a physician, health clinic, or other place of health care where an individual regularly and routinely seeks care). Almost all of the Healthy Families participants have a medical "home" to which they regularly turn for medical care and well-baby check-ups.

Healthy Families Participants Rely Less on Public Assistance (See pages 27 to 30)

Program participants are less likely to rely on public assistance programs. They show a lower participation rate for public assistance than is found for a comparison group of families. Additionally, Healthy Families participants are not on AFDC, food stamps, and AHCCCS as long as the comparison families. The shortened time on benefits for Healthy Families participants in contrast to the comparison families occurs whether the program participants were already on the programs at the time they entered Healthy Families, or enrolled after entering Healthy Families.

The findings indicate that by helping families increase self-sufficiency through direct services and referrals, the Program may be an effective method for decreasing the length of time families need to rely on public assistance and may help them to move off programs before their time limits expire.

Statutory Annual Evaluation Components (See pages 31 through 44)

Pursuant to Laws 1994, Ninth S.S., Ch. 1, §9, the Office of the Auditor General is required to make recommendations regarding program expansion and to estimate savings from the Program.

A cost-benefit analysis for the Healthy Families Pilot Program was contracted to the Early Intervention Institute at Utah State University. Long-term benefits could not be calculated due to the short time covered by the Program and the evaluation. This short time period makes it impossible to measure any long-term effects that could be derived from reductions in children being placed in special education, juvenile delinquency, drug and alcohol abuse, or adult crime. Potential benefits such as higher productivity, school completion, and wages and tax revenues were also impossible to measure.

Short-term, two-year benefits were estimated by the contractor. Overall, the contractors found that a short-term, two-year cost of the Program was $2,701,309 for families served through 1996. The two-year cost of the Program is based on the Program costs less the benefits from improved immunizations, decreased reliance on social welfare programs by Program families, and from reduced costs of Child Protective Services. There are short-term costs and benefits that have not been included in the short-term estimates. For example, costs of services provided by staff other than Healthy Families are not included. Additionally, benefits from reduced medical care for injuries caused by abuse are not included and some benefits, such as those from improved home environments, could not be calculated in dollars. However, such benefits are important and should be taken into account when considering the Program's value.

Short-term dollar savings are not the only factor in determining program continuation. In recommending continuation or expansion of Healthy Families, the Program's value to participants should be weighed against the Program's costs for the short period of time the Program has been operating. If the perceived value of the potential long-term benefits coupled with the short-term benefits of reducing the numbers of children abused and neglected and improving the health of these children exceeds the negative net dollar benefit, the Program should be continued and expanded. If the Program is expanded or continued, the administrative, program delivery recommendations made in this report should help to increase the benefits derived from it. However, if the Program is expected to pay for itself in reduced costs to taxpayers, in the short term, the Program should not be continued or expanded.

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INTRODUCTION AND BACKGROUND

The Office of the Auditor General has completed the final in a series of three annual evaluations of the Healthy Families Pilot Program. This evaluation was conducted pursuant to the provisions of Laws 1994, Ninth S.S., Ch. 1, §9. This final evaluation report provides information regarding the Program's effectiveness.

Child Abuse and Neglect Is a Growing Problem

Arizona's Healthy Families Pilot Program was created to prevent child abuse and neglect. Child abuse is an increasingly serious problem in the United States. From 1976 to 1994, the reported number of cases increased more than 4 times, from 669,000 to over 3 million. In 1976, about 10 out of every 1,000 American children were reported to have been abused or neglected. By 1994, this increased nearly 5 times, to 47 out of every 1,000.

Arizona experienced similar increases. From 1984 to 1994, the number of cases increased by almost 100 percent. In comparison, the State's general population increased by 47 percent, from 2.7 million to 4 million residents, during this period. Statewide, reports of child abuse and neglect remained fairly stable over fiscal years 1994 through 1996 at about 28,500 per year.

Healthy Families: What It Is and How It Works

The Legislature established the Healthy Families Pilot Program through Laws 1994, Ninth S.S., Ch. 1, §9, also known as the Family Stability Act of 1994, to address the growing need for child abuse prevention. The Healthy Families model is based on the premise that child abuse can be prevented by improving parent-child bonding, developing parents' coping skills, providing emotional support and assistance during family crises, and helping parents develop appropriate behaviors. Program participation is voluntary.

Arizona's Healthy Families Pilot Program (Program) uses the home visit model based on Hawaii's nationally recognized Healthy Start Program. The Program is community based, designed to enroll the families of newborns and serve them through the child's fifth birthday. Healthy Families Arizona aims at improving family functioning, and promoting optimal child development, positive parenting skills, and positive parent-child interactions as steps to prevent child abuse.

As outlined in last year's report, the Program attempts to identify and provide services to families who are most at risk to engage in child abuse and neglect. They are typically families under stress. Mothers and fathers are deemed to be "at risk" because of several factors, including limited finances, unstable employment, marital/relationship problems, and a childhood history of family instability. These issues may include a history of beatings as a child, sexual abuse, being raised by more than two families, and a history of substance abuse, mental health problems, or criminal activity.

Some of the Program's key components are:

- Systematic hospital-based screening to identify high-risk families from a specific geographic area. Risk factors include childhood history of abuse or neglect, marital status, level of education, and isolation from family or community
- Community-based home visits to provide family support services
- An individualized plan varying the intensity of service based on the family's need and level of risk
- Linkage to medical services including immunization and well-baby checks
- Coordination and referrals to a range of health, counseling, and social services.

At the local program level, services are provided through three types of staff: a) program supervisors, b) early identification/assessment workers, and c) family support specialists. Each site typically employs one professional supervisor who supervises a team of paraprofessional family support specialists. The family support specialists are responsible for ongoing home visits for up to five years, and the Program is designed so that each specialist is responsible for 15 to 21 families. The early identification/assessment workers are responsible for conducting the initial risk assessment. Initially, staff receive four days of intensive training and subsequently attend numerous in-service training programs. There is no education requirement for specialists, nor any requirement for a specific background in social work or a similar field. However, while 14 percent of Healthy Families staff have no education beyond high school, almost half have four-year college degrees.

The legislation that created the Program specified the following five goals for it. (A range of services and referrals is provided to assist participants in achieving these goals.)

- **Goal One: Reduce child abuse and neglect**—The Program provides a variety of services to meet this goal, including education on child development, nutrition, support groups, modeling appropriate behavior, life coping skills, emotional support, and crisis

management and intervention. Workers may also refer families to social service and mental health agencies.

- **Goal Two: Promote child wellness and proper development**—To meet this goal, family support specialists provide information on child development and child health care, such as immunizations and the importance of well-baby visits. Workers may also give families transportation to hospital and doctor appointments.

- **Goals Three and Four: Strengthen family relations and promote family unity**—To meet these goals, family support specialists work to draw fathers/spouses into the Program. They provide social events and support groups where men can meet and discuss issues relevant to families, relationships, and parenting. In addition, family support specialists try to get fathers involved in the home visits. Family support specialists also work with mothers by modeling appropriate behavior, building and improving communication skills, increasing self-esteem, and respecting the client.

- **Goal Five: Reduce dependency on drugs and alcohol**—This goal is addressed by referring the family member or the entire family to substance abuse counseling services. The family support specialists will also provide information on the dangers of substance abuse.

Appropriations and Contracting

The Arizona Department of Economic Security (DES) is responsible for administering the Healthy Families Pilot Program. The Legislature appropriated $1.7 million for fiscal year 1995 and $3 million annually for fiscal years 1996 through 1998 to DES to implement the Healthy Families Pilot Program. These monies allowed for the implementation of the Healthy Families Pilot Program at 13 sites beginning in January 1995. DES awarded 5 contracts to 4 contractors to serve sites in 6 counties. In addition to this legislatively mandated pilot program, DES administers a separately funded Health Families Program through its Child Abuse Prevention Fund and other monies.

- **Tucson Association for Child Care[1]**—The Association received two separate contracts. The first contract provides for three not-for-profit service sites in Cochise and Santa Cruz counties. The second contract was to provide for three urban sites in Pima County. However, with additional funding sources the Association has been able to operate four urban sites. In addition, their urban contract includes the cost of providing statewide program oversight through a quality assurance coordinator.

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[1] The Tucson Association for Child Care changed its name to Child and Family Resources since DES originally awarded contracts.

- **Southwest Human Development**—Southwest Human Development was awarded a contract for managing four sites in Maricopa County.

- **Marcus J. Lawrence Medical Center**—The Lawrence Medical Center serves one site in Yavapai County.

- **Coconino County Department of Public Health**—The Department has two sites in Coconino County.

In addition to these site contracts, DES contracted out the database management function to a data management firm.

A total of 1,952 families has been enrolled in the Healthy Families Pilot Program. Due to attrition, 897 were receiving some level of service on June 30, 1997.

Follow-up to Previous Evaluations

The previous report presented by the Auditor General's Office (Report No. 96-17) identified two primary concerns with the Program:

- A high attrition rate; and

- Fewer home visits and other services than envisioned by the program model.

Last year's reported attrition rate for the Program was 47 percent. This year, it has increased to 51 percent. This is based upon the nonparticipation of families who said they would volunteer to receive services when the initial assessment was conducted. Engagement in the Program (getting families committed to participation) significantly impacts the rate of attrition. The Program defines participants as engaged at the time of the fourth successful home visit. Using this definition, the attrition rate for participants who enrolled during 1996 and were engaged in the Program was only 7 percent. This finding suggests that Healthy Families staff need to focus attention on engaging families in the Program during the first critical months of enrollment.

The second primary concern identified in last year's report was that families were receiving fewer home visits and other services than required by the model. Although the model recommends that 15 to 24 home visits should be conducted during the first 6 months, the previous review found that families were receiving only 13 visits, on average. However, this year that number has improved slightly and is now 15 visits. This suggests that families are receiving the minimum number of home visits the model

specified. When attempted home visits are counted (e.g., family not home at time of scheduled visit) it appears that family support workers are making efforts to meet the Program's service goals. Additionally, most families are receiving other services. As reported in Finding III (see pages 21 through 26), most families have a regular medical care provider and program children are receiving well-baby check-ups and immunizations. However, program attrition continues to keep many families from receiving the full range of services and referrals available through the Program.

Scope and Methodology

The Family Stability Act requires the Office of the Auditor General to annually evaluate the results of the Healthy Families Pilot Program. These evaluations focus only on those program sites funded by this Act. Those Healthy Family Arizona sites funded by the DES Child Abuse Prevention Fund are evaluated by a separate contractor. The Family Stability Act requires evaluation of items such as the Program's effectiveness, the level and scope of program services, program eligibility requirements, and the number and demographic characteristics of program participants. A variety of methods was used to evaluate the Program.

During the third year of the evaluation, Auditor General staff visited each of the 14 sites for at least 2 days. Each site visit included: 1) an interview with the program coordinator; 2) group interviews with the assessment and family support workers, 3) reviews of at least 30 files representing both open and closed cases and families with moderate and high risk, and 4) attending at least one home visit. Additionally, 17 clients were interviewed and structured observations of 20 home visits were conducted statewide.

A variety of assessment tools was used to collect information about all families who are served by the Healthy Families Pilot Program. A description of the assessment tools used is included in the Appendix. The assessments include the **Child Abuse Potential Inventory** (CAPI), to measure the potential for child abuse; **Home Observation for Measurement of the Environment** (HOME), to measure the quality of the home environment and potential child neglect; the **Ages and Stages Questionnaire** (ASQ), to measure child development; and **FACES II,** to measure family functioning.

In addition to the assessment tools, the following data was collected and analyzed:

- Frequency of substantiated and unsubstantiated Child Protective Services reports on the Healthy Families participants;
- Immunization rates for children in the Program;
- Participation rates in three public assistance programs: Aid to Families with Dependent Children, Food Stamps, and the Arizona Health Care Cost Containment System; and

- Data specific to demographics of clients and their participation patterns.

Data was also collected on a comparison group of families eligible for but not enrolled in the Program. The comparison group included 150 families who were assessed as eligible for the Program, but since the Program was operating at capacity at the time, these families were offered referrals and agreed to enrollment in the comparison group. Program staff administered the screening and assessment instruments and the CAPI and FACES II twice. Their participation in the three public assistance programs was tracked.

Analysis of differences among the Healthy Families participants and the comparison families was conducted to assess the Program's impact on child abuse and neglect, family functioning, and dependence on public assistance programs. The comparison group is similar to the Healthy Families participants for a number of factors, such as the mother's age, number of living children, results of drug screenings at birth, and birth defects. Since the comparison group and the Healthy Families participants differ in marital status and ethnicity, statistical weighting has been used to make the comparison group more closely resemble the Healthy Families participants. Additionally, due to the significant difference in the two groups' size, statistical weighting was used to more closely match the size of the two groups. The adjustments are necessary to more adequately compare rates of events between them.

While the first- and second-year evaluations focused on program administration and implementation, this final report focuses on the Program's success in reaching its goals. Specifically, the report addresses:

- The extent to which Healthy Families has decreased the incidence of child abuse among participating families;
- The Program's impact on family functioning, and the degree to which children are provided nurturing environments;
- The extent to which the children in the Program are developing normally and receiving appropriate medical care; and
- Program participants' dependence on public assistance programs.

Laws 1994, Ninth S.S., Ch. 1, §9 also requires the Office of the Auditor General to report on participants' progress toward program goals and objectives and to make recommendations regarding the administration and expansion of the Program. Additionally, the Auditor General is to estimate the long-term savings for providing early intervention services to Healthy Families participants. These required elements of the evaluation are provided in the Statutory Evaluation Components (see pages 31 through 44) of this report.

The Auditor General and staff express appreciation to the Director of the Department of Economic Security, the Healthy Families Pilot Program Coordinator, and the staff of DES' Division of Children and Family Services, as well as the Healthy Families Pilot Program staff, for their cooperation and assistance during the third year of the Healthy Families Pilot Program Evaluation.

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FINDING I

HEALTHY FAMILIES APPEARS TO REDUCE CHILD ABUSE. HOWEVER, RESULTS VARY BY TYPE OF PARTICIPANT AND LENGTH OF ENROLLMENT

Overall, Healthy Families appears to reduce child abuse and neglect, but the impacts vary. Incidence of child abuse by parents with no prior history of abuse is lower for Healthy Families clients than for comparison group families. However, the Program's impact on families that already have a history of abuse and neglect and for first-time parents is inconclusive. Healthy Families could increase its impact on abuse and neglect through addressing two key service delivery issues. Since many participants drop out before the Program has had time to have much effect, efforts to improve program retention and service delivery need to be continued. Additionally, the Program needs to more clearly focus services and activities on the goal of preventing child abuse and neglect and ensure that all staff have the skills and resources necessary to meet this goal.

Background

Reduction of child abuse and neglect is the Program's primary goal. Through the Healthy Families Program, family support specialists model appropriate behavior, provide educational information, and offer opportunities for support groups and other services to assist parents in improving their parenting skills and reducing their risk of abusing their children.

Two measures were used to assess child abuse rates:

- **Child Protective Service (CPS) reports.** CPS records were reviewed to determine the number of substantiated and unsubstantiated child abuse reports filed on participants enrolled in the Program as of December 31, 1996. Report rates after program enrollment and after at least six months of receiving Healthy Family services were analyzed. CPS history was collected and analyzed for 1,534 Healthy Families participants. Data was also collected and analyzed on the CPS history of a comparison group of 150 families. This comparison group was then statistically weighted to compare, both demographically and in size, to the Healthy Families group. Reports originating with Healthy Families staff are excluded from the analysis. Because family support specialists are manda-

tory reporters, Healthy Families participants would be expected to have more reports because they are under weekly, intensive scrutiny, and any possible observed abuse or neglect must be reported. While the reports from Healthy Families workers have been excluded, it is important to note that reports from Healthy Families are a small percentage of the total number of reports and their inclusion would not change the conclusions in this report.

- **Scores on the Child Abuse Prevention Inventory (CAPI).** The CAPI is a self-report instrument written at a third-grade level. In addition to an overall abuse potential scale, the CAPI has six factor scales that represent risks associated with child abuse: 1) distress, 2) rigidity, 3) unhappiness, 4) problems with child and self, 5) problems with family, and 6) problems with others. Two sets of comparisons were attempted: one of Healthy Families participants when they had just begun the Program and 12 months later, and one of Healthy Families participants and the comparison group. Statistical weighting was performed on the 42 comparison group families who had both 3-week and 12-month scores. The weighting resulted in the comparison group respondents more closely resembling the age and marital status distribution of the 315 Healthy Families participants who had both 3-week and 12-month scores on the CAPI.

The CAPI and the methodology used for the CPS comparison are described in the Appendix.

Healthy Families Participants Show Reductions in Child Abuse Reports

Overall, Healthy Families participants have lower rates of child abuse and neglect than is found for the comparison group families. However, the Program varies in its effectiveness for types of families. The Program is most effective for families with no previous history of abuse and with more than one child. Results are less conclusive for families with a history of abuse or neglect and for first-time parents. Additionally, the participants appear to benefit more from the Program if they receive at least six months of services.

Almost 95 percent of the families who received some services from the Program are free of substantiated Child Protective Services (CPS) reports of abuse or neglect. Additionally, almost 97 percent of families who received at least 6 months of services had no substantiated CPS reports.

Percentage of families not abusing their children compares to findings from other programs—Of the program participants who received at least 6 months of service, 96.7 percent were free of substantiated reports of abuse and neglect, in contrast to only 91.5 percent of the comparison group. The rates of substantiated child abuse are similar to what has been found in other evaluations. An evaluation contracted by DES of Child Abuse Prevention-

funded sites in Arizona found that 97.2 percent of program participants were free of abuse, in contrast to 96.7 percent of a comparison group. In a 1997 report on Healthy Families Alexandria (Virginia), 98 percent of participant families did not have substantiated child maltreatment reports. An evaluation of the Pinellas County Florida Healthy Families project has found that more than 99 percent of their participants were free of substantiated abuse or neglect, in contrast to 94.3 percent for the County as a whole.

Healthy Families clients with no history of abuse are less likely to abuse their children than comparison group families—Overall, the Program appears to reduce the likelihood of substantiated CPS reports of abuse or neglect for families with no prior CPS reports and more than one child. The rate of abuse or neglect for families with no substantiated reports prior to enrolling in the Program is significantly less for the program participants at 3.3 percent, in contrast to 8.5 percent for comparison group families. Looking at all reports, both substantiated and unsubstantiated, the findings are similar. Program participants' rate is 5.7 percent, compared to 8.9 percent for the comparison families. No reduction in the severity of the substantiated reports is found.

Results inconclusive for first-time parents—It is not, however, clear if the Program is truly an effective child abuse and neglect prevention effort for first-time parents, who constitute approximately 50 percent of program participants. There is a small number of comparison group first-time families and they had no CPS reports, which makes comparison inconclusive. First-time Healthy Families parents had a substantiated abuse and neglect rate of 1.1 percent, compared to no substantiated instances for the comparison families. The percentage of first-time program parents with CPS reports increased to 2.1 percent from 1.1 percent, but remains at zero for the comparison group when unsubstantiated reports are included.

Families with prior history of CPS substantiated reports have higher rates of abuse than found for other Healthy Families participants—While families with active CPS cases cannot enroll in Healthy Families, families that have substantiated reports, but closed cases, can be enrolled. Approximately 2 percent of the participants have prior substantiated reports. However, the Program may not be highly effective in reducing abuse and neglect among these families. For program participants with prior substantiated reports, 26.9 percent had substantiated reports after receiving 6 months of program services. Since no comparison group families had prior substantiated reports and DES cannot provide reliable numbers to estimate the likelihood of additional CPS reports, it is not possible to contrast this rate. However, the rate of abuse for this group of families is much higher than the rate for other families in the Program. While a higher rate of abuse might be expected for families who already have abused, the actual rate is unknown. Additional data on child abuse recidivism is necessary in order to fully assess whether the type and intensity of services offered by Healthy Families is an effective approach to preventing further abuse.

Abuse rates go down after six months of program services—The rate of abuse for Healthy Families participants decreases after six months in the Program, and is lower after six

months than for the comparison families. During the first six months in the Program, families with no prior history of abuse have an abuse rate of 4.6 percent. This rate goes down to 3.3 percent after receiving at least six months of service. Comparison group families, however, have no reduction in their rate of abuse over time. Additionally, they have a rate of 8.5 percent six months after entering the comparison group.

Results from Assessment of Child Abuse Potential Reveal Minimal Reductions

Although it appears that the actual incidence of abuse decreased among program participants, the CAPI shows a reduction in the potential for abuse only among participants who had a limited risk to begin with.

Three-week to 12-month reductions in child abuse potential were found only for low-risk families. Healthy Families participants' CAPI scores at 3 weeks after enrollment in the Program were compared to their CAPI scores 12 months after enrollment. Overall, participants had a reduction in their CAPI abuse scores from 3 weeks to 12 months, indicating that their risk of abusing decreased during this time. The decrease in their scores from 3 weeks to 12 months was statistically significant in contrast to the comparison group, who actually had an increase in their scores. However, most of the reductions in risk potential were found for families who already have a relatively low risk potential. For families most at risk of abuse, those with elevated scores at 3 weeks, the slight improvements in risk from 3 weeks to 12 months were no better for the program participants than for the comparison group families.

Benefits Increase with Longer Enrollment in Program

At least six months of service may be necessary for the Program to have its full effect on reducing child abuse and neglect. However, many Healthy Families clients fail to stay in the Program a sufficient amount of time to receive this minimum level of service. For the Program to substantially impact the incidence of child abuse and neglect, it needs to more clearly focus on engaging and retaining families in the Program.

Analysis of the CPS reports suggests that for the Program to reduce child abuse, families must receive a minimum level of service. The analysis shows little or no decrease in rates of child abuse and neglect during the Program's first six months. However, analysis does show decreases in rates of child abuse and neglect after families receive six months of program services.

However, due to high attrition and failure to engage families in the Program's early months, many families never receive 6 months of service. About half of the families who enter the Program drop out, and they do so after being in the Program an average of 153 days, or about 5 months. Additionally, the first 6 months of the services appeared to have little impact on child abuse. Reductions in substantiated reports of child abuse and neglect are found only after 6 months of program service.

These results provide further indication of the need for program officials to find ways to increase retention. Intervention for a period of time less than 6 months does not appear to be effective in decreasing child abuse.

Program Staff Need a Stronger Focus on Abuse and Neglect

Beyond the issue of many participants' limited program time, an additional factor that may reduce the Program's impact on child abuse rates is the need for a stronger staff focus on abuse and neglect. First, group interviews of Healthy Families staff revealed that staff at 3 of 14 sites did not see the purpose of the Program as preventing child abuse; instead, they saw themselves as providing assistance to families. Second, some staff do not have the education and experience necessary to provide them with the skills required to effectively intervene and educate and assist parents to provide effective parenting that is free of abuse and neglect.

Improvements in Program Can Increase Effectiveness

Several steps can be taken to improve the Program's effectiveness in preventing abuse and neglect. First, consideration should be given to intensifying the level of services provided to very high-risk families. Second, providers need to focus on methods to engage and retain families long enough for the Program to have the intended impacts of preventing abuse and neglect. Finally, training needs to focus on how to identify abuse and neglect and how to appropriately address observed or suspected abuse or neglect.

It is not known if families with a history of abuse or neglect are benefiting from the Healthy Families Program. There is concern that these families may need services beyond what can be provided by a weekly home visitation program using paraprofessionals. More intensive services, provided by professional staff, may be more appropriate for these clients. However, until data is available to fully assess whether these parents are benefiting from the Program, it is recommended that families with a history of substantiated abuse and neglect and families with very high risk scores be provided the most intensive level of services pos-

sible and that the Program staff make full use of their referral system to ensure these families receive additional assistance.

The Program needs to focus its training on engaging and retaining families. In addition, the Program needs to ensure that family support specialists can identify abuse and neglect and know how to appropriately intervene. The Program has already begun to address the need for more training on addressing abuse and neglect. For example, at the May 1997 Healthy Families Institute, the first major session was devoted to helping family support specialists learn how to take appropriate actions when abuse or neglect is observed.

Recommendations

To improve the Program's effectiveness, DES should:

1. Develop measures of child abuse recidivism to allow for an adequate assessment of the impact of Healthy Families services on families with a history of abuse and neglect.

2. Require contractors to provide families with very high risk levels a higher intensity of services, including more frequent visits and more extensive referrals to other direct services.

3. Require contractors to provide those families with a history of abuse and neglect with a higher intensity of services, including more frequent visits and more extensive referral to other direct services.

4. Focus staff training on engaging and retaining families in the Program if it is to fully achieve hoped-for outcomes.

5. Continue to emphasize identifying and addressing abuse and neglect at the Healthy Families Institute's semi-annual training programs.

FINDING II

HEALTHY FAMILIES SHOWS SOME SUCCESS AT IMPROVING HOME ENVIRONMENT

After 6 months of Healthy Families services, most Program participants provide their children with positive, child-centered nurturing environments. The environments are found to improve even more after an additional 12 months of Healthy Families services. These positive environments indicate that the Program has been successful in creating positive parent-child bonds that may reduce the likelihood of child abuse and neglect. However, the Program has not been successful in improving Healthy Families' participants' overall family functioning.

Background

Strengthening family relations and promoting family unity is a legislated goal of the Healthy Families Program. Healthy parent-child relationships provide children with critical foundations for development. However, among families where abuse occurs, these relationships are often poorly established or disintegrate during periods of developmental change or family stress. The Healthy Families model tries to provide families with child management skills designed to assist parents in developing competencies they need to reduce conflict and to increase their level of interaction with their children. Through the development of such skills and improving the quality of parent-child relationships, parents should be less likely to abuse or neglect their children. The HOME, a 45-item observational tool used at 6 and 18 months after program enrollment, was used to measure the child-centered quality of participants' homes.

Additionally, family conflict and lack of cohesion among family members are believed to create a foundation of negative interactions that increase the likelihood of child abuse. Research has found that child abuse perpetrators report more family conflict and less family cohesion and expressiveness. In contrast, nonviolent families have been characterized by the expression of feelings, shared pleasurable activities, and emphasis on personal rights. (Mollerstrom, Patchner, and Milner, 1992). A goal of the Healthy Families Program is to improve family functioning in order to decrease the likelihood of child abuse. While improving family functioning and unity is a goal of Arizona's Healthy Families Program, it is not a goal of the Healthy Families model used in other states. The national model used in other states focuses on meeting adult needs, but improving overall family functioning is beyond the Program's services. The FACES II assessment, used to measure family functioning and unity

among program participants, was administered at 3 weeks and again at 12 months after families' enrollment into the Program. A comparison group of families eligible for but not enrolled in the Program was also administered the FACES II at both time periods.

Healthy Families Participants Are Providing Nurturing Environments

The Program has a positive impact on families' home environments, increasing their nurturing and reducing children's risk of neglect. Results of the Program's emphasis on parent-child interactions can be seen in the HOME assessment. The impact is seen at 6 months with positive, child-centered environments and improves even more from 6 to 18 months for families who stay in the Program. This analysis suggests that the Program increases parent-child bonding and consequently reduces the likelihood of Healthy Families participants neglecting their children.

The following types of behaviors must be observed in order for families to receive high scores on the six subscales:

- **Responsivity**—the parent responds to the child's vocalizations with a vocal or verbal response, permits child occasionally to engage in "messy" types of play, spontaneously praises the child's qualities or behaviors, speaks to the child with a voice that conveys positive feeling, and kisses or caresses the child.

- **Acceptance**—the parent does not inappropriately shout at, scold, or criticize the child, and does not interfere with the child's actions or restrict the child's movement.

- **Organization**—the child gets out of the house at least four times a week, is taken regularly to the doctor's office or clinic for check-ups and preventive health care, and has an environment safe and free of hazards.

- **Play materials**—the child has one or more muscle activity toys or pieces of equipment, has a push or pull toy, a stroller or walker, kiddy-car, scooter, or tricycle, toys appropriate to his or her age, and toys involving literature and music. The parent is observed to provide toys or interesting activities for the child.

- **Parental involvement**—the parent keeps the child in visual range, looks at the child often, and talks to the child frequently. The parent provides toys that challenge the child to develop new skills and provides some structure during play periods.

- **Variety**—the father provides some caregiving every day, the child eats at least one meal per day with parents, visits or receives visits from relatives at least once a month, has

stories read to him or her at least three times a week, and has three or more books of his or her own.

Families providing child-centered environments after six months of service—The six-month administration of the HOME shows most Healthy Families participants were providing their children with a nurturing, child-centered environment after only six months of program service. The HOME scores indicate that the environment is supportive of the children's intellectual and emotional development. Table 1 shows most Healthy Families participants have high scores on the HOME, and in contrast to scores from a national sample, Healthy Families participants score higher on all of the six subscales and on the total score.

Table 1

Healthy Families Pilot Program
Average Scores on HOME Assessment for
Families with Children 6 Months and 18 Months Old
January 1995 through April 1997

		Average Score			
		6 Months		18 Months	
Assessment Categories	**Potential Scores Range**	**National**	**Healthy Families**	**National**	**Healthy Families**
Responsivity	0 to 11	7.50	8.85	8.02	9.67
Acceptance	0 to 8	5.91	6.38	5.29	6.18
Organization	0 to 6	4.62	5.18	4.89	5.44
Appropriate play materials	0 to 9	5.04	6.21	6.36	7.44
Maternal involvement	0 to 6	3.01	4.48	3.32	4.90
Variety in daily stimulation	0 to 5	2.25	2.88	2.97	3.59
Total HOME	0 to 45	28.49	33.99	30.85	37.28
Number of children [1]			681		216

[1] Number of children included in the national sample not available.

Source: Auditor General staff analysis of data provided by Healthy Families staff.

HOME scores improve from 6 months to 18 months—While Healthy Families participants already had fairly high HOME scores at 6 months, these scores increased even more at 18 months. Analysis revealed that, for the 179 families who had scores for both 6 and 18 months, significant gains were found in all but the acceptance category.

No Improvements Shown in Family Functioning

Although Healthy Families' services appear to have a positive effect on parent-child relationships, they have no measurable impact on the adaptability, cohesiveness, or overall family functioning components. Approximately half the families entered the Program with poor family functioning and, after 12 months of program services, had no notable improvements.

The FACES II measures two dimensions of family functioning:

- **Family cohesion**—assesses the degree to which family members are separated from or connected to their family. Family cohesion is defined as *the emotional bonding that family members have toward one another.*
- **Family adaptability**—has to do with the extent to which the family system is flexible and able to change. Family adaptability is defined as *the ability for a marital or family system to change its power structure, role relationships, and relationship rules in response to situational and developmental stress.*

The FACES II also has a Total Scale score that measures overall family functioning.

Families show no gains in family functioning after 12 months of program services—Analysis of the FACES II shows no 3-week to 12-month improvement in family cohesion, adaptability, or family functioning. In addition to comparing the percentage of families who fell into each family functioning, cohesion, and adaptability category, an analysis of the change in scores was done for each family assessed with FACES II at 3 weeks and again at 12 months. Both types of analysis revealed no significant improvements. Additionally, the results for the Healthy Families participants were almost identical to the results for the comparison families.

Improving Family Functioning Not a Goal of National Model

While the statute creating the Arizona Healthy Families Program establishes improvements in family functioning as a goal of the Program, having such an impact may be beyond the scope of the Program's model. First, improving family relations and functioning beyond the parent-child relationship is not a goal of the national program model. Second, the Program focuses primarily on parent-child relationships and not on the total family unit. Additionally, since only 18 percent of participants reported that they were living with their husbands, improvements in adult family relations may be unrealistic. Finally, program staff generally lack the specific qualifications and skills necessary to provide the intensive types of services required to improve family functioning.

Improving family unity and relations not a goal of the model—The goal of improving family unity beyond the parent-child relationship is not a goal of the national Healthy Families model. However, the legislation that created Arizona's Healthy Families Pilot Program included strengthening family relations and promoting family unity as a program goal. DES incorporated this goal into the Healthy Families model used in Arizona in order to comply with the statutory requirements.

Program services focus on parent-child relationships—The Program's family support specialists focus their activities and discussions during home visits primarily on parenting and child development, not on overall family unity and relations. These activities and discussions are designed to improve parenting and promote child development. If both parents are involved in parenting, then through these activities and discussions and through the creation of a common parenting system, overall family functioning can improve. However, less than half of the Program's families have both parents involved in parenting their children.

Families' structures not amenable to improvements—Few of the participants in the Program are in families that are subject to improved functioning. Only 18 percent of the participants reported they were living with their spouse when they entered the Program. A third were living with their parents and others reported living alone, with a boyfriend, or in other arrangements. While the Program can assist individual parents to improve their living skills, it cannot provide services that will have major impacts on family unity and functioning.

Healthy Families staff not equipped to provide intensive family counseling—Additionally, Healthy Families staff generally do not have the specific qualifications necessary to provide intensive family counseling and interventions. Staff work with their supervisors to identify families who need additional services and make referrals to other service providers where appropriate. For example, families with substance abuse or domestic violence problems will be referred to social service agencies with staff qualified to provide interventions in these areas. Staff should continue to provide these valuable referrals to families with such needs.

Recommendations

1. DES should continue to focus Healthy Families services on improving parent-child relationships.
2. DES should continue to require contractors to provide social service referrals for participants who have needs for individual or family counseling.
3. The Legislature should consider changing the Program goals of strengthening family relations and promoting family unity to the goals of strengthening parent-child relations and unity.

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FINDING III

HEALTHY FAMILIES IMPROVES CHILDREN'S HEALTH CARE AND DEVELOPMENT

The Program is effective in several ways in improving the medical care and healthy development of participating children. Healthy Families children have relatively high rates of immunizations. Program staff screen children regularly for developmental delays and refer those with potential delays to medical and social services for further assessments. Almost all of the Healthy Families participants have a medical "home" to which they regularly turn for medical care and well-baby check-ups.

Background

Promoting child wellness and proper development is one of the Program's legislative goals. In addition, legislation requires evaluating the process of educating parents about developmental assessments so that developmental delays can be identified early. Not only is early identification a program goal, but parental understanding of normal development can reduce frustration and might reduce the risk of parents abusing and neglecting their children. For example, if a parent understands that most children are not ready for toilet training until they are 24 to 48 months old, the parent is less likely to become frustrated with the 18-month-old who is not toilet training.

The Program attempts to meet these goals mainly through the activities of the family support specialists, who provide participating families with education about child development and health care. If needed, program staff may also provide transportation to health care appointments.

Assessment of the Program's accomplishments with regard to health care and child development, and education about developmental assessments, focused on three measures.

- **Immunization rates**—Immunization rates for Healthy Families children were calculated for 4 ages: 2 months, 4 months, 6 months, and 12-15 months.[1] Each site's immunization rate was then compared with the rate in the surrounding community, as measured by

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[1] Consistent with the Arizona Department of Health Services definition, children at the youngest three ages were considered age appropriate if they were immunized no later than 30 days from the date due and no more than 30 days early. Also consistent with DHS, children aged 12 to 15 months were considered age appropriate if the immunization was given at ages 12 to 16 months.

figures from the county health department or county health clinic, whichever was appropriate for the comparison.

- **Ages and Stages Questionnaire (ASQ)**—Healthy Families administers the ASQ to children at several ages: 4 or 6, 12, 18, and 24 months. The ASQ is a questionnaire that helps identify children who might have a developmental delay. The ASQ is completed jointly by the family support specialist and family. Scores below which children may be considered delayed are provided in five areas of development: 1) gross motor 2) communications, 3) fine motor 4) problem solving, and 5) social and personal skills. Through frequent administration of the ASQ, which has different items at each age, it is possible to make early identifications of children with developmental delays, which is an objective of the Healthy Families Program. Early identification with appropriate referral and service may help children develop more fully. The ASQ also provides a method to educate parents about how their child should develop and is developing. This assessment focused on what ASQ results showed about Healthy Families children and how program staff responded to indications of developmental delays. The ASQ is currently used for program evaluation and not as part of program service delivery.

- **Medical "homes"**—Providing good medical attention, appropriate immunizations, and well-baby check-ups can help ensure Healthy Families children develop appropriately, are well cared for, are disease free, and have developmental problems identified early. Having a medical "home" (a medical provider such as a physician, health clinic, or other place of healthcare where an individual regularly and routinely seeks care), is one way of ensuring good medical attention, appropriate immunizations, and well-baby check-ups are accessible. Having a medical home can also reduce the likelihood that families make inappropriate and unnecessarily expensive use of emergency room facilities. Healthy Families participants' records were reviewed to determine how many of them had such a medical home.

Immunization Rates High for Healthy Families Children

As part of home visits, family support specialists discuss the importance of immunizations and remind mothers to get their children immunized. These efforts appear to have benefited the children in the Program by increasing their rates of immunization when compared with other children in the community. The difference in favor of program children increases as the children get older, providing further indications of the Program's effect.

Family support specialists provide information about immunization—Family support specialists discussed immunizations with at least 62 percent of the mothers in the Program, and 65 percent of all families were provided information on where to receive medical services. Family support specialists will often ask during home visits if babies have been immunized and will remind parents of the importance of having their children immunized.

Healthy Families site rates compare favorably to local rates—Most Healthy Families sites had immunization rates that exceeded those in the community. At 9 of the 14 sites, immunization rates were higher for all four ages (see Table 2, page 24). For example, immunization rates for the South Phoenix site were 8 to 22 percent higher than rates reported by the Maricopa County Health Department. Of the remaining 5 sites, 3 had higher immunization percentages at least half of the time.

Differences favoring Healthy Families increase as children get older—While the rates of immunization for both groups tend to decrease from 2 to 15 months, the drop in the community rates is much greater, suggesting that the Program is having an effect on parents' desires to continue immunizing their children. For example, at the South Phoenix site, an 8 percent difference in immunization rates occurs for children who are 2 months old, while a 22 percent difference in rates occurs for children 12-15 months old. Immunization data for 2-year-olds has not yet been collected for the program children.

Families Receive Referrals When Potential Developmental Delays Are Identified

The results of the ASQ show that most of the children in the Program are experiencing age-appropriate development. Additionally, families of children with possible delays show a higher rate than other participants of referral to medical and social services.

ASQ administration rate high—Almost all children in the Program had an ASQ at either 4 months or 6 months, demonstrating the Program's success in educating parents about early identification of developmental delays. The results of the ASQ show most of the children are developing at age-appropriate levels. As seen in Table 3 (see page 25), few children are identified as potentially developmentally delayed. The percentage of the relatively small number of children assessed as potentially delayed at 24 months is greater than found at the younger ages.

Family support specialists are referring families—Subsequent to the administration of the ASQ, the Program's family support specialists are referring families with potentially delayed children to medical and social services for further assessment and services. While referrals can be for many reasons other than developmental delays, such as illnesses and injuries, and well-baby checkups, 85 percent of families with children who had potential developmental delays at four months were referred to services. By comparison, only 32 percent of the families whose children were not identified with potential delays were referred for such services. The substantially higher rate of referrals where there is a potential developmental delay suggests that the Program is helping families to get their developmentally delayed children identified early and served early.

Table 2

Healthy Families Pilot Program
Percentage of Children Appropriately Immunized During Infancy
for Program Participants Compared to Those
Immunized at Local Public Health Facilities
January 1995 through April 1997

Program Site and Comparative Local Public Health Facility	Percentage of Children Immunized by			
	3 months	5 months	7 months	12 to 16 months
Nogales Healthy Families	84%	77%	78%	58%
Mariposa Community Health Center	74	59	48	51
Page Healthy Families	82	57	69	54
Lake Powell Health Center	83	71	56	61
Tuba City Healthy Families	96	94	91	100
Coconino County Health Department	84	70	57	44
Verde Valley Healthy Families	67	61	54	36
Yavapai County Health Department	73	54	37	40
Bisbee and Douglas Healthy Families	83	71	56	50
Sierra Vista Healthy Families	69	60	67	46
Cochise County Health Department	75	51	32	35
Central Phoenix Healthy Families	71	61	61	67
Maryvale Healthy Families	67	60	43	49
South Phoenix Healthy Families	68	63	48	50
East Valley Healthy Families	73	75	62	50
Maricopa County Health Department	60	46	31	28
La Frontera Healthy Families	76	66	51	56
La Hacienda Healthy Families	65	53	56	54
Casa de los Ninos Healthy Families	75	69	51	64
Codac Healthy Families	72	63	69	82
Pima County Health Department	65	45	30	22

Source: Auditor General staff analysis of data provided by Healthy Families staff and information provided by the Arizona Department of Health Services.

Table 3

**Healthy Families Pilot Program
Percentage of Children with
Ages and Stages Questionnaire Scores Indicating
Possible Developmental Delay
January 1995 through April 1997**

Developmental Area	Age at Evaluation 4 months	12 months	24 months
Gross motor skills	9.9%	2.7%	7.9%
Communications	1.7	2.2	11.1
Fine motor skills	3.7	1.5	8.9
Problem solving	5.2	4.2	6.7
Personal and social development	4.0	2.7	10.1
Number of participants	768	406	90

Source: Auditor General staff analysis of data provided by Healthy Families staff.

Participants mention value of early identification—Participants say they benefit from knowing about children's development. Two of 17 participants who were interviewed during fiscal year 1997 had children who are developmentally disabled. One child's problems were identified at birth, and the other was identified through Healthy Families. Both of the mothers talked about how the Program helped them to identify their needs and obtain needed resources for their children. During the interviews, information on child development was the most frequently mentioned service the Program provided, and almost all of the 17 participants discussed how the Program helped them to learn more about child development and their babies.

Healthy Families Children Have Medical "Homes"

Medical "homes" (a medical provider such as a physician, health clinic, or other place of health care where an individual regularly and routinely seeks care) are an important resource to ensure children's healthy development. Program children show initially high rates of having medical homes, and the rate stays high for families who stay in the Program.

Family support specialists made referrals to doctors for almost two-thirds of program participants. The referrals may have increased the likelihood that Healthy Families children had medical homes. For Healthy Families participants, 97 percent of the children had a medical

home at 2 months of age, 98 percent at 6 months of age, and 99 percent at 12 months of age. The percentage dips slightly, to 95 percent, for children at 18 months of age.

Recommendations

1. DES should require the use of the Ages and Stages Questionnaire or a similar assessment as part of program service delivery.

2. DES should continue to require family support specialists to encourage participants to find medical homes for their children and to have them appropriately immunized.

FINDING IV

HEALTHY FAMILIES PARTICIPANTS RELY LESS ON PUBLIC ASSISTANCE

Program participants are less likely to rely on public assistance programs. They show a lower participation rate for public assistance than is found for a comparison group of families. Additionally, they receive benefits for a shorter amount of time. Other researchers have found similar results from home visitation programs, and Healthy Families may be an effective method of helping participants meet new shortened time limits for receiving welfare benefits.

Background

Evaluation of the Program's effectiveness on reducing welfare dependency is required by legislation. The Program is expected to be effective in reducing participants' dependence on welfare and increasing their self-sufficiency. Through developing participants' self-esteem, and referring families to social and job services, clients are expected to improve their self-sufficiency and reduce their reliance on public assistance programs. Over 80 percent of Healthy Families participants received emotional support and life-coping services, almost half received referrals to social services, and almost one-fourth were referred to job services. These activities should result in reduced welfare dependence.

To determine if the Program had an impact on welfare dependence and self-sufficiency, enrollment in the federally supported Aid to Families with Dependent Children (AFDC)[1], food stamps, and the Arizona Health Care Cost Containment System (AHCCCS) was analyzed. Enrollment in the three programs was analyzed for participants who enrolled in Healthy Families prior to January 1, 1997. The comparison group's enrollment in the three programs was also analyzed.[2]

Fewer Program Participants Receive Public Assistance

Healthy Families participants receive fewer public assistance services than the comparison group. They are less likely to ever receive assistance and were less likely to have been on

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1 AFDC has been replaced by the Temporary Assistance to Needy Families (TANF) program.

2 The comparison group was statistically adjusted for marital status, ethnicity, and size to match the Healthy Families participants.

public assistance at the time they enrolled in the Program.[1] Except for AHCCCS benefits, Healthy Families participants not already receiving benefits were less likely to enroll in public assistance programs after they entered the Program than were the similar comparison group members. Specifically:

- Only 46 percent of Healthy Families, but 54 percent of comparison group families, ever received AHCCCS benefits.
- Forty-seven percent of Healthy Families clients received AFDC whereas 53 percent of the comparison group received AFDC.
- At the time they enrolled in Healthy Families, only 30 percent of participants were enrolled in AHCCCS, but 44 percent of the comparison group was enrolled.
- Thirty-four percent of Healthy Families participants were receiving AFDC benefits when they entered Healthy Families in contrast to 43 percent of the comparison group.
- Almost as many Healthy Families participants were receiving food stamps when they entered the Program as were comparison group families.
- More than 22 percent of Healthy Families clients started on AHCCCS after entering the Healthy Families Program, compared to only 10 percent of the comparison families.

Healthy Families does not increase reliance on public assistance programs—Healthy Families program participation does not result in increased reliance on public assistance. The slightly lower rates of enrollment in AFDC and food stamps after enrollment in Healthy Families indicate that the Program does not increase reliance on these public assistance programs. While there is a higher rate of AHCCCS enrollment for Healthy Families participants after program enrollment, this increase does not bring the overall AHCCCS participation rates for Healthy Families up to the rates found for the comparison group.

Program Participants Receive Public Assistance for a Shorter Time Period

Not only do a smaller number of participants receive public assistance, those who do spend significantly less time on AFDC, food stamps, and AHCCCS than the comparison families. Program families receive benefits for a shorter period than comparison families whether they

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[1] For analysis purposes, enrollment into the study by the comparison group is equivalent to enrollment into Healthy Families for the participants.

were already on the programs at the time they entered Healthy Families, or enrolled after entering Healthy Families. Table 4 summarizes the differences in the length of time families spend on public assistance programs.

The Program may help clients move off of public assistance before their time eligibility expires—The Program's services may help clients reduce their time on public assistance. Both program families and comparison group families who received assistance generally received it longer than the new Arizona public assistance limits allow. Currently, public assistance recipients in Arizona are limited to 60 months of assistance during a lifetime and are generally limited to 24 months consecutively at any one time. Program participants averaged about 25 months on AFDC. However, the shorter amount of time program participants spend on public assistance suggests they move toward self-sufficiency more quickly than do comparison families.

Table 4

Healthy Families Pilot Program
Average Number of Days on Public Assistance
January 1995 through May 1997

	Public Assistance Program		
	AFDC	Food Stamps	AHCCCS
Comparison group	892	1,110	313
Healthy Families group	771	910	240
Difference	121	200	73

Source: Auditor General staff analysis of data provided by Healthy Families staff.

Similar findings found by other researchers—A recent 15-year follow-up study of families who received home visitation reported that prenatal and early childhood home visitation by nurses can reduce the use of public assistance (Olds, et al 1997). The researchers found that families who were visited at home stayed a significantly shorter period of time on AFDC than families who were not. Another study found similar outcomes, indicating that it is possible to reduce the risks for dependence on public assistance if home visitation programs are comprehensive, intensive, and long-lasting. The programs that resulted in these outcomes included services that fostered maternal personal life-course development, specifically, family planning, educational achievement, and participation in the workforce. These are also issues that are discussed in the Healthy Families Program.

In addition to Healthy Families family support specialists discussing these issues with program participants and referring them to additional support services, participants are involved in goal setting and planning. Each family, working with a family support specialist, develops an Individual Family Service Plan (IFSP). The IFSP worksheet is used to help participants identify their family concerns and ways the Program can assist them with these concerns. Through the process, participants must begin to set goals for themselves, which helps build self-sufficiency. Also, participants work with family support specialists to plan activities for their next home visit, which helps them develop planning skills, build self-confidence, and create self-sufficiency.

Recommendation

DES should require program staff to continue their efforts to help participants develop their self-esteem and refer families to social and job services, in order to improve their self-sufficiency.

STATUTORY ANNUAL EVALUATION COMPONENTS

Pursuant to Laws 1994, Ninth S.S., Ch. 1, §9, the Office of the Auditor General is required to include the following information in the annual program evaluation.

C.1. Information on the number and characteristics of the program participants.

Information on the number and characteristics of program participants was available only through June 30, 1997. Since the Healthy Families Pilot Program's inception, 1,952 families have been enrolled. At the end of June 1997 the Healthy Families Pilot Program was serving 897 families. Fifty-nine percent of these families reside in the urban areas of Maricopa and Pima Counties. The remaining families are located in four predominately rural counties—Coconino, Cochise, Santa Cruz, and Yavapai. The Program did not operate in the other nine counties.

Demographics are reported on all 1,952 client families. The amount of data on program participants varies by category. For example, we have more information on ethnicity than on education. This report contains specific demographic information only on those participants for whom that specific data was recorded.

Participants by Age, Employment, and Education—Although there were two cases in which the mother was 12 years old, the median age of mothers entering the Program is 21. Thirty-seven percent of the mothers are teenagers, an increase from 27 percent reported last year. While 50 percent of the mothers report they have either a high school diploma or GED (also an increase from last year's reported 39 percent with such education), 88 percent of mothers report being unemployed.

Often fathers are not involved with the baby or mother at the time of birth, creating difficulties in determining paternal demographic information. There are 1,310 reported cases with information on the father's education. Of these cases, 58 percent have a high school diploma or GED. Additionally, 33 percent of the fathers report being unemployed. The fathers are typically older than the mothers, with a median age of 24, and the youngest fathers were 14 years old (2 cases).

Other Demographic Information—Additional demographic information on Healthy Families Pilot Program participants includes participants' marital status, living situation, ethnicity, and household income. Only 18 percent of the mothers reported being married at the time they enrolled in the Program. However, only 12 percent of the mothers reported living alone. Thirty-two percent were living with

their parents, 18 percent with a husband, 13 percent with another relative, and 25 percent with a nonrelative or cohabitating partner.

There is variation in the participants' ethnicity. Forty-nine percent of the mothers and 52 percent of the fathers are Hispanic. Anglos accounted for 29 percent of the mothers and 24 percent of the fathers. Approximately 10 percent of the mothers and 10 percent of the fathers are Native American. Seven percent of the mothers and 10 percent of the fathers are African-American.

Most program participants belonged to impoverished households. Among family households whose annual household income was reported (not including assistance), 68 percent reported annual household income below $10,000. The median income is $7,200 per family. Only 7 percent reported an income above $20,000. In addition, a large number of families depended on one or more welfare benefits, most commonly Aid to Families with Dependent Children (32 percent), food stamps (44 percent), and Women, Infant, and Children programs (80 percent).

Health of target child at birth—While 21 percent of the babies enrolled in Healthy Families were born prematurely, only 11 percent were born in poor health and were cared for in intensive care units after birth. By comparison, 19 percent of all babies born in Arizona were premature and 6 percent entered intensive care. One percent of the babies born to program participants were reported to have known birth defects at birth, compared to almost 2 percent for all Arizona births in 1996. Fewer than 1 percent of the newborns screened positive for alcohol, and 1.4 percent screened positive for drugs at birth. Enrolled babies included 51 sets of twins and 1,901 single births.

Family size—For 52 percent of the mothers the Healthy Families target child is their first baby. Twenty-two percent have 1 other child and 14 percent have 2 other children. The remaining 12 percent of mothers have 4 or more children.

Families' risks of child abuse and neglect—Many of the mothers in the Program also have had personal problems that can make the challenges of raising their new babies more difficult. Based on the results of the Family Stress Checklist (FSC) used to assess families' need for the Program, 62 percent of the mothers and 43 percent of the fathers have a moderate risk of child abuse, and 34 percent of the mothers and 20 percent of the fathers have a severe risk of child abuse. Specifically, mothers are at risk of child abuse due to various problems such as a childhood history of being repeatedly beaten or deprived, low self-esteem, stressors in their lives, history of substance abuse, mental illness, or criminality, and having rigid and unrealistic expectations of their infants.

C.2. Information on contractors and program service providers.

DES awarded 5 contracts to 4 contractors to serve 13 sites in 6 counties. The Tucson Association for Child Care received 2 separate contracts for urban and rural sites and manages 3 urban and 3 rural not-for-profit service sites. In addition, their urban contract includes the cost of providing statewide program oversight through a quality assurance coordinator. Southwest Human Development was awarded a contract for managing 4 sites in Maricopa County. A fourth contract was awarded to the Marcus J. Lawrence Medical Center, which serves 1 site in Yavapai County. The final contractor, Coconino County Department of Public Health, has two sites, serving Coconino County.

In addition to these site contracts, DES contracted out the data management function to a data management firm.

C.3. Information on program revenues and expenditures.

A total of $3.7 million was available during fiscal year 1997 to support the activities of the Healthy Families Pilot Program. In addition to the $3,000,000 fiscal year 1997 Healthy Families Pilot Program appropriation, contractors contributed $709,729 of in-kind support (see Table 5, page 34). Of the total amount of monies available, approximately $3.5 million was spent on the Program and $250,000 will be used to support fiscal year 1998 activities. Table 5 shows how the state monies were distributed across contractors. DES estimates that approximately $95,000 in additional DES monies was used to support the administrative functions associated with Healthy Families in fiscal year 1997.

C.4. Information on the number and characteristics of enrollment and disenrollment.

As of June 30, 1997, the Program has enrolled 1,952 families since it first began to provide services in January of 1995. The Program is voluntary and during that same period, 1,193 families chose to leave the Program, which is a 60 percent attrition rate. Fiscal year 1997 began with 673 families enrolled from fiscal years 1995 and 1996. An additional 638 families were enrolled in fiscal year 1997, and 585 families exited the Program during this same period. Thus, for fiscal year 1997, there is a 45 percent attrition rate.

Of cases that were reported active as of March 31, 1997, the median length of time in the Program was 334 days, with 25 percent of the families in the Program fewer than 155 days and 25 percent of the families in the Program more than 602 days. Families that have exited the Program were enrolled for a median of 167 days. Families still enrolled in the Program have been in the Program an average of 371 days.

Table 5

**Healthy Families Pilot Program
Revenues and Expenditures by Contractor
Year Ended June 30, 1997
(Unaudited)**

	Tucson Association for Child Care Urban	Tucson Association for Child Care Rural	Southwest Human Development	Marcus J. Lawrence Medical Center	Coconino County Department of Public Health	Data Management	Total
Revenues:							
State	$821,810	$654,923	$ 989,600	$137,403	$319,436	$76,828	$3,000,000
Contractor contributions	47,624	33,191	338,797	9,639	27,971		457,222
Total revenues	869,434	688,114	1,328,397	147,042	347,407	76,828	3,457,222
Expenditures	894,434	671,990	1,362,974	152,983	300,520	76,828	3,459,729
Excess of revenues over (under) expenditures	(25,000)	16,124	(34,577)	(5,941)	46,887		(2,507)
Balance, July 1, 1996	75,000	54,258	64,577	32,591	25,221		251,647
Balance, June 30, 1997	$ 50,000	$ 70,382	$ 30,000	$ 26,650	$ 72,108	$ 0	$ 249,140

Source: Auditor General staff analysis of financial information provided by the Department of Economic Security.

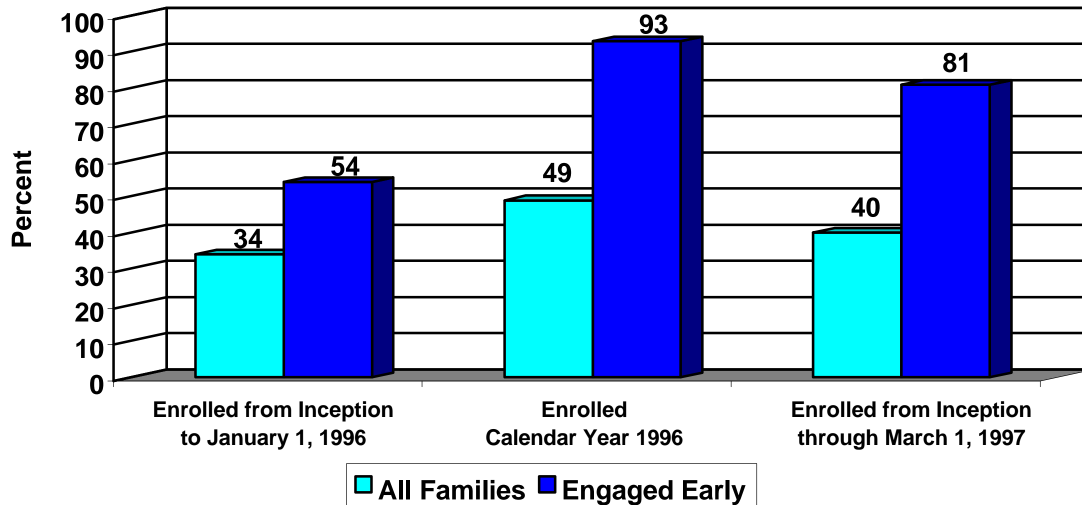
Early engagement (getting families committed to participation in the Program) is critical to long-term retention in the Program. As can be seen in Figure 1 (see page 35), families who were engaged in the Program early are much more likely to remain in the Program than all families who were enrolled. While retention does drop off significantly over time, the trends suggest that families who can be engaged early on in the Program are likely to continue services for more than one year.

These results in Figure 1 (see page 35), suggest that the Program needs to work actively to engage families early on to gain their full participation.

The most common reason (32 percent) for a family exiting the Program is that the family support specialist (home visitor) was no longer able to contact the family. The second most common reason (31 percent) was the family moving. Less than 20 percent of the families left the Program because they either refused to continue, or refused to accept a new home visitor after their previous home visitor left the Program. Seven percent of the families who have left did so because they had reached self-sufficiency as defined by the Program.

Figure 1

Healthy Families Pilot Program
Percentage of Families Still Enrolled
As of March 31, 1997



Source: Auditor General staff analysis of data provided by Healthy Families staff.

C.5. Information on the average cost for each participant in the program.

Table 6 (see page 36), presents the costs per family per year of the Healthy Families Pilot Program. Two estimates are provided. The first calculation (Method A) is based only on families who were active in the Program as of the last day of the fiscal year. The second method (Method B), includes all families who were served at some time during the fiscal year.

Table 7 (see page 37) presents the estimated costs to complete the Program. The average cost of completing the Program is estimated using both methods that have been used to calculate the costs per family per year. Costs per year are based on the average yearly costs for years ended June 30, 1995, 1996, and 1997. Best estimates take into account attrition. Two estimates for each method are included. The first estimate is based on 1.685 years to complete the Program, which is the average of those who have successfully completed it. The second estimate is based on four years to complete the Program, which is more in keeping with the Program's model. Changes in annual costs per client, a significant shift in the attrition rate, or a change in the time needed to move clients through the Program would result in different costs.

Table 6

Healthy Families Pilot Program
Cost per Family [1]
Six Months Ended June 30, 1995, and
Years Ended June 30, 1996 and 1997
(Unaudited)

	Method A [2]			Method B [3]		
	1995	**1996**	**1997**	**1995**	**1996**	**1997**
State expenditures	$3,269	$4,127	$3,812	$2,796	$2,362	$2,096
Federal and contractor contributions [4]	424	350	585	362	201	322
Total cost per family	$3,693	$4,477	$4,397	$3,158	$2,563	$2,418

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1 All costs including quality assurance coordinator, training, data management, and service delivery.

2 Calculated using the number of families enrolled in the Program at year-end (*does not* include families who have disenrolled).

3 Calculated using the total number of families served during the fiscal year (*does* include families who have disenrolled).

4 No federal contributions were available in 1997.

Source: Auditor General staff calculations based on data provided by the Department of Economic Security and Healthy Families staff.

C.6. Information concerning progress of program participants in achieving goals and objectives.

Finding I (see pages 9 through 14), reports on the progress participants have made toward reducing their rates of child abuse and neglect.

Finding II (see pages 15 through 19), reports on the progress participants have made in improving their family functioning and interactions with their children.

Finding III (see pages 21 through 26), reports on the progress participants have made in improving the rates of children having a medical home, receiving immunizations, and being screened for developmental delays.

Finding IV (see pages 27 through 30), reports on the progress participants have made in increasing self-sufficiency and reducing their dependence on social welfare programs.

Table 7

Healthy Families Pilot Program
Estimated Costs to Complete the Program
As of June 30, 1997

Estimated Length of Time to Complete the Program	Costs to Complete Program Method A	Method B
1.685 years	$ 7,058	$ 8,466
4 years	16,756	20,098

Source: Auditor General staff calculations based on data provided by the Department of Economic Security and Healthy Families staff.

C.7. Recommendations regarding program administration.

Overall, DES administered the Program efficiently and the administrative tasks were completed in a timely fashion. The first annual evaluation report (Auditor General Report No. 95-19) reported that DES efficiently implemented the Healthy Families Program by awarding contracts in a timely and efficient manner, by developing family eligibility criteria in accordance with legislative mandate, and by keeping administrative costs low. Additionally, the report found that the Healthy Families Program design appeared sound. In the second annual report (Auditor General Report No. 96-17), we reported that the Program was targeting families who need its services but that families were accessing fewer services than envisioned in the program model.

As reported in Finding I (see pages 9 through 14), it is not clear if the Program is positively impacting high-risk families and families who have previous Child Protective Services reports. While the Program appears to have prevention effects for moderate-risk families, it may not have the same benefits for high-risk families. However, data is not available to draw a full conclusion. If the Legislature chooses to continue the Program, DES should:

1. Develop measures of child abuse recidivism to allow for an adequate assessment of the impact of Healthy Families services on families with a history of abuse and neglect.

2. Require contractors to provide families with very high risk levels a higher intensity of services, including more frequent visits and more extensive referrals to other direct services.

3. Require contractors to provide families with a history of abuse and neglect with a higher intensity of services, including more frequent visits and more extensive referral to other direct services.

4. Focus staff training on engaging and retaining families in the Program.

5. Continue to emphasize identifying and addressing abuse and neglect at the Healthy Families Institute's semi-annual training programs.

Based on Findings II (see pages 15 through 19), III (see pages 21 through 26), and IV (see pages 27 through 30), it is also recommended that:

6. DES should continue to focus Healthy Families services on improving parent/child relationships.

7. DES should continue to require contractors to provide social service referrals for participants who have needs for individual or family counseling.

8. The Legislature should consider changing the Program goals of strengthening family relations and promoting family unity to the goals of strengthening parent-child relations and unity.

9. DES should require the use of the Ages and Stages Questionnaire or a similar assessment as part of program delivery.

10. DES should continue to require family support specialists to encourage participants to find a medical home for their children and to have them appropriately immunized.

11. DES should require program staff to continue their efforts to help participants develop their self-esteem and refer families to social and job services, in order to improve their self-sufficiency.

C.8. Recommendations regarding informational materials distributed through the programs.

The Healthy Families Pilot Program distributes informational materials in accordance with the state-mandated services. Our Office selected and reviewed materials related to child development, parent-child attachment, and bonding issues, and found them to adequately address program needs. No recommendation is deemed necessary regarding informational materials distributed through the Program at this time.

C.9. Recommendations pertaining to program expansion.

The Healthy Families Program has shown positive effects for families at moderate risk of abuse and neglect, resulting in a reduction in their rates of Child Protective Services reports. However, it is not clear if reductions in child abuse and child abuse potential occur for high-risk families, families with a history of child abuse, and first-time parents. Other positive effects are found, including Healthy Families clients having a more positive, nurturing home environment, and increased rates of children having medical homes and receiving on-time immunizations. Additionally, families appear to move toward self-sufficiency as a consequence of Healthy Families services.

While these outcomes reflect benefits to participants, the short-term dollar amount of the benefits does not equal the total dollars invested in the Program. The cost-benefit analysis required for this evaluation (see pages 42 through 44) shows that based on the costs of the Program and short-term, two-year benefits, the Program has a cost of $2,701,309. However, as discussed on pages 42 through 44, these benefits do not take into account potential long-term benefits that cannot be measured at this time and the value of benefits that cannot be given dollar amounts.

The Program's value to the participants must also be weighed against the cost for the short period of time the Program has been operating. If the value of reduced numbers of children being abused and neglected and the improved health of these children exceeds the costs, the Program should be continued and expanded. If the Program is expected to pay for itself in reduced costs to taxpayers, in the short term, the Program should not be continued or expanded. If the Program is expanded or continued, the administrative recommendations (see pages 37 through 39) should help to increase the benefits derived from the Program.

Pursuant to Laws 1994, Ninth S.S., Ch. 1, §9, the Office of the Auditor General is required to include the following information in the final program evaluation.

E.1. Statistical information measuring the effectiveness of the programs in accomplishing the goals and objectives established in this act.

Finding I (see pages 9 through 14) includes statistical information specific to the effectiveness of the Program in reducing the risk of child abuse and neglect.

Finding II (see pages 15 through 19) presents statistical information specific to the effectiveness of the Program in improving family functioning.

Finding III (see pages 21 through 26) presents statistical information specific to the effectiveness of the Program in improving children's health and development.

Finding IV (see pages 27 through 30) presents statistical information specific to the effectiveness of the Program in reducing dependence on public assistance and improving self-sufficiency.

E.2. The attitudes and concerns of program participants.

Seventeen program participants were interviewed during the 1997 fiscal year. These participants overwhelmingly found the services helpful. They were generally appreciative of Healthy Families services, indicating they would change little about the Program, and that their lives would be much more difficult if they were not in the Program. They compared the family support specialists to either a friend or a teacher who provided them with valuable information about child development, parenting, and childcare services.

In addition, observations by Auditor General staff of 20 home visits during the 1997 fiscal year found all of the family support specialists to be professional and respectful of the families, their culture, their ethnicity, and their religious values. Evaluators observed that all of the family support specialists had good to excellent listening skills and usually involved the participant as a full partner in the process.

F.1. Evaluate the educational process for parents on developmental assessments so that early identification of any learning disabilities, physical handicaps or behavioral health needs are determined.

Finding III (see pages 21 through 26), discusses the use of the Ages and Stages Questionnaire for assessing children's development as well as subsequent follow-up by family support specialists in referring families for further assessment. Parents are educated about development through the ASQ, which is completed jointly by the parents and family support specialists.

F.2. Measure the effects on program participants of promoting family unity and strengthening family relations.

Finding II (see pages 15 through 19), discusses the effects on program participants of promoting family unity and strengthening family relations.

Moreover, while positive nurturing environments and improved parent-child interactions were found, no improvements are found in overall family functioning.

F.3. Review the impact on program participants of counseling and coping support services.

Healthy Families does not provide direct counseling services. Family support specialists do make referrals for mental health, drug and alcohol, and social services for participants with needs in these areas. Through March 31, 1997, 4 percent of the clients had received referrals for drug and alcohol counseling (less than 1 percent received referrals more than once), and 7 percent received mental health referrals (3 percent received repeated referrals). Social service referrals, which can be made for a wide array of reasons, were made for 20 percent of participants with 7 percent receiving a referral more than once.

F.4. Evaluate the method for selecting eligible participants.

Healthy Families determines eligibility through a two-stage process. Families are screened through a 15-item Hospital Chart Screen conducted at hospitals at the time of a baby's birth. Items such as education level, marital status, and employment are included on the screen. Based on the results of the Hospital Chart Screen, families are determined not eligible or referred for further assessment. A 10-item Family Stress Checklist (FSC) interview instrument is used to assess program eligibility. Individuals receive a score of 0 (no risk), 5 (moderate risk), or 10 (high risk) on each item for a total range of 0 to 100. Areas on the FSC include childhood history of abuse or neglect, potential for violence, and a history of mental illness, criminality, and drug abuse. A separate score is computed for the mother and father. A score of 25 or higher for either the mother or father on the FSC makes a family eligible for the Program. Sixty-two percent of the mothers in the Program have moderate risk of abuse (a score of 25 through 40), 34 percent have a high risk, and only 4 percent have no or low risk as measured by the FSC. Data is incomplete for many of the fathers.

Almost two-thirds of the eligible births in the targeted area went through the Hospital Chart Screen process during fiscal year 1997. However, areas differ in the percentage of births that were screened. For example Sierra Vista, Nogales, Page, and the Verde Valley sites screened more than 90 percent of the eligible births, and Tucson and Tuba City screened less than half. During fiscal year 1997, 4,630 families went through a Healthy Families Pilot Program Hospital Chart Screen. Of these families, 762 were assessed with the Family Stress Checklist and 693, or 91 percent, screened positive for child abuse potential. Ninety-two percent of the 693 initially accepted enrollment into the Program.

The second-year evaluation report found that the Family Stress Checklist may assess too many families as eligible for the Program. Although the Healthy Families Amer-

ica Research Network[1] subsequently investigated ways to improve and refine the checklist to increase its ability to better measure a family's risk level, it has concluded that little would be gained by further revising the Family Stress Checklist. While many evaluators are dissatisfied with the Family Stress Checklist, it is unclear how a simple reorganization or modification in its terminology, scoring, or interview protocols would produce more effective or appropriate protocols. Additionally, it should be noted that Family Stress Checklist scores are correlated with families having substantiated Child Protective Services Reports, indicating the Checklist does have some validity. Given the lack of any good alternatives, we recommend that the Program continue to use the FSC for assessing families for program eligibility.

The research network has also concluded that there is a need to complete a comprehensive literature review on risk assessment to provide the most current information regarding risk assessment methods.

F.5. Evaluate the overall effectiveness of the program based on performance based outcome measurements including a reduced dependency on welfare, increased employment and increased self sufficiency.

As reported in Finding IV (see pages 27 through 30), Healthy Families participants are slightly less likely to rely on public assistance programs and are on those programs for a shorter period of time than are a comparison group of families. However, it would be premature to conclude that this is a direct result of the Program without more research.

F.6. Estimate the long-term savings for providing early intervention services established in the Healthy Families Pilot Program.

We contracted with the Early Intervention Research Institute at the Center for Persons with Disabilities at Utah State University to estimate the long-term savings provided by the Program. The contractor was unable to estimate the long-term savings at this time, but was able to estimate short-term benefits and costs. Long-term benefits could not be calculated because the Program and the evaluation cover only a two-year time period. This short time period makes it impossible to follow these families and children to take into account any potential long-term benefits that could be derived from reductions in special education placement of children, juvenile delinquency, drug and alcohol abuse, or adult crime. The Program could also result in increased long-term benefits to society through higher productivity, school completion, and wages and tax revenues from those who are the beneficiaries of these pro-

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[1] The Healthy Families American Research Network meets twice yearly. It includes Healthy Families evaluators from more than 20 states and is supported by private grant funding.

grams. While there is extensive research that demonstrates a relationship between child abuse and these outcomes, the current state of the research does not allow for good estimates of monetary costs and subsequent benefits of reducing child abuse. The cost contractor does conclude that given what is known about the long-term consequences of child abuse and neglect, it becomes clear that preventing a few incidences of child abuse may reap substantial future savings.

Overall, the contractors found the short-term, two-year cost of the Program to be $2,701,309 for families served through 1996. The two-year cost of the Program is based on the costs of the Program less the benefits from improved immunizations, decreased reliance on social welfare programs by Program families, and from reduced costs of investigated CPS reports, providing in-home services for open CPS cases, and reductions in foster care placements. Table 8 (see page) shows the estimated benefits from the Program, total costs, and factors included in estimating the benefits.

The short-term benefits estimated by the contractor do not take into account savings in medical care, which costs would be borne by clients, agencies, or public monies. In addition, some benefits, such as an improved nurturing environment as measured by the HOME, cannot be calculated in dollars and are not included in the calculations. However, such benefits are important and should be taken into account in estimating the Program's value. However, the costs do not include the costs to families (such as transportation costs) to receive services and the costs of services provided by staff other than Healthy Families. Costs such as these should also be included in a truly comprehensive cost study.

Table 8

Healthy Families Pilot Program
Cost/Benefit Analysis
for the Period January 1995 through December 1996

	Number of Observations (a)	Reduction in Days or Services Needed [1] (b)	Cost [2] (c)	Average Family (d)	Savings (Benefits) (axbxcxd)
Total Healthy Families Program Costs					5,674,278
Benefits of Healthy Families Program					
Public Assistance Program Reductions:					
Food Stamps	871	180.0	$ 2.41	2.9	$1,095,735
AFDC	614	135.1	3.73	3.0	928,226
AHCCCS	802	77.6	12.23 [3]	N/A	761,136
Child Protective Services Reductions:					
Investigations	N/A	13.0	3,442.00	N/A	44,746
In-home Services	N/A	29.0	3,720.00	N/A	107,880
Foster Care Placement	N/A	1.3	15,600.00	N/A	20,280
Immunizations	550	N/A	$27.21 [4]	N/A	14,966
Total Benefits					$2,972,969
Short-term Cost of the Healthy Families Program					$2,701,309

[1] The number of Food Stamps, AFDC, and AHCCCS days is the estimated number reduced by the program participation. The number of Child Protective Services investigations, in-home services, and foster care placements is the estimated number of these services reduced by participation in the Health Families Pilot Program.

[2] For Food Stamps, AFDC, and AHCCCS, the cost is per person, per day. For Child Protective Services, cost is for the applicable service. For immunizations, the cost is the estimated savings from immunizations based on cost savings provided by the Center for Disease Control.

[3] Cost for AHCCCS is the middle estimate of benefits. Three estimates are made based on different assumptions about the number and age of family recipients. The high and low cost estimates are $17.85 and $11.05, yielding total high and low savings of $1,110,898 and $687,699.

[4] An average benefit for immunizations at 2 months, 4 months, 6 months, and 12 to 15 months.

Source: "*Cost Benefit Analysis of the Arizona Healthy Families Program,*" Early Intervention Research Institute, Utah State University.

Agency Response

ARIZONA DEPARTMENT OF ECONOMIC SECURITY
1717 W. Jefferson - P.O. Box 6123 - Phoenix, AZ 85005

Jane Dee Hull
Governor

Dr. Linda J. Blessing
Director

Mr. Douglas R. Norton, CPA
Office of the Auditor General
2910 North 44th Street, Suite 410
Phoenix, Arizona 85005

Dear. Mr. Norton:

Thank you for the opportunity to respond to the recently completed audit of the Healthy Families Pilot Program.

I am pleased that your findings indicate that the program truly benefits the families we serve. You found that the program appears to reduce child abuse and that families participating in the program have a more positive nurturing home environment, increased immunization rates, appear to move toward self-sufficiency, and rely less on public assistance, all as a consequence of the Healthy Families program.

Even though your report states that the long-term benefits of the program could not be calculated, the department was gratified to see that the investment in the Healthy Families program had already recouped almost $3 million in the short-term. Additionally, we believe other quantifiable short-term benefits exist. I have included a listing of other short-term benefits that are being realized by the state in the enclosed response.

Given what is known about the long-term consequences of child abuse and neglect, preventing abuse reaps substantial future savings through reductions in the cost of health care, crime and delinquency, and the need for special education. Although difficult to quantify, additional savings are realized through increased benefits to society by way of higher productivity and increased academic achievement as well as wage and tax revenues from those who are the beneficiaries of the program. Included in my response is information from national studies as to the long-term cost benefits of prevention programs.

We certainly know that raising healthy children will save money, however, we also know that such initiatives often take years to show results. The Healthy Families Program should be compared to an investment wherein savings grow over time. Continued funding will allow this program to prove that it will save money in the long run, because it will assist families in raising healthy productive children.

We agree with all four findings contained in the report. The recommendations pertaining to each finding will be implemented as discussed in our accompanying response.

Finally, please accept our appreciation for the time and effort invested in this important evaluation. We wish to specifically recognize Elizabeth Holtzapple for her hard work during the evaluation process.

Sincerely,

Linda J. Blessing

Enclosure

DEPARTMENT OF ECONOMIC SECURITY
RESPONSE TO THE
HEALTHY FAMILIES PILOT PROGRAM EVALUATION

FINDING I: Healthy Families Appears to Reduce Child Abuse. However, Results Vary By Type of Participant and Length of Enrollment

The Department agrees that the program appears to reduce child abuse and neglect. The report states that almost 95 percent of the families who received some services from the Program are free of substantiated Child Protective Services (CPS) reports of abuse or neglect. Additionally, almost 97 percent of families who received at least 6 months of services had no substantiated CPS reports. Also, the Child Abuse Potential Inventory (CAPI) assessment tool showed that there was a decrease in a parent's risk of abusing their child.

The finding of the Auditor General is agreed to and the audit recommendation to develop measures of child abuse recidivism to allow for an adequate assessment of the impact of Healthy Families services on families with a history of abuse and neglect will be implemented.

The audit recommendation to require contractors to provide families with very high-risk levels a higher intensity of services, including more frequent visits and more extensive referrals to other direct services will be implemented. This requirement will be written into the provider's contract. The program currently utilizes a case weighting system which allows for very high risk families to be weighted heavier; thus, allowing the Family Support Specialist time to visit the family more frequently than once per week.

The audit recommendation to require contractors to provide those families with a history of abuse and neglect with a higher intensity of services, including more frequent visits and more extensive referrals to other direct services will be implemented. As stated above, the current case weighting system in place allows Family Support Specialists to spend more time with these families to better meet their needs.

The audit recommendation to focus staff training on engaging and retaining families in the Program to fully achieve hoped for outcomes will be implemented. Staff currently receives training on engaging and retaining families in the program and this training will continue. Staff recognizes that families must remain actively involved in the program to receive the benefits it has to offer.

The audit recommendation to continue to emphasize identifying and addressing abuse and neglect at the Healthy Families Institute's semi-annual training programs will be implemented.

DEPARTMENT OF ECONOMIC SECURITY RESPONSE TO THE HEALTHY FAMILIES PILOT PROGRAM EVALUATION

FINDING II: Healthy Families Shows Some Success at Improving Home Environment

The Department agrees with the Auditor General that the program has a positive impact on the families' home environments, increasing their nurturing and reducing children's risk of neglect. Program families showed improvements in all six assessment categories on the HOME scale: mother's responsiveness to her child, acceptance of the child, organization of the home environment, appropriate play materials, maternal involvement, and variety in daily stimulation.

The finding of the Auditor General is agreed to and the audit recommendation to continue to focus Healthy Families services on improving parent-child relationships will be implemented.

The audit recommendation to require contractors to provide social service referrals for participants who have needs for individual or family counseling will be implemented.

The Department supports the audit recommendation for the Legislature to consider changing the Program goals of strengthening family relations and promoting family unity to the goals of strengthening parent-child relations and unity.

FINDING III: Healthy Families Improves Children's Health Care and Development

The Department agrees with the Auditor General that the program has a higher than average immunization rate for program children, that the program identifies children that have developmental delays so appropriate referrals can be made, and that 99 percent of program children had a medical "home" (health care provider) at 12 months of age.

The finding of the Auditor General is agreed to and the audit recommendation to require the use of the Ages and Stages Questionnaire or a similar assessment as part of program service delivery will be implemented.

The audit recommendation for DES to continue to require family support specialist to encourage participants to find medical homes for their children and to have them appropriately immunized will be implemented.

DEPARTMENT OF ECONOMIC SECURITY
RESPONSE TO THE
HEALTHY FAMILIES PILOT PROGRAM EVALUATION

FINDING IV: Healthy Families Participants Rely Less on Public Assistance

The Department agrees with the Auditor General that the program participants are less likely to rely on public assistance programs and receive benefits for a shorter period of time.

The Department agrees with the Auditor General's recommendation that DES require program staff to continue their efforts to help participants develop their self-esteem and refer families to social and job services, in order to improve their self-sufficiency will be implemented.

STATUTORY ANNUAL EVALUATION COMPONENTS

F.6. Establish the long-term savings for providing early intervention services established in the Healthy Families Pilot Program.

The Department agrees that the calculated short-term benefits is at least $2,972,969 over a two-year period. The Department believes this study could have included additional short-term cost savings. Examples of additional cost savings categories are:

PER CHILD

- Savings for medical costs of injuries due to abuse
- Direct & indirect savings related to fully immunized children

PER CHILD

- Savings for the Comprehensive Medical & Dental Program
- Savings for Court Appointed Special Advocate Program
- Savings related to the Foster Care Review Board

In addition to the above short-term cost savings, there are cost savings for judges, Assistant Attorney's General, and court appointed counsel for children in foster care.

More important than the short-term benefits are the long term-benefits to be realized by this program. Even though long-term benefits are extremely difficult to quantify and even though existing studies do not specifically address Arizona's Healthy Families

model, some studies have shown that child abuse prevention programs save money. A cost benefit study conducted by the National Committee to Prevent Child Abuse found that for every $3 dollars spent on home visitation programs, $6 dollars for child welfare services are saved in areas such as special education, medical care, foster care, counseling, and housing juvenile offenders[1].

During one year in Michigan over $823 million dollars were spent on the long- and short-term consequences of inadequate prenatal care and child abuse. An in-depth 1990 Michigan study[2] on the costs of child abuse found the following:

- Low birthweight babies cost the state over $255.9 million dollars
- There were 16 deaths that cost the state of Michigan $430,992 in lost tax revenue
- The medical costs due to child abuse in Michigan were $4.98 million dollars
- Michigan spent $6.46 million dollars for special education services delivered to child maltreatment victims
- The Protective Service expenditures in the area of child abuse was $37.9 million dollars
- Michigan spent $74 million on foster care placement on children affected by child maltreatment
- It would cost Michigan $207 million dollars annually to incarcerate children from abusive households who become involved in juvenile delinquent behavior
- Adult criminality related to child abuse costs Michigan $174.65 million dollars
- Psychological care of maltreatment victims cost $16 million dollars

The Department believes that ongoing funding of the Healthy Families program will continue to show both short- and long-term cost saving benefits. Many benefits of the program cannot be calculated in dollars but are no less important. These benefits include such things as the building of a nurturing home environment, creating a healthy lifetime bond between parents and children, promoting healthy child development, and moving families towards self-sufficiency.

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[1] Bryant, P. and D. Daro. Building a Healthy Families America System: A summary of costs and benefits. (Chicago: National Committee to Prevent Child Abuse) 1994.

[2] Caldwell, Robert A. The Costs of Child Abuse vs. Child Abuse Prevention: Michigan's Experience. (Michigan Children's Trust Fund) 1992.

Copies of these studies can be made available upon request.

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APPENDIX

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APPENDIX

Assessment Tools

Hospital Chart Screen

The Hospital Chart Screen is the initial screen of families for child abuse potential. Based on the results, families are determined not eligible for the Program or referred for further assessment by the Family Stress Checklist.

A Hospital Chart Screen is completed at the child's birth to determine if families should be screened for the Program using the Family Stress Checklist. The screen consists of 15 items that are coded as true, false, or unknown for each potential participant. The items measure a variety of factors that can contribute to child abuse, including marital status, late or no prenatal care, history of substance abuse, abortions and depression, unsuccessful abortion or adoption of the baby, and fewer than 12 years of education. The Hospital Chart Screen is completed by Healthy Families family assessment workers.

Family Stress Checklist

Results from the Family Stress Checklist determine eligibility for the Program. The Family Stress Checklist, an assessment tool developed at the University of Colorado Health Services Center, provides an indication of whether or not a family is at risk of abusing or neglecting their children. The Family Stress Checklist is an unstructured interview conducted with the families at the time of the child's birth. The Checklist provides a measure of a family's risk of child abuse and determines eligibility for the Program. The Family Stress Checklist contains 10 rating factors for which each mother and father can receive a score of normal (0), mild (5), or severe (10). The ten factor scores are summed to compute a total score. Separate scores are computed for each parent. The Family Stress Checklist is completed by the Healthy Families family assessment workers.

Child Abuse Potential Inventory

The Child Abuse Potential Inventory (CAPI) is a self-report physical child abuse screening device. The scale is written on a third-grade level and includes 160 agree/disagree items. The physical abuse scale consists of six factors: distress, rigidity, unhappiness, problems with child and self, problems with family, and problems from others. The Child Abuse Prevention Inventory also includes validity and response distortion scales.

The Child Abuse Potential Inventory is a paper-and-pencil assessment completed by participants and administered by Family Support Specialists. The Child Abuse Prevention

Inventory is meant to be administered at 3 weeks, 12 months, 24 months, 36 months, 48 months, and 60 months.

FACES II

FACES II is designed to measure family dynamics. It measures family dynamics on two dimensions, cohesion and adaptability. Cohesion is the degree to which family members are separated or connected to their families. Adaptability is a family's ability to change its power structure and role relationships. These two dimensions are combined to give a general family type score.

The FACES II is a paper-and-pencil assessment completed by participants and administered by Family Support Specialists. The FACES II was to be administered at 3 weeks, 12 months, 24 months, 36 months, 48 months, and 60 months.

HOME

HOME is an observation and interview instrument that measures the quality of stimulation, support, and structure available to children in their homes. Different forms are used for three different age groups—0 to 3 years (infants and toddlers), 3 to 6 years (preschoolers), and 6 to 10 years (elementary school age). Healthy Families Arizona uses only the first form, meant for infants and toddlers. The 0-to-3yrs form consists of six subscales measuring the following six factors of home environment—1) emotional and verbal *responsivity* of parent, *2) acceptance* of child's behavior, *3) organization* of physical and temporal environment, 4) provision of appropriate *play materials*, 5) parent *involvement* with child, and 6) opportunities for *variety* in daily stimulation.

The HOME is completed by Healthy Families family assessment workers. HOME observations are meant to be completed at 6, 18, 30, 42, and 54 months.

ASQ (Ages and Stages Questionnaire)

ASQ is a parent-completed, child monitoring system. The questionnaire can be administered 11 times until the child turns 4. However, depending on program needs, it can be administered fewer times. In the case of Healthy Families Arizona, we decided to use the questionnaire 8 times.

The questionnaire addresses the following five areas of child development: 1) Communication, 2) Gross Motor, 3) Fine Motor, 4) Problem Solving, and 5) Personal-Social.

The ASQ is cooperatively completed by Healthy Families family support specialists and participants. The ASQ is meant to be administered at 4, 6, 12, 18, 24, 30, 36, and 48 months.

Child Protective Services Reports

In order to determine the frequency and severity of substantiated and nonsubstantiated Child Protective Services (CPS) reports, lists of Healthy Families participants and comparison group families enrolled through December 31, 1996, were provided to the Department of Economic Security's Division of Children and Family Services (DCFS) staff. During February and March 1997, DCFS staff checked the CPS central data systems for the existence of reports for each client and comparison group member. A paper copy of each report found was provided to Auditor General staff who coded each report and produced an electronic file of the reports for analyses. Each report was coded for, among other things, status of findings, severity and type of finding, children involved in the incident, the perpetrator of the alleged incident, and the timing of the incident.

Public Assistance Programs

In order to determine reliance on public assistance programs, lists of Healthy Families clients and comparison group families enrolled through December 31, 1996, were provided to the DCFS staff. During May 1997, DES staff ran names and social security numbers against DES electronic data files for Aid to Families with Dependent Services, Food Stamps, and AHCCCS. For all Healthy Families participants and comparison group families, DES staff created an electronic data file that included each reliance period, including the beginning and ending dates of program reliance. The data file was provided to the Auditor General staff for analysis.

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