Healthy Families Montgomery

Years I – VI

A Longitudinal Study

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In Memorium

The authors wish to dedicate this report to the founder of Healthy Families Montgomery, the late Ms. Mary C. Jackson. Without her vision, compassion, and dedication to families, the Healthy Families Montgomery program could not have accomplished the results set forth in this report.

Mary C. Jackson
1935 - 2002

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Part I. Introduction

Healthy Families Montgomery, established in 1996, is the first Healthy Families America site established and credentialed in the State of Maryland. Healthy Families America (HFA) is a national initiative of Prevent Child Abuse America (PCA) launched in partnership with Ronald MacDonald Children's Charities in 1992. Healthy Families America also receives financial support and leadership from the Freddie Mac Foundation.

The Family Services Agency, Inc. of Gaithersburg, Maryland manages the Healthy Families Montgomery (HFM) Program, providing preventive services for first time parents and their infants in order to promote positive parenting, child health and child development, and prevent child abuse, neglect and related negative outcomes. Healthy Families Montgomery offers services to families for up to five years if necessary, providing support from pregnancy through a child's transition to school. Healthy Families Montgomery represents a collaboration between the Family Services Agency, Inc., Montgomery County Department of Health and Human Services (Public Health Services and Child Welfare Services), the Maryland Governor's Office for Children, Youth, and Families (OCYF), Montgomery County Infants and Toddlers Program (MCITP), the Montgomery County Collaboration Council (LMB), and Holy Cross Hospital. Additionally, an Advisory Board of local public and private stakeholders supports HFM in fulfilling its mission through advocacy efforts, community awareness, strategic planning, and coordination of program services within the community.

History

The initiation of the Healthy Families Montgomery program was the culmination of a collaboration between Mary C. Jackson, Director of Grants and Children's Programs at The Family Services Agency, Inc. and Horace (Bud) Bernton, M.D., the President of the Board of the Primary Care Coalition of Montgomery County. Their shared vision to stave off the rising numbers of child abuse and neglect and the reported successes of the Healthy Families model on maternal and child health, parenting and family support, and the prevention of child abuse and neglect led Ms. Jackson to attend the 1995 Healthy Families America Conference in Chicago. Contact made with Desiree Griffin-Moore from Freddie Mac Foundation at that conference prompted the development and subsequent funding of a proposal from the Foundation to the Family Services Agency, Inc. in Gaithersburg, Maryland. With the establishment of Healthy Families Montgomery and the simultaneous award for the first Early Head Start program as a result of Ms. Jackson's initiative in 1995, the Family Services Agency, Inc became pioneers and leaders in the provision of home visiting services to high-risk families. The two home visiting programs were initially structured to be managed by the Early Head Start Program Director. However, the underlying differences between the two models in terms of eligibility, required program practices and performance standards, staff training and qualifications, and program emphasis resulted in a separation of the two programs with discrete program managers and staff. In fact, the Clinical Supervisor of the Early Head Start program, Janet Ceasar, M.A., M.S., was hired as the first Healthy Families Montgomery Program Manager and remained with the

program for its first five years. Notably, over the past six years, the Healthy Families Montgomery and Early Head Start programs have sustained a strong partnership through shared resources, trainings, and a joint parenting/center-based program to support teen mothers in finishing high school.

HFM started serving families in June 1996, and by the end of its first year had served 45 families in Upper Montgomery County (north of Shady Grove Road). There was no affiliation process established by the National Healthy Families America office at that time, nor was there public funding from the County or State. Initially the program received funding only from Freddie Mac and in-kind support from the Montgomery County Department of Health and Human Services. Several Community Health Nurses were trained to do screenings and assessments for the program and two Public Health Services staff were trained to become half time Family Support Workers (FSW). Thus, HFM began with one Program Director/Supervisor, two full time and two half time FSWs, with the nurses responsible for the screenings and assessments. After two years of demonstrating excellent outcomes, as documented in the Annual Evaluation Reports, HFM was awarded funding from the County and then the State, which enabled the program to serve up to 150 families at any one time. This increased capacity remained significantly below the outstanding need documented by the screening and assessment process. To date only about 11% of the families who screened positive for the HFM program have been enrolled due to the capacity limitations.

Healthy Families Montgomery initiated services to a changing Montgomery County population. As the largest jurisdiction in Maryland and historically considered affluent, Montgomery County is home to an increasingly poorer and more diverse population. Due to the tremendous growth of immigration, the County now has the largest minority population (40%) in the state and the largest Latino population in the greater metropolitan Washington DC area. There are an estimated 16,000 to 20,000 undocumented immigrants. Recognizing these population trends and the implications for social services, the founders, Ms. Jackson and Ms. Ceasar, worked hard to ensure that HFM developed into a culturally competent program that was responsive to diverse families and their needs.

The largest ethnic group served has been Latino (for most years over 60%). However, in recent years families from 27 countries were served, leading to the diversity of the HFM Family Support Workers, most of whom are Spanish-speaking and immigrants themselves. HFM has focused on alleviating many of the problems inherent to its immigrant families, such as post-traumatic stress syndrome, mental health issues, and the social isolation and acculturation difficulty that stems from limited English skills. Special emphasis has also been placed on helping these families prepare their children for entering school ready to learn.

In November 1999, HFM successfully completed the now established HFA credentialing process, attesting to its fidelity to the HFA model and outstanding program performance. Although an intense and rigorous process, HFM received a four-year credential and will be up for re-credentialing in 2003. The program has twice received awards from the Montgomery County Council for the excellence of its services to families, once with a special mention of the

cultural competence of its services. As with all other Healthy Families programs, HFM fills a special niche, which may be identified as understanding and supporting diversity.

To their credit, the founders recognized the need for an independent, outside program evaluation from the inception of the program, and for the past seven years this has been provided by Donna D. Klagholz, Ph.D. and Associates. The ongoing evaluation not only helped ensure fidelity to the HFA program model, and provision of quality services, but was also used to leverage funding.

Over the course of its six years of operation, HFM has demonstrated success in achieving fidelity to the HFA model as verified through the credentialing process; repeatedly achieved positive outcomes for children and families; and provided leadership to the Healthy Families Maryland State Initiative. These achievements were made possible by a strong program foundation and infrastructure; responsive program management; highly committed staff; and a responsiveness to evaluation findings. As a result, HFM has been able to leverage its successes into sustained political support and funding, as well as additional resources for expansion and program enhancements. Strengthening HFM's position as a pioneering force in the state is its participation in a pilot initiative focusing on school readiness and its assumption of a leadership role as statewide coordinator of training and advocacy efforts. However, the success of HFM can, in large part, be attributed to the combined vision and skills of its founders, Mary C. Jackson and Janet Ceasar.

Healthy Families Model

The Healthy Families America (HFA) Initiative was established as a collaboration between Prevent Child Abuse America and the Hawaii Family Stress Center. The Hawaii Family Stress Center is home to the 'Healthy Start' program, which was developed in 1985 and designed to provide comprehensive at-home services to high-risk new parents. Outcomes from the 'Healthy Start' program were so successful that state legislators in Hawaii earmarked funding that provided for state-wide implementation of the program. Experiences in the 'Healthy Start' program provided critical evidence of the importance of quality early childhood experiences and their impact on physical, social, and cognitive development throughout childhood. Prevent Child Abuse America looked to capitalize on findings from both the 'Healthy Start' program and 20 years of research on child abuse. They partnered with Ronald McDonald Children's Charities and in 1992 implemented the Healthy Families America Initiative.

Like the 'Healthy Start' program in Hawaii, the HFA model is centered on intensive, comprehensive home visiting services for first-time parents at risk for child abuse and neglect. The vision of Healthy Families America is simple: to offer parents the support and information they want and need to develop and nurture successful families. To that end, the primary goals of the program include 1) promoting positive parenting, 2) enhancing child health and development, and 3) preventing child abuse and neglect. This vision, while simple, has fostered significant interest in and commitment to the HFA model, allowing the program to flourish while making an

indelible impact on families across the nation. As of 2002, HFA has grown to over 450 sites across 39 states, the District of Columbia, and Canada. HFA employs over 5,000 staff members and retains the services of thousands of volunteers. Nationally, over 80,000 families are assessed each year, with 50,000 families receiving services.

The strength of the HFA approach rests largely in the strength of its model. It is prevention based, which places emphasis on identifying and correcting risks for abuse before they manifest, and it is grounded in critical elements, which are the research-based best practices that promote activities and services which optimize family functioning (***see Appendix A - HFM Logic Model***). Healthy Families America is the only program of its kind to have a formal credentialing function that reflects the quality standards and best practices delineated in the critical elements and used in program services. Moreover, Healthy Families America is founded on research and evidence-based findings to continually inform and improve program practice. There is strong dedication to staff training, development, and supervision, resulting in a comprehensive and rigorous approach to confronting and eliminating child abuse through means that empower families and communities.

Part II. Methods

Healthy Families Montgomery is the longest-running Healthy Families (HF) program in the State of Maryland and, as such, possesses valuable information and insight into the strengths and weaknesses of the home visiting model. While the HF model promotes positive parenting in order to both minimize child abuse and neglect and ensure optimal child development, few opportunities have surfaced to examine the long-term impact of the program on child and family outcomes. Now in its 7th year of operation, Healthy Families Montgomery stands poised for such examination.

The primary purposes for conducting the Year VI evaluation were to examine trends in program impact over time, identify program practices leading to successful outcomes, and determine critical dosage levels affecting outcomes. A particular focus was on the impact of the HFM program on school readiness. Conclusions drawn from the *'The Future of Children,'* a report conducted by the David and Lucile Packard Foundation in 1999, suggested that there is tremendous variability in program implementation and dosage across home visiting programs like Healthy Families. The corollary has been a difficulty consistently demonstrating successful outcomes in research on these programs. Such findings make it critical to establish what program practices and dosage levels are effective in producing change among at-risk populations so as to better represent the viability of home visiting programs in promoting healthy development in children.

To that end, research methodology and data analysis procedures employed for the Year VI evaluation strayed from the previous years' approach to include aggregate data analyses of participant demographics and performance on outcomes. Annual reports conducted previously for the Healthy Families Montgomery program followed a standard evaluation protocol that focused exclusively on analysis of discrete data elements collected and program design

modifications imposed within a given time frame. Research findings, while informative, spoke primarily to current trends and progress achieved during that fiscal year. In contrast, data presented here on the participant population, program implementation, and targeted goals and objectives reflect program changes and response patterns that have occurred since the program's inception in 1996. The ultimate goal for such an approach is the establishment of a comprehensive program profile, which details the evolution of Healthy Families into a mature, highly functioning, and increasingly powerful family service program in Montgomery County and the State of Maryland.

As in previous evaluations, participant data was collected on the entire sample and updated for each year of enrollment. Outcomes data collected during the current year and previous program years was done so using a pre-test/post-test research design without comparison group. Trained Family Support Workers administered measures according to a formalized schedule of assessment, including baseline (within 60-90 days of enrollment or birth of the baby), 6 months, 12 months and annually thereafter, and submitted all tools to the Evaluation Team for scoring and quality assurance. As with previous years, the research sample was comprised of families receiving eight or more home visits. Participant information (demographics, risk factors, screening and assessment) is presented on all families for which data was available, regardless of length of time in the program.

In order to report on research sample data in aggregate form, a *Repeated Measures* analysis procedure was used on the following measures (see ***Appendix B*** for detailed descriptions of the standardized measures):

- HOME Inventory (HOME) – standardized measure designed to assess, through observation and interview, the quality of the home environment
- Knowledge of Infant Development Inventory (KIDI) – non-standardized measure designed to assess knowledge of parent practices, developmental processes and infant norms of behavior
- Parenting Stress Index (PSI) – standardized measure designed to assess the degree to which parents are feeling stresses in their parent role
- Center for Epidemiological Studies – Depression (CES-D) – standardized measure designed to assess mother's depression post-partum
- Safety Checklist

Repeated Measures analysis examines performance on a given measure across multiple time points. When collapsed across all participants who received eight or more home visits, the results profile rates of change in parenting skills, knowledge of child development, stress, social support, and knowledge of home safety incurred while enrolled in the program. Repeated Measures analysis is particularly useful in that it can provide an accurate profile of performance with only a few time points (in this case, there are 4). It also speaks directly to a goal of this report, which is to identify critical dosage levels for affecting change in family status.

In addition to the univariate analysis described above, *Covariate Analysis* and *Multivariate Analysis* were also performed to investigate potential relationships among various

outcome measures as well as with program variables (i.e. dosage) and participant characteristics, such as initial risk status or demographics. This type of analysis investigates mediating effects such as the impact of the amount of service (dosage) or mother's risk level at entry on outcomes. Finally, an analysis of the characteristics of successful participants was conducted to develop a profile of the type of participant with whom the HFM program may be most successful.

Methodology for the examination of school readiness outcomes followed a different course. A two-pronged approach was implemented that would address the readiness of current participant children as well as a retrospective analysis of former participant children who are currently in kindergarten or first grade. The assessment of HFM current participant children involved the administration of two developmental tools, the DIAL-3 and newly piloted Ounce Scale. Results of this process are summarized in the Outcome section of this report and a detailed report can be found in ***Appendix C***. In order to assess former participant children, a partnership was established with the Maryland State Department of Education (MSDE) to access, in aggregate form, readiness scores collected using the Maryland Model for School Readiness (MMSR), the statewide readiness measure administered to all children entering kindergarten. Procedures were established to secure confidentiality, report total and breakout scores by domain and participant characteristics, and to establish a matched sample with whom to compare HFM participant children. Due to the length of time required to establish these procedures, results were not available for this reporting.

The next chapter reflects changes that occurred in program implementation and an assessment of longitudinal outcomes. The Program Implementation section includes data that identifies general trends in screening and assessment procedures, as well as changes in staffing, demographic composition of the program, and the risk levels of participants at enrollment. The Longitudinal Outcomes section reveals trends in achievement of program goals and objectives as well as findings related to program impact.

Part III. Results

A. Program Implementation

Program Description

Originally designed to reflect the Healthy Families America program model, the HFM goals and objectives have remained fairly constant over the past six years (***see Appendix D-HFM Goals and Objectives***). With a focus on parenting, child health and development, and the reduction of psychosocial risk factors associated with child maltreatment, the original goals, objectives, and outcome indicators have easily superceded subsequent Maryland State, Montgomery County, and HF Regional Consortium goals and objectives over the tenure of the

program. The corollary activities which comprise the HFM program implementation are derived from this extensive and ambitious series of objectives.

As with the goals and objectives, a continuous thread over the past six years and the centerpiece of the program is the intensive home visiting component implemented by well-trained, closely supervised, and highly committed paraprofessionals. These Family Support Workers (FSWs) are representative of the communities and populations they serve, enabling them to establish rapport with these high-risk families and comprehend the range of issues that these families confront on a daily basis. Through home visits, FSWs engage families in a range of activities to meet their evolving, individual goals and needs which are represented in the Individual Family Support Plan (IFSP). The use of culturally competent home visiting as a strategy to achieve program goals is highly effective because it eliminates multiple barriers, such as social isolation, transportation, child care, language and cultural issues, and trepidations associated with institutions. Home visiting services include parenting education, health education (i.e., immunizations), support for enhanced family functioning, developmental screenings, and child development activities, particularly those linked to school readiness. Family Support Workers help to foster healthy parenting practices by sharing parenting information, role modeling, and offering direct feedback to families through the use of videotaped parent/child sessions. FSWs also seek to empower families by facilitating linkages with primary health care providers and other community resources, parental skills development (i.e., Parents As Teachers Curriculum); community referral, and education/support regarding child development, basic care skills, healthcare information (i.e. immunizations, well-care visits, medical provider, etc.), discipline strategies, and home management.

The success of the HFM program is predicated largely on the intensity and consistency of the relationship that develops between the FSW and the family. Family Support Workers visit each prenatal mother twice monthly until the mother is within two months of delivery. She is then visited once weekly for a minimum of one hour. Weekly one-hour visits continue for a minimum of six months after the baby is born. If the parenting relationship and the family situation is strong, the visits may be reduced to bi-weekly or, later monthly, as families progress through service levels (***see Appendix E - Service Level Descriptions***). At any time during a family's participation in HFM, visits can be weekly, or more than weekly, if circumstances require it. The flexibility afforded by the service levels allows families to move at their own pace and receive a higher intensity of service if crises arise. Also, it establishes clear and consistent criteria for service provision which decreases variability in implementation.

Because the HF model is designed to provide high quality intensive home visiting services, there are also strict criteria regarding caseload size. Smaller caseloads allow workers to better focus their efforts at building rapport, assessing family strengths and needs, and addressing the range of issues that these high-risk families face. At HFM, each FSW carries a caseload of about 12 families with a maximum caseload weight of 24. The size of the caseload for HFM reflects factors such as the complexity of family issues, whereas the caseload weight is determined by the leveling. HFM's caseload weight has been lower than other Healthy Families sites due to geographical distance and the caseload acuity.

In addition to home visits, the HFM program offers families opportunities to participate in a range of group socialization activities, such as a New Mom Support Group, Early Literacy Learning Parties, Father-focused groups, nutrition and cooking classes, health education workshops, graduation celebrations, and annual picnics. On many of these occasions, HFM teams with sponsors and/or stakeholders from the local area to conduct special activities for parents and children.

In the first two years of program implementation, HFM focused its efforts on core program components, fidelity to the model, and building infrastructure to assure quality. Once these systems were in place, HFM expanded program capacity and enhanced the core model with a fatherhood program, a child development specialist, topical support groups, and partnerships with mental health (i.e., Child Center; Adult Services), school system (i.e., Judy Center; Even Start), and health organizations. Expansion efforts were in direct response to evaluation findings which documented an enormous number of high risk families in Montgomery County in need of HF program services. Additionally, sustained levels of maternal depression, parental stress, and the high incidence of teen mothers in the program led to the initiation of program enhancements to address these issues. The HFM program has continually adapted its core program model to the evolving needs of the high-risk population it serves. As such, HFM has found it necessary to strengthen its child development component in order to prepare children to be ready for school. This was in response to an increasing number of families with parents of very low educational achievement, limited English proficiency, and low economic status, all of which are negatively associated with school readiness. Additionally, due to the comprehensiveness of services offered by the HFM program, it has become the program of choice for the highest risk families in the County. Over the past six years, HFM has seen an increasingly greater number of families referred and enrolled with multiple risk factors, including severe mental health, substance abuse, and/or health and developmental impairment. This has placed an incredible burden on HFM, which as a prevention program utilizing paraprofessionals, is not equipped to provide the intervention services that these families require (i.e., substance abuse rehabilitation, therapy, etc.). However, HFM has responded to these challenges by aggressively pursuing funding and establishing linkages to provide, for example, expert mental health consultation, child development expertise, and a fatherhood specialist. An additional challenge for the program has been increased expectations of the model's capacity. As a prevention program and in accordance with the HF model, HFM limits its eligibility to first time parents. However, HFM has been requested to enroll families with multiple children. Although a tribute to the recognized credibility and successes of the HFM program model, it nevertheless compromises the ability of the program to effectively provide prevention services to the maximum number of families successfully. The highest risk families and families with multiple children typically have a complex constellation of risk factors that require intensive services from a range of professionals. Therefore, HFM has steadfastly limited its enrollment to first-time parents only, supporting the development of a continuum of universal services in the community to meet the needs of multi-risk families..

The HFM program continues to stretch its resources and staff to accommodate its increasingly complex participants. In fact, they have recently submitted a proposal to fund a mental health specialist to provide therapeutic services in the home with some of the program's

highest risk families. The challenge for HFM is maintain fidelity to the HF model and the program integrity that has resulted in successful achievement of outcomes, while remaining flexible enough to respond to evolving participant needs and decreasing community resources.

Staffing

Healthy Families Montgomery implements its program utilizing highly trained paraprofessionals who are closely supervised by clinical staff. The program is acutely aware of the need to be culturally sensitive and linguistically competent when working with its families. Therefore, staff characteristics parallel the cultural and linguistic characteristics of the program population. A large percentage of program families are immigrants from Latin and South America and speak Spanish as their primary language, or have limited English proficiency. Many of the staff have been recent immigrants themselves and are bilingual.

The staff of HFM has grown and evolved over the past six years in response to program expansion and the needs of the participant population. In its first year of operation, the program supported 6.5 staff positions, expanding to a high of 27 positions during Year V. At the close of Year VI, the staff consisted of 17 employees. The most significant increase in staffing occurred during Year IV, when the program doubled its capacity. In addition to hiring new FSWs and Clinical Supervisors, a team of specialists was hired, including a registered nurse, an Early Intervention Specialist, and a DADs Coordinator. Major staffing changes, however, occurred the following year. Midway through Year V, the original Program Director left after 4½ years with HFM. Additionally, a total of 10 other staff members departed, including six FSWs, the Early Intervention Specialist, the DADs Coordinator, a nurse, and a Supervisor. Six of these positions were subsequently filled at various points during Year V. ***(See Appendix F- Staff Tenure Years I-VI)***

Screening and Assessment

To date, Healthy Families Montgomery has relied largely on health centers operated by the Maryland Department of Health and Human Services for participant referrals. Specifically, health centers located in Germantown, Piccard, and Silver Spring, conduct the bulk of screens for the Healthy Families Montgomery program, as they are the initial points of entry for the majority of pregnant women throughout the county in need of government health assistance for themselves and their unborn babies. A much smaller number of screens are completed on women who utilize other public and private health providers for prenatal care and delivery.

Women who screen positive for the HFM program (i.e., teen pregnancy, self-report of depression or history of abuse) are asked to undergo an additional level of assessment. The C.H. Kempe Family Stress Checklist (FSC) is an in-depth measure designed to assess risk on ten domains, including substance abuse, self-esteem and depression, as well as perceived expectations about childrearing and bonding and attachment. A trained Healthy Families staff member, Family Assessment Worker (FAW), administers the FSC to all eligible women. Women who score at or above 25 are considered at risk and are recommended for services.

Table 1 below highlights screening and assessment data across the last six years of the Healthy Families program. Such data was not tracked consistently during the first two years of the program and therefore could not be included in the totals. As can be seen in the table, an overwhelming number of women who pass through local health centers screen positive for risk. Screens conducted the last four years alone have identified over 3,000 first time mothers in need of family support services for themselves and their new child. Such an index reflects strongly on the critical level of need throughout the county.

Even more alarming, however, are the number of assessments completed for all positive screens. While Healthy Families Montgomery program staff have done an outstanding job of enrolling nearly all woman (93%) who present with positive assessments for moderate to severe risk and have worked tirelessly to increase program capacity every year, their efforts are only benefiting a small number in need. Indeed, across the last four years, only 11% of all positive screens were followed up with an assessment and enrolled in the program. Historically, Healthy Families Montgomery would not assess clients for enrollment unless they had adequate space and resources to provide services. Rather, they worked in close collaboration with referral agencies and partners to find social service programs throughout the county that can provide immediate assistance. More recently, HFM has stepped up efforts to complete assessments on as many families as possible who have scored a positive screen. This assists the program in identifying specific areas of outstanding need in the County, critical information for local legislators and policy-makers.

Table 1. Screening and Assessment Data by Year and Aggregate – Year I through Year VI

Year*	Total Positive Screens	Total Assessments Completed	Total Positive Assessments	Total Negative Assessments	Total Enrollments	Total Refusals	Program Capacity
Total (Yrs I-VI)	**3,293**	**368**	**344**	**24**	**319**	**17**	**150**
YEAR VI	854	146	127	19	116	10	150**
YEAR V	828	63	60	3	50	3	160
YEAR IV	824	110	108	2	104	4	150
YEAR III	787	49	49	0	49	0	75
YEAR II (6mos)	393	-	-	-	54	-	75
YEAR I	-	-	-	-	45	-	50

* Screening and Assessment Data from DHHS incomplete for Years I and II of the program-Not included in Totals.

**Due to the number of families at a high level of risk and requiring intensive Level I services, the HFM program is necessarily limiting its current maximum capacity to 145-150 participants.

Based on the needs of the community, as well as on evaluation results, HFM acquired funding for FY '03 to step up efforts to assess more families. The huge gap that exists between positive screens and assessments completed, coupled with limited program capacity, exposes a

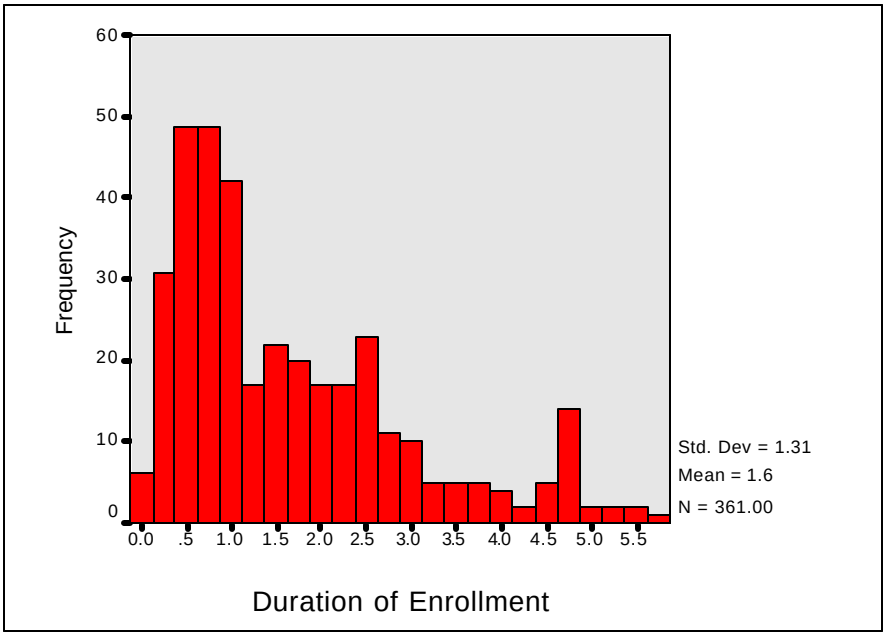
dangerous and critical trend in the county. Programs like Healthy Families are struggling to meet the needs of county residents, whose issues embody increasingly more complex psychological and social problems. As a prevention program, Healthy Families is designed to support families at-risk for abuse and neglect. However, a large proportion of program effort is directed toward families who already pose severe risk at entry. Beginning FY '03, changes in screening and assessment procedures will be instituted to achieve a more balanced risk profile and preserve the integrity of the Healthy Families program. Therefore, families who screen in the very high/severe risk range on the Family Stress Checklist can be directly referred to services designed to provide interventions targeting more serious psychological and situational conditions.

Enrollment and Attrition

While the Healthy Families program is designed to provide comprehensive, intensive home-based services up through the child's fifth year of life, recent findings have called to question the necessity of that amount of service for all participants. As a strength-based and voluntary program, HFM services are available for as long as families need them, which can be as long as five years. In fact, it is most often the highest risk families that remain in the program the longest. The HFA service leveling criteria, when implemented as designed, allows for families to receive more or less intensive home visiting depending on their progress in parenting and self-sufficiency. Despite this flexible program design, some report findings have criticized home visiting programs like Healthy Families for not retaining families for the maximum length of service, while not taking into account the varying levels of initial risk and speed at which families progress. This has spurred interest in determining appropriate dosage levels for affecting change in parenting practices and skills.

Figure 1 highlights composite length of enrollment for participants in the Healthy Families Montgomery program. As can be seen in the table, the majority of families (80%) for which data is available are enrolled in the program for up to 2.5 years, with enrollment numbers steadily decreasing after that. Average participation in the program is 1.6 years. To the extent that 2.5 years is "enough" time to promote positive outcomes will be discussed in the outcomes section of this report.

Figure 1. Aggregate Average Length of Enrollment Years I-VI



Attrition rates spanning the length of the program have always been examined in two ways. Attrition is first measured using a sample of all families ever enrolled in the HFM program. The second means of assessing attrition consists of using a sample of families active within each year of the program (including any families who enrolled in the program during a previous year and remained active in the program, as well as those newly enrolled). As can be seen in **Table 2**, the Year VI attrition rate shows only a slight increase over that of Year V. At the same time, the number of closed cases nearly doubles between Years V and VI, while the number enrolled and retained also increased. However, Years V and VI rates of attrition are significantly higher then in Year IV. This increase in attrition may have been a result of higher staff attrition during Year V. Research indicates that when a Family Support Worker leaves the program, approximately one-third of the families on his/her caseload decline re-assignment to a new worker. Additionally, clinical supervisors hired in Year V have emphasized to staff the importance of maintaining professional boundaries and referring families with severe risks to more appropriate services, as well as more strictly applying service level criteria and using the Individual Family Service Plan (IFSP) to track progress. If families are not progressing as expected, it is recommended that they be referred to alternative services that may better meet their needs. The potential impact of these events is a greater number of and more rapid process for case closures.

Table 2. HFM Attrition – Year II through Year VI

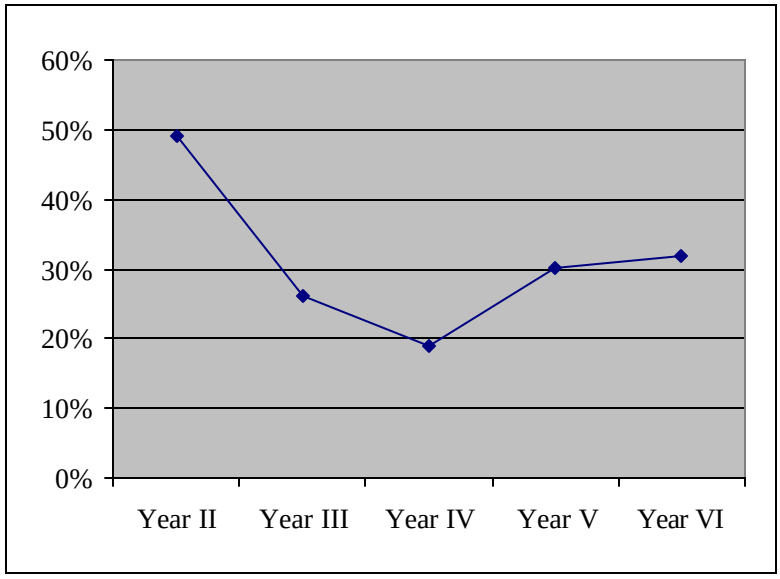
	Enrolled	Open	Closed*	Attrition Rate
Total Ever	388	140	214	55%
Year VI Active	226	140	72	32%
Year V Active	161	113	48	30%
Year IV Active	145	118	27	19%

Year III Active	110	82	28	26%
Year II Active	99	51	48	49%

*This figure does not include case closures of program graduates, transfers to other Healthy Families programs, and closures due to Full-time work.

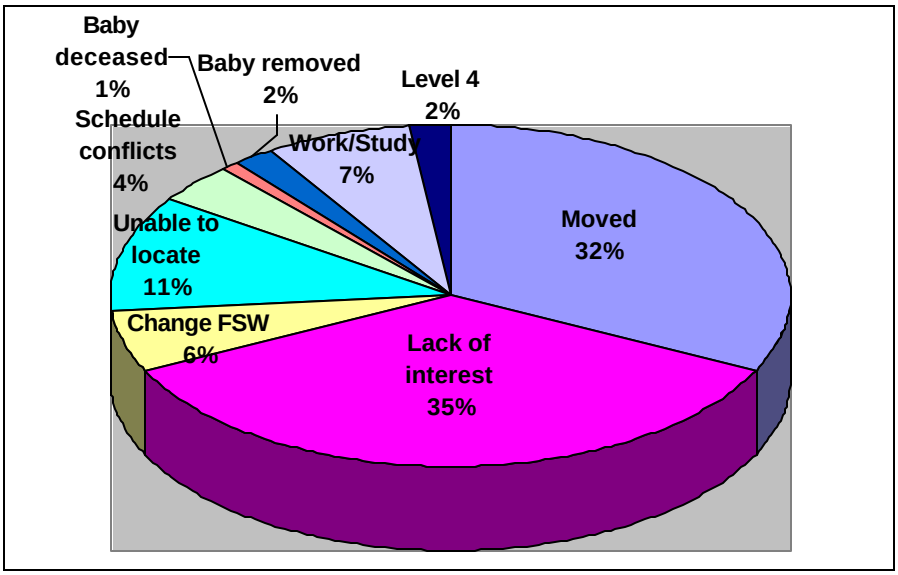
Figure 2 graphically displays attrition rates over the six years of program implementation. HFM clearly demonstrates progress from Year I in retaining families in the program and is equal or below comparable rates, which range from 30%-60% in other Healthy Families programs across the country.

Figure 2. Attrition Rates – Percentage Profile



Over the past six years, HFM graduated 17 were program families, 8 transferred to other Healthy Families programs, and 10 left the program to work full time. Of the 214 families that left the program, 7% (n=14) were on Work/Study status (indicating that they had in some measure achieved self -sufficiency), and 2% (n=5) of families were on service level 4 (the highest HFM service level before graduation). As seen in **Figure 3**, most attrition continues to be a result of a geographical move (32%) or a lack of interest on the part of the family (35%). To a lesser degree families leave due to a change in FSW (6%), while cases are closed by the program when they are unable to locate the family or contact them (11%) or due to scheduling conflicts (4%). A very small number of families are closed if baby is deceased (1%) or removed from the mother's care (2%).

Figure 3. Longitudinal Reasons for Case Closures (n=214)



Population Demographics

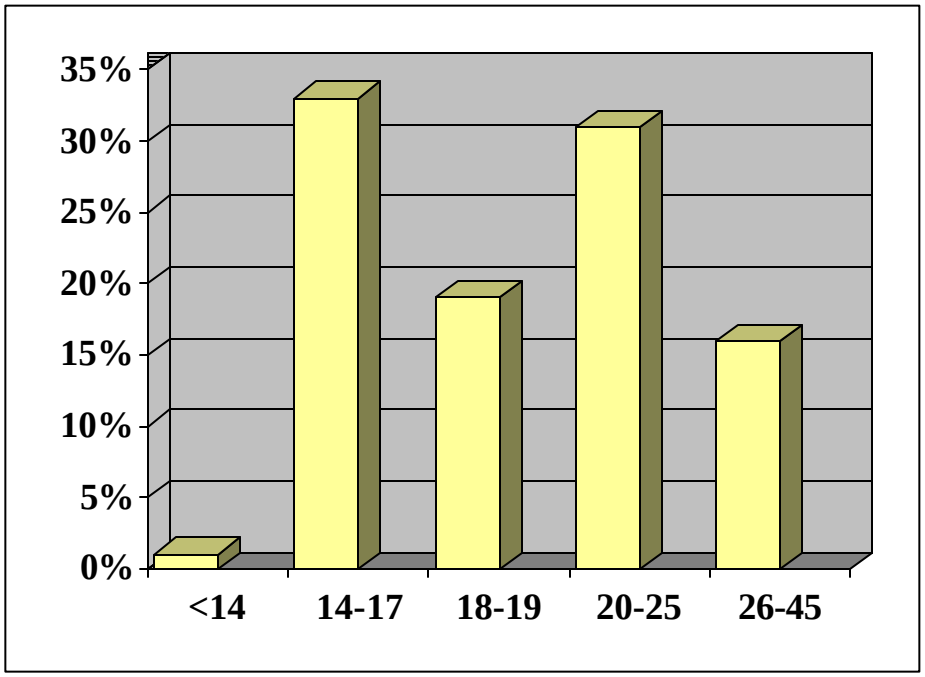
The eligibility criteria for the HFM target population has remained consistent throughout its six years of operation. HFM targets first-time parents living in Montgomery County, Maryland who are identified as being at high risk for child abuse and neglect. To be eligible for inclusion in HFM, participants must be first-time parents who are enrolled prenatally or within two weeks of the birth of a child. Participants must also be screened for risk factors and, if the screen is positive, an assessment is completed by an HFM Family Assessment Worker (FAW) utilizing the *C.H. Kempe Family Stress Checklist (FSC).* The FSC assesses the mother's/father's history and current functional status across ten domains, including substance abuse, mental illness, criminality, self-esteem, stress, violence potential, developmental expectations, child discipline, and bonding/attachment. Parents must score in the moderate to high-risk range for abuse and neglect (score =>25) to be eligible for the Healthy Families program.

Throughout the multi-year evaluation, all enrolled families were included in enrollment and attrition analyses, however, only families who had a minimum of 8 home visits were included in the outcome analyses. No other exclusionary criteria were used. The demographic information presented in this section reflects only those participants in the research sample, who have received 8 or more home visits.

Age. Data on age of mother at program entry was available for 327 out of 388 participants and is presented in **Figure 4**. This data reveals that the majority of participants enrolled in Healthy Families Montgomery were either young teens (32%) or young adults (31%), with an average age of 20.7 years. Young teen mothers were more prevalent during Years I, III and IV of the

program, comprising 34-44% of the entire sample population across those years. In contrast, older teens and young adult mothers have become more prevalent in Years V and VI, comprising 24 – 45% of the entire sample population, respectively. The range of age of participants to date is 13-39 years.

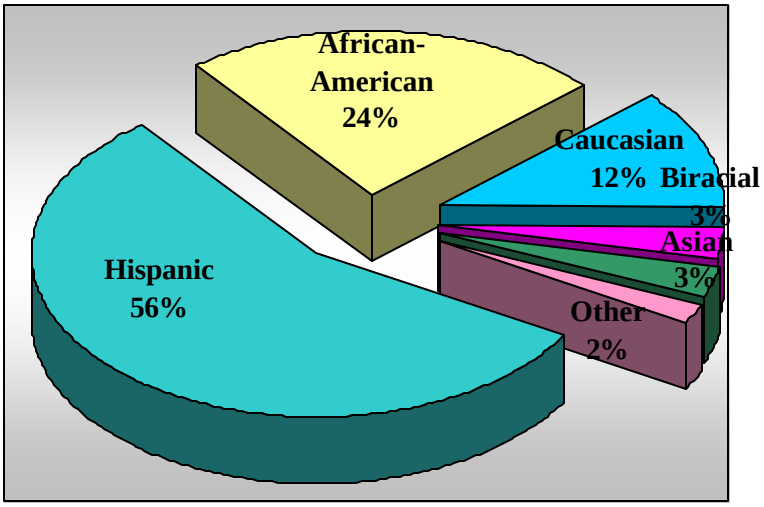
Figure 4. Mother's Age at Program Entry



Ethnicity. Since its inception, the Healthy Families Montgomery program has served a large percentage of Hispanic families. Data on ethnicity was available for 329 participants and **Figure 5** reveals that Hispanic families comprise over half the entire sample population. One quarter of participating families (24%) are African-American families, while Caucasian families comprise 12%. Interestingly, Year I of the program saw a more moderate split of Hispanic and African-American families, who represented 42% and 32% of the sample, respectively. Enrollment in Year II, however, saw Hispanic participant enrollment jump to over three times that of African-American participant enrollment and it has maintained at least a 2:1 ratio of enrollment with African-American families through Year VI.

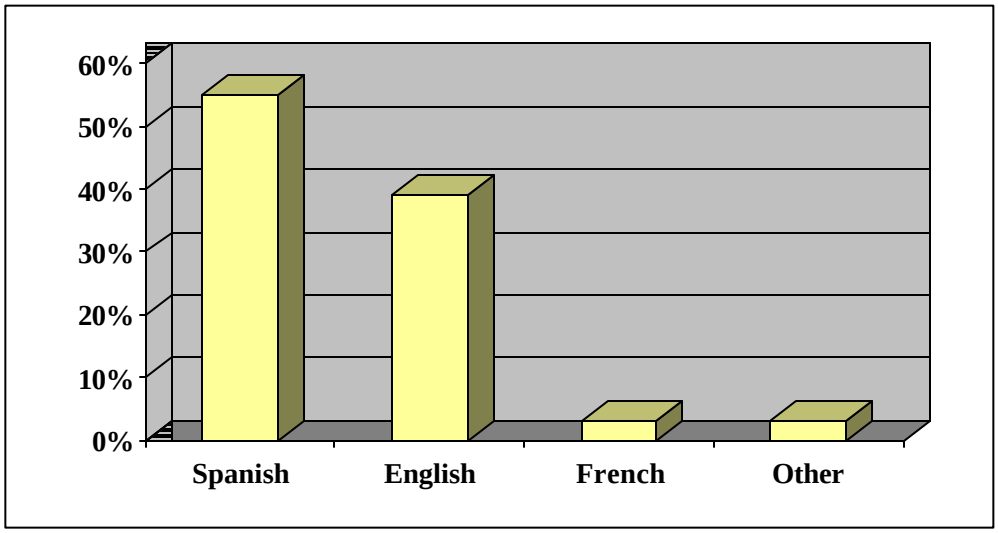
Also worth noting are changes in participant birth country over the past six years. In the first three years of the program, US-born participants comprised the majority. The last two years, however, saw a dramatic shift to a majority of El Salvador-born participants, who averaged 34% of enrollment, compared to 22% for US-born participants. No other significant trends were observed.

Figure 5. Mothers' Ethnicity



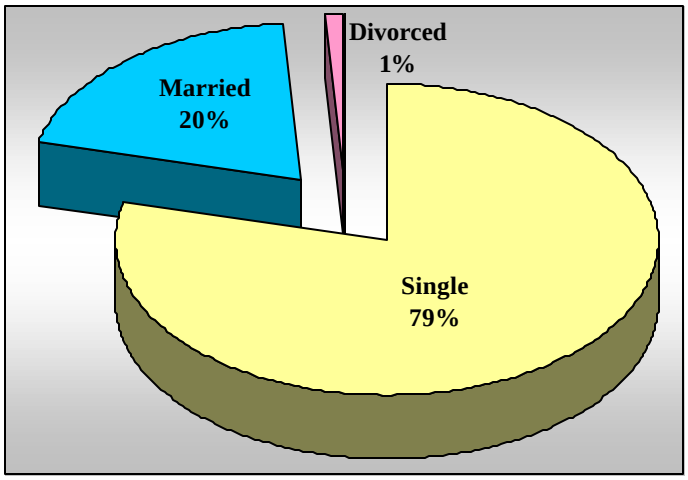
Language. Given the findings regarding mothers' ethnicity, data on participants' primary language were not surprising. Information on language was available for 327 participants, 55% of whom identified Spanish as their primary language (see **Figure 6** below). Approximately 40% of participants identified English as their primary language, while only 3% reported speaking French. It is worth noting, however, that the presence of French is likely due to small but increasing numbers of participants from African countries. Should this trend continue, the number of participants speaking French will continue to rise, posing a different kind of cultural barrier than is currently experienced.

Figure 6. Mothers' Primary Language at Program Entry



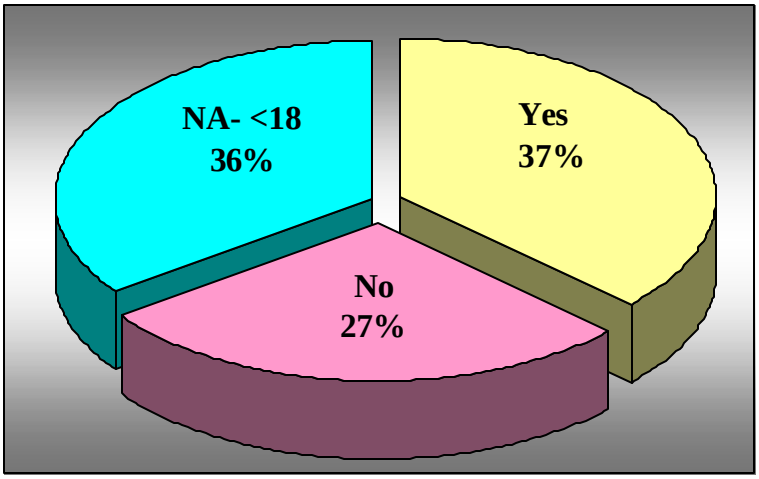
Marital Status. The marital status of participants was examined over the six years of program implementation. Data was available for 329 participants, and as can be seen in **Figure 7,** the overwhelming majority are single mothers. The trend for single marital status established in Year I has not changed over the tenure of the program, and continues to indicate a high level of risk for HFM families.

Figure 7. Mothers' Marital Status at Program Entry



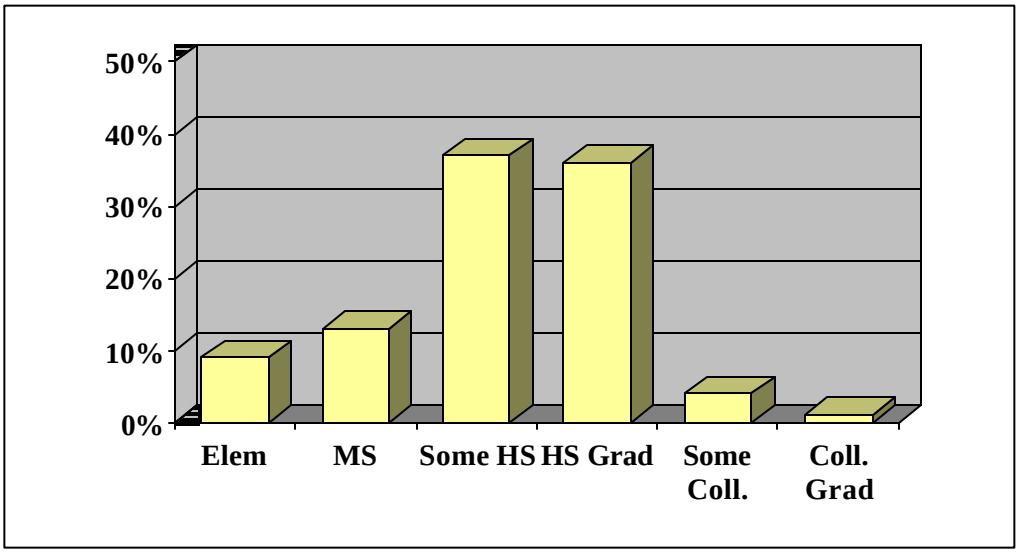
Education. Academic achievement is considered to be a critical factor in improving self-sufficiency and resiliency. Data identifying participants' educational status at program entry was available for 322 participants. As can be seen in **Figure 8,** the number of participants with a high school degree upon entry was higher than those without a degree upon entry after controlling for participants young enough to still be enrolled in high school.

Figure 8. Percentage of Mothers with High School Degree at Entry



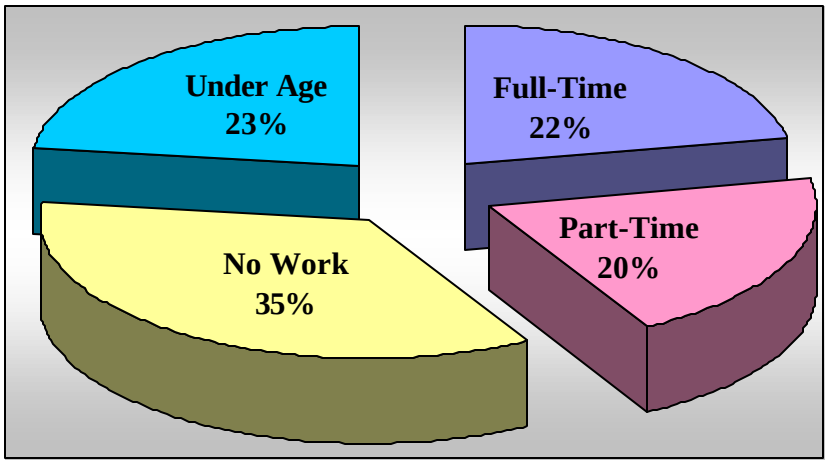
Data was also analyzed across education level for participants (see **Figure 9** below). For the 288 mothers on whom data was collected, mean level at entry was the 10th grade. The percentage of high-school level participants (36%) is not surprising, especially given the number of teen mothers enrolled in the earlier years of the program. That 41% of participants were high school graduates upon entry, including a few with some college or a full college degree, suggests increased capacity to learn and benefit from program participation. Interestingly, this percentage is largely accounted for by teens and older mothers, as a sizeable number of young adult mothers (46%) did not have a high school diploma at enrollment.

Figure 9. Mothers' Education Levels at Program Entry



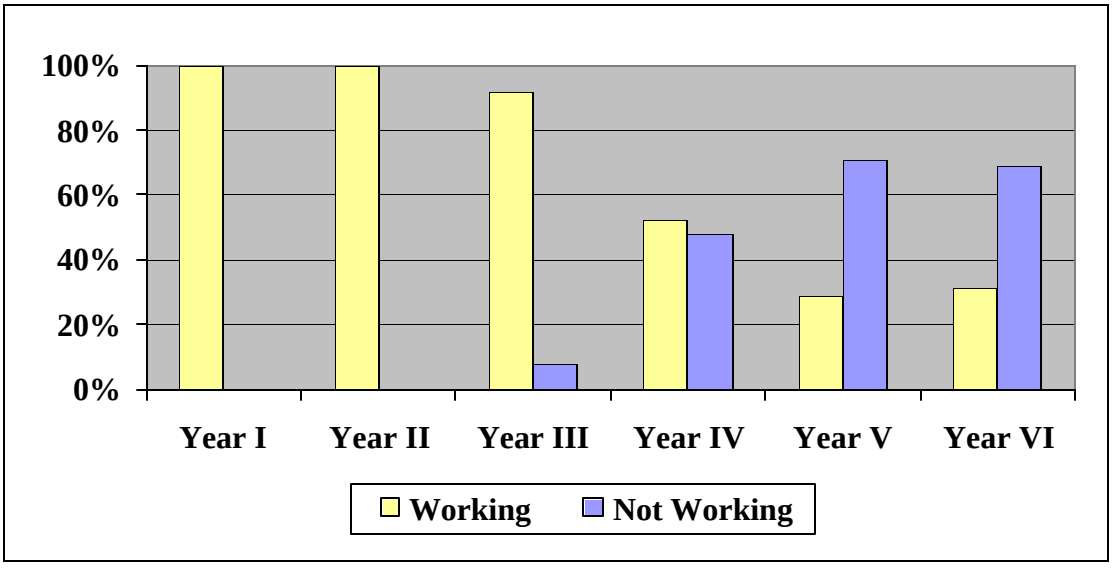
Employment. Economic independence is another critical factor that impacts self-sufficiency and resilience and, as such, is strongly encouraged in the Healthy Families program. Data highlighting participants' employment status at program entry was available for 265 women and is presented in **Figure 10.** As can be seen in the figure, percentages of mothers employed full or part-time are roughly equal at 22% and 20%, respectively. However, the number of mothers not working when they enter the program is considerable, even after controlling for teen mothers who are too young to work.

Figure 10 – Mothers' Employment Status at Program Entry



To profile trends in employment status, data was examined individually for each year of the program across participants old enough to work legally. Employment status and year of entry was available for 186 participants aged 17 or older. Data reveals a profound change in employment status among participants over the course of the program. In Year I, 100% of participants enrolled in the program were working at either full-time or part-time jobs (see **Figure 11**). By Year VI, this trend was drastically reversed, with only 31% of participants having full-time or part-time employment at entry. This trend is truly surprising, given the increasing number of adult mothers enrolling in the program in recent years. Perhaps risk factors among young and older adult mothers (e.g., substance abuse, mental health) have prevented them from securing employment or even a high school diploma, placing them at even greater risk than other members of their cohort.

Figure 11. Mother's Employment Status at Entry – Aggregate



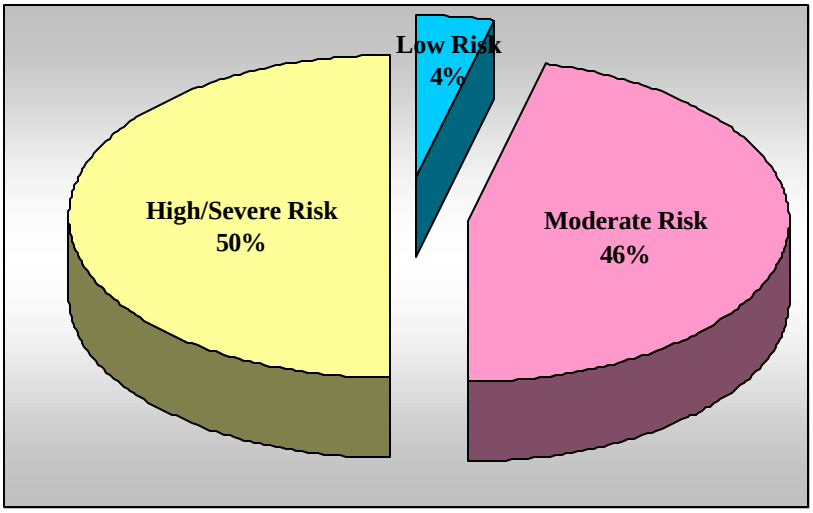
Risk Factors

In addition to examining participant demographics, Healthy Families Montgomery also examines performance on risk measures in order to determine need for services.

The C.H. Kempe Family Stress Checklist (FSC)

The FSC assesses a family's degree of risk based on factors such as history of abuse, substance abuse, level of stress, and other psychosocial elements in parents' lives that may increase potential for abuse and neglect, poor family bonding, and other important indicators of risk. Baseline risk assessment was available for 308 participants. As seen in **Figure 12** below, half of all participants are identified as being at high or severe risk at program entry. With only 4% of mothers scoring at low risk, the profile represents a very high-risk population at enrollment with a constellation of complex issues and an intense level of need. Interestingly, this level of risk has held largely constant across the six years of the program. Also worth noting is that high or severe risk is more common among young and older teen mothers (58% and 54%, respectively), as compared to young adult and older adult mothers (43% and 36%, respectively).

Figure 12. Risk Scores at Program Entry

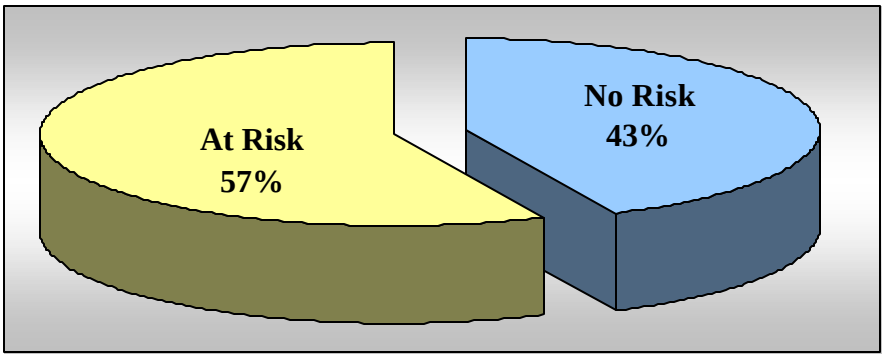


The Center for Epidemiological Studies – Depression Scale (CES-D)

The CES-D is administered to participants to determine risk for maternal depression. The CES-D is a short, standardized measure used to examine maternal risk for depression prenatally, post-partum, and at annual intervals. Program mothers who earn scores of 16 or greater are considered to be at risk. While post-partum depression is not uncommon, symptoms must be identified and monitored, as they could be indicative of clinical depression, which is highly associated with child abuse and neglect. Indices of maternal depression risk at program entry were available for 217 participants. As represented in **Figure 13**, the majority of participants (57%) scored at risk for depression at program entry, with an average score of 15 out of 20 on

the CES-D. Scores were also examined by age of mother at entry. Analyses revealed that the most vulnerable group of participants included late teen mothers aged 18-19, 56% of whom (n=34) scored at risk for depression at enrollment. No other age group presented such strong indication of depression.

Figure 13. Risk for Maternal Depression at Program Entry



Participant Profile

Composite findings on participant demographics and risk factors provide an interesting perspective on trends of a "typical" participant of the Healthy Families Montgomery program at entry. Data reveals that the typical participant early in the program was an unmarried Latino teenager that, in all likelihood had not completed high school, but who likely was employed either full- or part-time. Moreover, this typical participant was likely born in the United States, although still considered Spanish to be her primary language. While her risk for depression was moderate to severe, her chances for high or severe risk for child abuse and neglect were considerable.

The face of the more recent typical participant is somewhat different. Today's typical participant at entry is more likely to be an unmarried, Latino young adult or older adult with an increased chance of being a high school graduate, but currently unemployed. At the same time, today's typical participant is more likely to be an immigrant from El Salvador, with considerable language barriers. Risk for depression is severe, while high risk for abuse and neglect less so.

These participant profiles lend insight into the changing face of the Healthy Families Montgomery program and the lengths to which program staff have continually evolved to meet the changing face of the population. As needs and situations of families continue to change, so will services that aim to provide quality care and support for optimal child development.

Staff and Participant Satisfaction

Staff Satisfaction

The Healthy Families Montgomery Program recognizes the value of staff input and feedback on issues relating to program implementation and job satisfaction. Such information has been solicited from HFM staff annually through the use of questionnaires distributed at the close of each fiscal year. These surveys are designed to ascertain staff members' impressions of the program's effectiveness, any benefits they have received, and their level of job satisfaction.

Throughout the evolution of the program, issues about which the staff have been concerned have varied, reflecting programmatic changes. When responses over the past six years are examined, some trends emerge that reflect vacillations in morale and perception of program effectiveness. Whereas Years I, II and III saw 100% agreement that the program was responsive to the needs of the staff and that adequate supervision was provided, these percentages dropped dramatically in Year IV. At that time, responsiveness to staff needs fell to 79%, while satisfaction with supervision fell to 71%. Additionally, when staff were asked to cite program strengths, responses from Years II and III focused on teamwork and supervision, while perceived strength in Year IV shifted toward training, with staff support and supervision being more frequently cited as weak. This shift may be a reflection of diminished morale felt by the staff during a time when the program rapidly doubled its capacity, expanding from 75 to 150 families. In Year IV, the program was without a Clinical Supervisor for the first three months of the fiscal year, and a second supervisor was not hired until December. Although the program strove to make up for the shortage in supervisory positions, the decreased clinical support available appeared to have a significant impact on staff morale. As new staff members were hired to accommodate increased capacity, the concerns expressed again shifted to reflect a perceived lack of compensation for the heavy demands of the job. Although staff training and the program's family-based approach continued to be cited as strengths, low salaries and the large amount of paperwork were concerns during Year V. Additionally, while responsiveness to staff needs remained relatively constant at 80%, satisfaction with the amount of supervision rose to 93%.

Interestingly, responsiveness to staff needs dropped this past year to an all-time low of 60%, while satisfaction with supervision remains high at 93%. Moreover, the most frequently cited strength has shifted from program-centered assets to the staff itself. The professionalism, commitment, and cohesiveness of the staff, as well as strong teamwork, were cited by well over half of the respondents. It is clear that, in its sixth year of operation, the staff has grown to feel empowered and confident in their ability to connect with their families and deliver a high quality level of service. Though staff no longer cites the amount of paperwork as a burden, they continue to have concerns regarding lack of compensation. Nonetheless, they remain a strong, cohesive team committed to their families.

Participant Satisfaction

The HFM program places high value on fidelity to the HFA model as standardized for credentialing. The feedback from parents, along with home visiting information collected from program records, has consistently confirmed that the HFM program is being implemented as required by credentialing standards. With the exception of Year III, questionnaires were distributed to participants, who were asked to complete them anonymously and return them in sealed envelopes to the program. These surveys were then forwarded to the independent evaluator for summarization. In Year III, the program underwent credentialing preparations and sought participant feedback through HFA credentialing satisfaction surveys (which are mailed directly to HFA) and telephone interviews conducted by FSAI volunteers. The previous method of soliciting comments through written surveys was, however, reinstated in Year IV and has been used annually since. Another slight change in collecting satisfaction information occurred in Year V, when participants were asked to complete a supplementary survey, the Client Satisfaction Questionnaire (CSQ-8). Other than reaffirming the high level of satisfaction reported on the HFM survey, the CSQ-8 yielded little additional information of value and was discontinued this past year.

The program's adherence to quality standards and commitment to its families is evidenced in the high participant satisfaction reported each year since the program began. Over the years, parents have earnestly expressed their appreciation for the information and knowledge they have gained as a result of participation, and, most avidly, the bond that has developed between them and their FSW. This, perhaps most of all, has emerged as the single greatest factor that parents attribute to their success in the program. The support, friendship, attention, and guidance provided by the FSWs is clearly valued and appreciated by participants. Many see their FSWs as both mentors and friends and imply that this relationship has empowered them in their roles as parents, has provided them with the emotional support they are seeking as new mothers, and has resulted in their increased knowledge of child development.

General satisfaction with the HFM program has been consistently supported by participants' comments when asked how the program could be improved. Their suggestions almost exclusively reflect a desire to increase their involvement through more FSW contact, both socially and in the home visiting context. For the first time in Year VI, scheduling appeared to be a challenge for some mothers, as they had difficulty arranging home visits at convenient times that did not conflict with work. (This is interesting in light of the trend over the past four years for increasing numbers of mothers to report being unemployed.) To resolve this conflict, several suggested scheduling meetings at different times. Some mothers would like to be provided with transportation to meetings, while others suggested increasing time with their FSWs through more frequent home visits or field trips/outings together. Clearly, participating moms are extremely satisfied with the program.

B. Achievement of Goals and Objectives

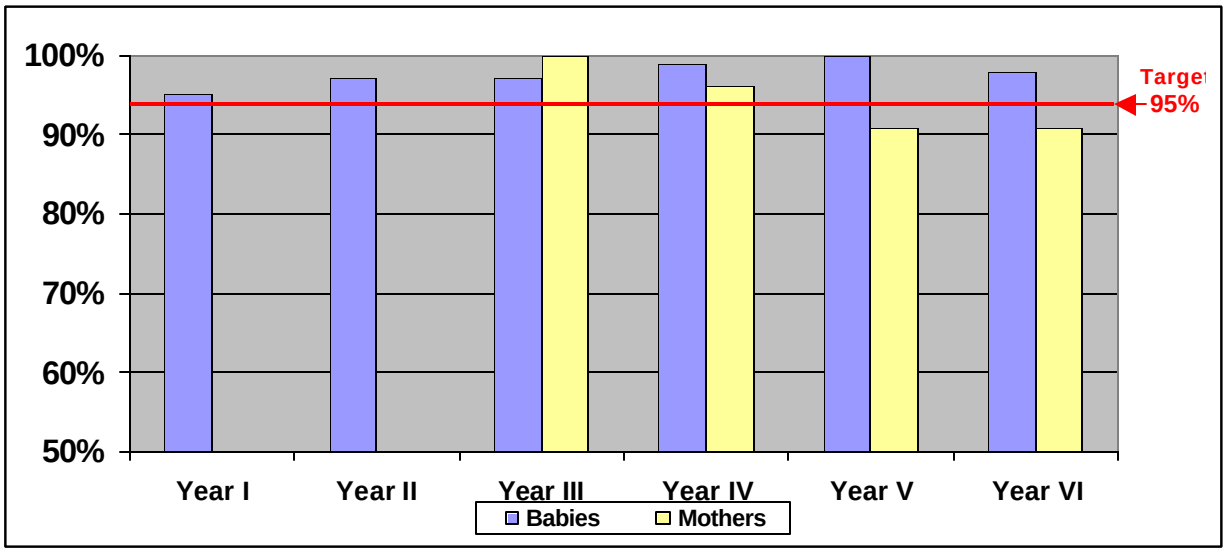
Over the past six years, the Healthy Families Montgomery Program has consistently met with success not only in achieving its goals and objectives, but also exceeding many of its outcome targets. Beginning in Year I, the goals and objectives set forth in the original grant proposal served as the main focus of the program's mission, reflecting the HFA vision. At the same time, however, several supplemental outcomes were also targeted as outlined in the independent evaluation plan developed at program inception. This expanded framework of goals and objectives was fortified further in Year V when the program incorporated ten additional objectives developed by the state of Maryland (*see Appendix D – Goals and Objectives*). This level of self-imposed rigor has been the driving force that guides HFM's efforts in sustaining its high quality of program implementation and in achieving successful outcomes for its families. **(see Tables 6 – HFM Outcomes Chart: Years I – VI; and Table 7- HFM Outcomes and Comparative Statistics)**

Goal I:Promote Preventive Health Care

A. Health Care Provider

One of the primary concerns of Healthy Families Montgomery is linkage of participating families to preventive health services, specifically Medical Assistance, private insurance, and/or primary care physicians. Over the course of six years, the program has been particularly effective in its efforts to increase both mothers' and babies' access to health care. As a result, increased numbers of babies are not only receiving well child check-ups regularly, but are also being immunized on schedule. Although primarily concerned with securing the child's health care provider, mothers have also benefited from HFM's focus on accessing medical care. Over the past four years, between 96% and 100% of mothers have been linked with a primary care or community service medical provider. Consequently, the program has consistently met with great success in the related maternal health care goals of reducing repeat births and completing post-partum care. **Figure 14** below illustrates the percentages of babies and mothers linked to health care providers for each year of program operation. Specific data on mothers was only available for Years III through VI.

Figure 14: Babies and Mothers - Access to Health Care Provider: Years I - VI

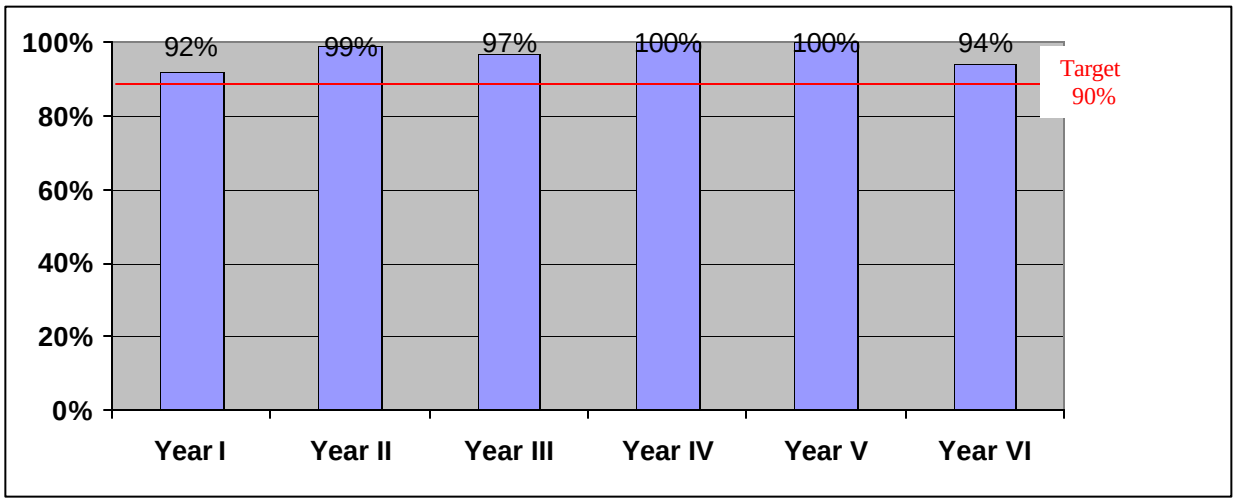


B. Current Immunizations

As stated above, the HFM program has had remarkable success in ensuring that children are immunized on schedule. Achieving this goal has been facilitated through the program's partnership with the Department of Health and Human Services and the State MCHP program. Over the past six years, the program target of 90% has consistently been surpassed, with current immunization rates ranging from 92% to 100% (**see Figure 15**). The impact of the nation's pediatric vaccine shortage is likely responsible for the 6% drop in the program's immunization rate in Year VI. While several routine childhood vaccines had been in short supply in the state of Maryland, including DTaP (diphtheria, tetanus and pertussis [whooping cough]), PCV-7 (pneumococcal conjugate vaccine), and Varicella (chickenpox) vaccine, the Centers for Disease Control and Prevention (CDC) reports that supplies are currently normalizing. Despite the return to "normal" production and distribution of most of the pediatric vaccines, the repercussions of the recent limited availability and consequent delay in administration may be felt well into next year.

The yearly immunization rates for HFM are particularly impressive in comparison to state and national figures, as each year the program's rates have superceded those achieved by both the state of Maryland and the nation. During the past six years, immunization rates for the complete series in Maryland have ranged from 78% to 79%, far below those consistently achieved by the program. Similarly, national rates have ranged from 76% to 78% for the complete series of immunizations.

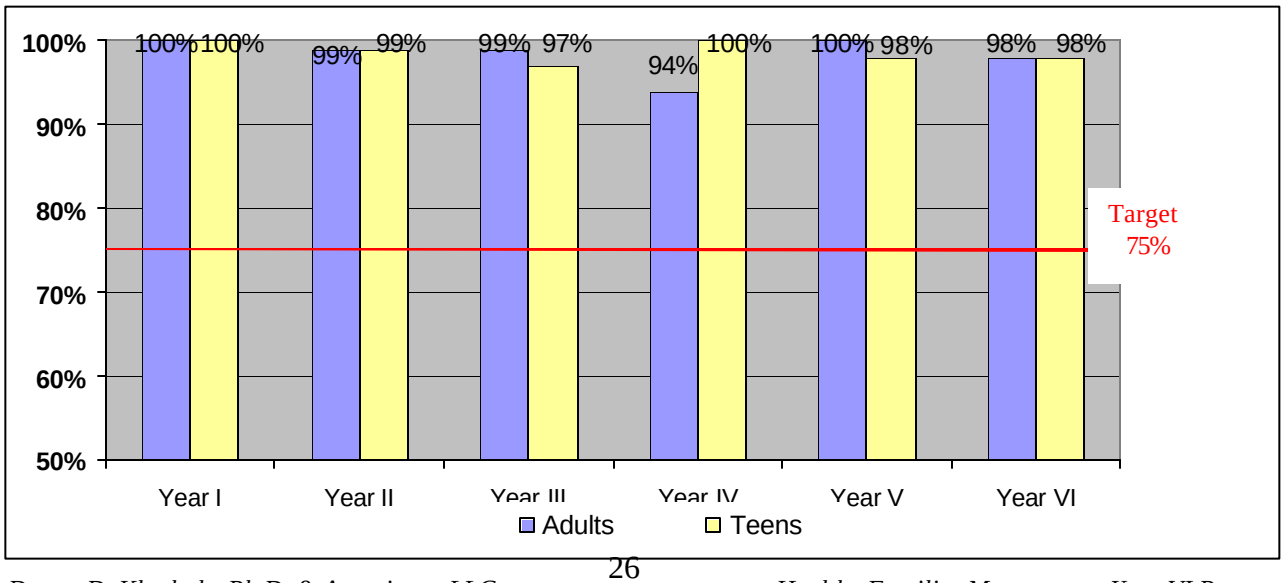
Figure 15: HFM Immunization Rates – Years I - VI



C. Additional Births

The HFM program has been successful in educating participating mothers in family planning with the goal of decreasing unwanted pregnancies. It is recommended that young mothers, particularly teens, have an interval of at least 24 months between births. Over the past six years, a total of 11 mothers had repeat births in less than the recommended 24 months. Of these, four were teen mothers. In Year VI, three mothers had additional births in less than 24 months, one of whom was a teen. Thus, HFM consistently exceeded not only its target rate of 75%, but also state and national rates of mothers having no additional birth in less than 24 months. **Figure 16** below shows HFM's performance for adults and teens for Years I - VI.

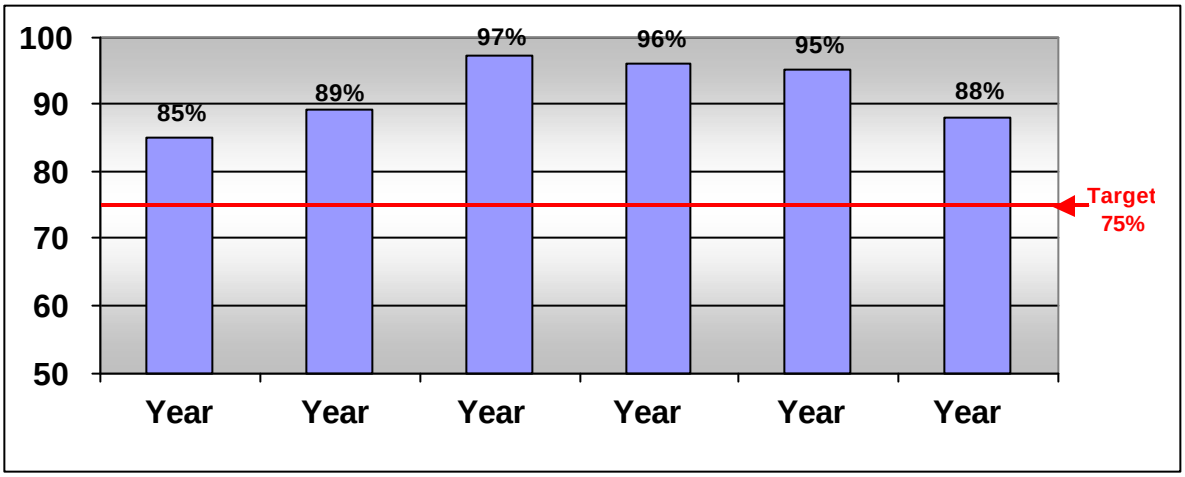
Figure 16: HFM Percentage of Mothers with No Repeat Birth < 24 Months – Years I – VI



D. Post-Partum Care

Directly related to the low percentages of repeat births is the corollary high rate of post-partum visits completed by program mothers. Increased access to maternal health care has provided mothers with important information regarding family planning. The percentages of mothers who completed these critical visits ranged from a low of 85% in Year I to a high of 97% in Year III. As seen in **Figure 17**, rates for Years IV and V were relatively stable, but dropped 7% in Year VI to 88%. Despite this decrease, the HFM program has been consistently successful in surpassing its target of 75% of mothers accessing post-partum care.

Figure 17: HFM Percentage Mothers Completing Post-Partum Care – Years I - VI



E. Healthy Birthweight

The HFM program places strong emphasis on early prenatal care and has put much effort into enrolling mothers early in their pregnancies. Most mothers, however, are typically not referred until their second or third trimester, depriving the program of the opportunity to ensure early care in compliance with ACOG standards. Despite this, however, the percentage of babies born with a healthy birthweight (>2500 grams or 5.5 lbs.) for singleton, non-premature births has ranged from 88% to 97% during the past six years. When premature infants are included, the percentage of healthy birthweight ranges from 84% to 89%.

Goal II: Optimize Child Development

The HFM program fosters optimal child development through a holistic perspective incorporating emphasis on infant and child health care, parent education on appropriate developmental expectations, activities designed to stimulate the child and enhance the home environment, and regular screenings for developmental delay.

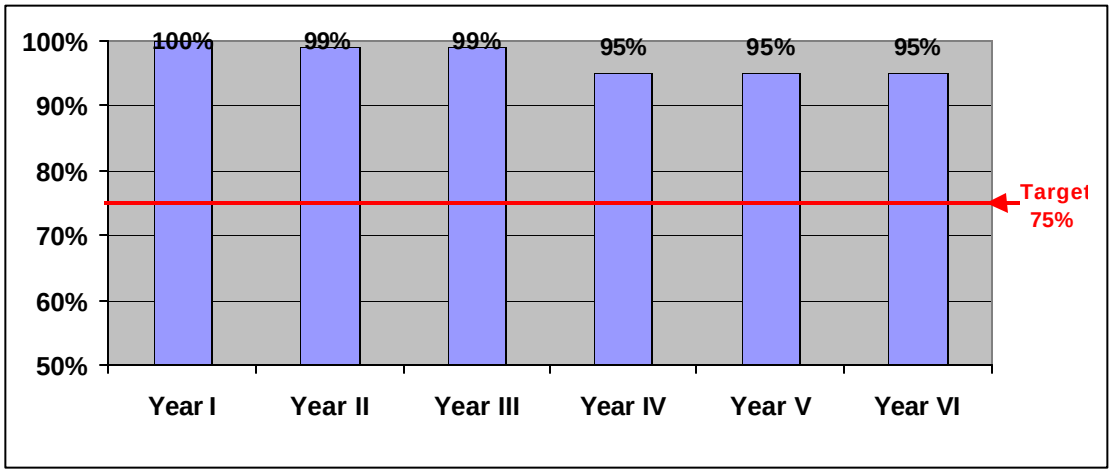
F. Developmental Delay

The program adheres to a rigorous standard in documenting children's cognitive, motor, language, social, and emotional development. The Ages and Stages Questionnaire is administered to program children every four months, beginning at 4 months of age, affording both HFM staff, as well as parents, the means by which to monitor children's developmental progress on a regular and periodic basis. Additionally, HFM piloted the newly developed Ounce Scale designed to identify developmental strengths and weaknesses as they relate to school readiness. This system, along with the implementation of strong parenting and child development curricula (i.e., Parents As Teachers) and resources, is a powerful tool in early identification of suspected delay. Those children identified as being at risk are referred to the Montgomery County Infants and Toddlers (MCIT) program for an in-depth assessment.

County and national figures indicate that approximately 3-5% of children over the age of three experience congenital developmental delay. Above that, delay is most often a result of environment factors, which are targeted by the program in its screening process and curricula for both parents and children. As shown in **Figure 18** below, the percentages of children each year who demonstrate normal child development and who meet developmental milestones have consistently exceeded the program's target of 75%.

The hiring of an Early Intervention Specialist during Year IV resulted in increased referrals, as her expertise made it possible to more accurately identify children at risk and secure appropriate developmental support. Consequently, an increased number of positive assessments occurred in the last three years of program operation, reflecting the program's commitment to early identification, referral and intervention as necessary. These activities are critical to ensuring that every HFM child reaches kindergarten ready to learn.

Figure 18: Children Meeting Developmental Milestones – Years I – VI



School Readiness

The *Healthy Families Montgomery School Readiness Pilot* (see full report in ***Appendix C***) was designed to assess past and current success of the HFM program in preparing children to be ready for school. It was critical to identify a measure that correlated with the Maryland Model for School Readiness (MMSR) and the Work Sampling System (WSS) used by Maryland State Department of Education (MSDE). Moreover, the measure needed to be appropriate for administration within a home visiting context. As such, the DIAL-3 was selected for its strength-based approach, educational focus, and overlap with the MSDE model. Simultaneously, HFM was asked to pilot the newly developed 'Ounce Scale', providing opportunity to compare results across the DIAL-3, the Ounce Scale, and the Ages and Stages Questionnaire (ASQ) – the screening tool typically used by HFM. Unfortunately, however, the 'Ounce Scale' was not fully implemented during this reporting period due to the number of tasks already being accomplished on home visits and the unavailability of the instrument in Spanish.

HFM's readiness assessments of current participants using the DIAL-3 and the ASQ provided vital information regarding the utility and validity of each measure in a home visiting environment. Further, it illuminated to staff and supervisors the underlying role that certain environmental factors play in compromising school readiness. The DIAL-3 was individually administered to 14 three- and four-year olds who currently participate in the Healthy Families Montgomery program. Conducting this measure in a home visiting setting proved challenging to the staff for several reasons. Many of the tasks presented on the DIAL-3 were difficult for the children, particularly those who are not enrolled in child-care outside the home. This resulted in lengthy administrations, which taxed the attention spans of many of the children. Although future use of the DIAL-3 as a screening tool is uncertain, it did provide information that resulted in several essential referrals. Results indicated that the program plays a major role in providing children with opportunities for fundamental skill development. With 79% (n=11/14) of children identified as developing satisfactorily with no serious difficulties foreseen, it appears that the program is successful in addressing environmental factors impacting skill acquisition and securing services for those children who are in need of more intensive, needs-specific intervention.

Comparative analysis of the three different measures used by HFM to assess readiness and identify developmental concerns provided valuable information. While the ASQ offers greater flexibility in its administration, its reliance on parental report compromises its validity resulting in underreporting of developmental risk. On the other hand, while the lengthy administration of the DIAL-3 requires a very structured format, it yielded important developmental information valuable in initiating referral for further assessment. The Ounce Scale, as well as Work Sampling, appears to offer a potential valid alternative that is well aligned with the MMSR.

Goal V: Reduce Incidence of Child Maltreatment

The rate of families with an indicated case of child abuse and neglect (per 1,000 children) in Montgomery County was 2.3 in 1999. For the State of Maryland, this rate is 6.3 for the same reporting year. Finally, the latest national figure for indicated cases of child abuse and neglect was 12.4 per thousand for 2001. In order to determine the number of participants on whom a 'founded' report has been made during each fiscal year, the program has established a partnership with Montgomery County Child Welfare Services (CWS). At the end of each fiscal year, the HFM program submits a list of participants to CWS. After running a check on those families, CWS reports to HFM the percentage on whom a 'founded' report of child abuse and/or neglect has been made. For Year VI, out of 226 families, 99% did not have a founded report of child abuse or neglect. There was one founded report of neglect. Additionally, over the past six years of program operation, there have only been four 'founded' cases of neglect. This is clearly a strong indicator of the prevention effects of the HFM program as it exclusively serves families identified to be at high risk for child maltreatment.

C. Longitudinal Outcomes

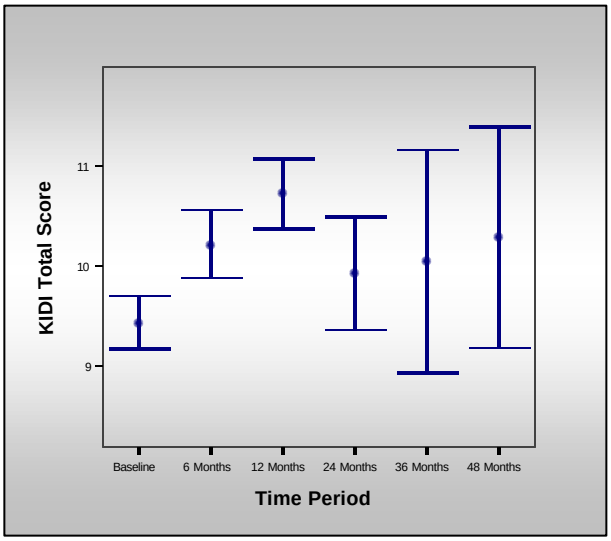
The following results represent analyses conducted with participants who met the minimum criteria of receiving at least eight home visits during program participation (N=313). Previous findings indicate that this is the minimum amount of service necessary for change.

Analyses were conducted to investigate change in outcomes over time in the program from Baseline to 6, 12, 24, 36, and 48 months. Outcomes were assessed using a series of measures that represent parental knowledge and practices, home environment and safety, social support, maternal depression, and parenting stress. Once patterns of change were established for each of these outcomes, parent, child, and environmental characteristics were investigated to identify factors that may impact such outcomes.

The Knowledge of Infant Development Inventory (KIDI)

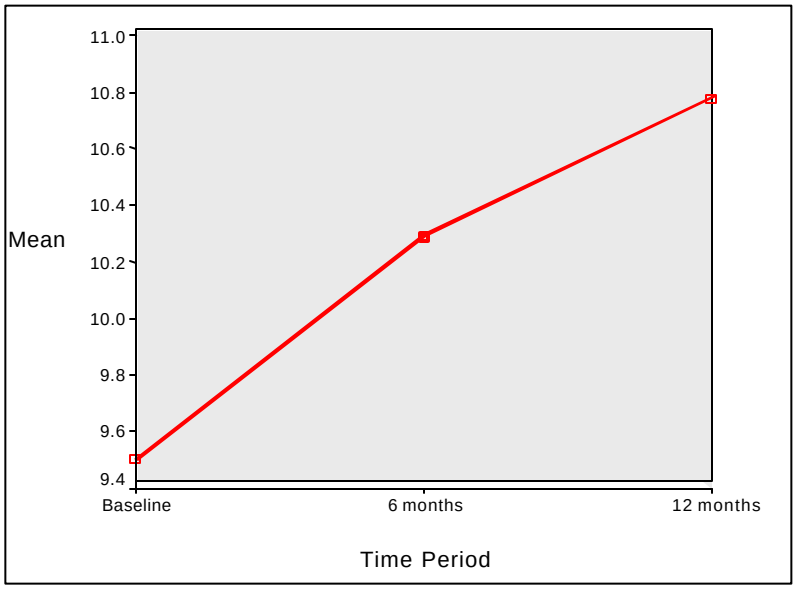
The KIDI is used to assess one's knowledge of parental practices, developmental processes, and infant norms of behavior. **Figure 19** shows the mean and 95% confidence intervals for KIDI scores from Baseline through 48 months for program participants who received a minimum of eight home visits. Consistent with earlier findings, the peak for parental knowledge appears to be at the time that the child is about one year old. The large variance in scores at 36 and 48 months is due to the relatively smaller number of parents still enrolled at that time. Most parents participate in the program for 1-2 years. Additionally, the version of the KIDI used is most valid for infants from birth through one year; therefore, scores at later intervals may not be a true reflection of parental knowledge as children enter toddlerhood. To address the limitations of this edition of the KIDI, the program has transitioned to the 58-item KIDI (0-3 years) and KIDI-P (3-6 years), comprehensive versions covering the entire age span of children in the HFM program.

Figure 19: Means and 95% Confidence Intervals for KIDI Total Score through 48 Months



Given this peak in scores at 12 months and the availability of complete data, repeated measures statistics (GLM analyses) were conducted on those parents who were administered measures at Baseline through 12 months (n=74). Across this time period, a significant increase in KIDI scores was found ($F(2, 146)=11.72$, $p<.001$), with a corresponding small to moderate effect size indicating that enrollment time accounts for 14% of the variance in scores. Using follow-up analyses (Sidak pairwise comparisons), scores at 6 months and 12 months were found to be significantly higher than those at Baseline, although scores at 12 months were not significantly greater than scores at 6 months (see **Figure 20**).

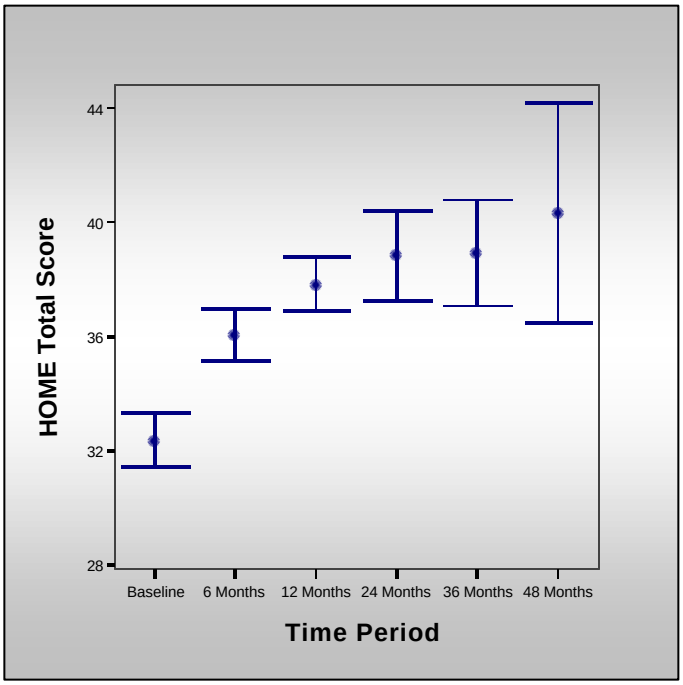
Figure 20
Significant Improvements in KIDI Scores over Three Time Points



Home Observation for Measurement of the Environment (HOME) Inventory

Through observation and semi-structured interview, the HOME is designed to assess the quality of the home environment as it relates to aspects of parent-child interaction and optimizing child development. **Figure 21** shows the means and 95% confidence intervals for HOME scores from Baseline through 48 months for program participants who have received a minimum of eight home visits. As illustrated in this graph, scores appear to plateau at 12 to 24 months. Again, note the large variance in scores at 48 months due to the relatively smaller number of parents still enrolled at that time. This indicates decreased confidence in the results for that timepoint.

Figure 21
Means and 95% Confidence Intervals for HOME Total Score through 48 months

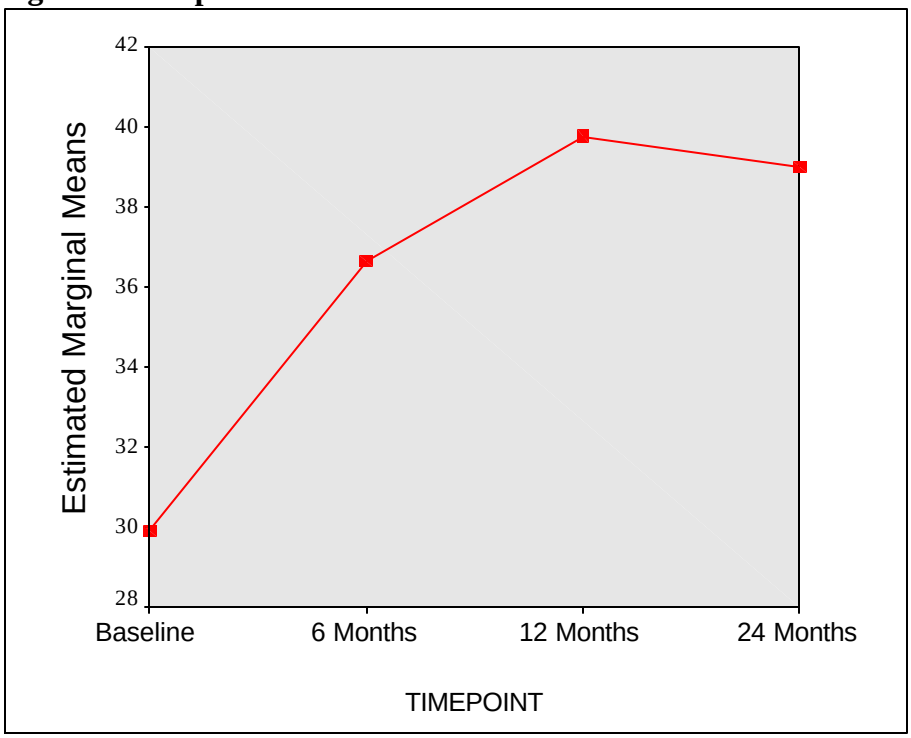


Results of the GLM repeated measures analyses (n=25) indicate significant gains in HOME scores from Baseline through 24 months ($F(3,72)=26.51$, $p<.001$) with a large effect, suggesting that time in program accounts for 50% of the variance in scores. Follow up analyses (Sidak pairwise comparisons) indicate that scores at 6, 12, and 24 months are significantly higher than at Baseline ($p<.001$ for all comparisons). However, changes in HOME scores between 6 to 12, and 12 to 24 months were non-significant (see **Figure 22**).

Significant differences at each timepoint compared to baseline are:

- Baseline v. 6 months : *$F(1,24)=31.54$, $p<.001$*
- Baseline v. 12 months : *$F(1,24)=56.25$, $p<.001$*
- Baseline v. 24 months : *$F(1,24)=53.43$, $p<.001$*

Figure 22
Significant Improvements in HOME Scores over Four Time Points

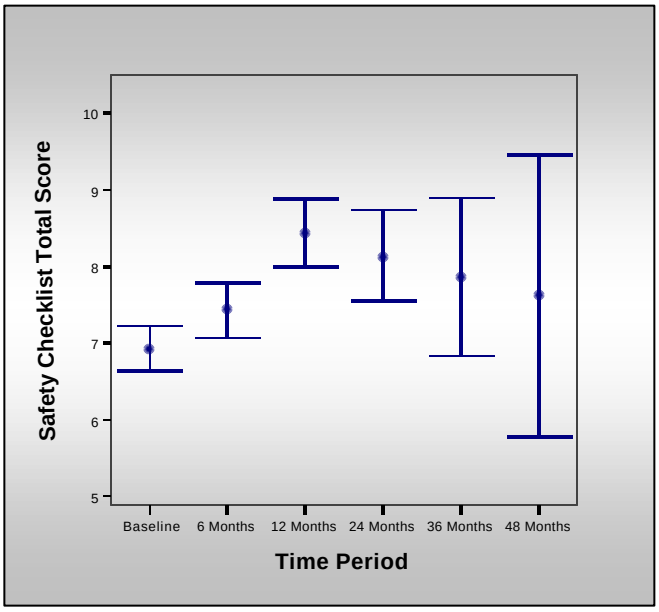


Child Safety Checklist

During home visits, FSWs assess a family's cognizance of environmental safety through several means. The Child Safety Checklist was originally adapted from items on the Early Head Start Cross-site measure and was administered with the HOME. To supplement observational data, FSWs interviewed parents on a variety of additional issues, such as knowledge of emergency numbers, installation of safety devices (smoke detectors, safety gates, outlet covers) and use of automobile safety restraints. This checklist was used exclusively during Years I through VI. In Year V, however, the program began the transition to a more comprehensive measure, the HFMD Safety Checklist, which contains all the items on the original instrument, as well as questions regarding (as appropriate) lead, radon, and CO. As of FY '04, the checklist will include a question about the presence of firearms in the home.

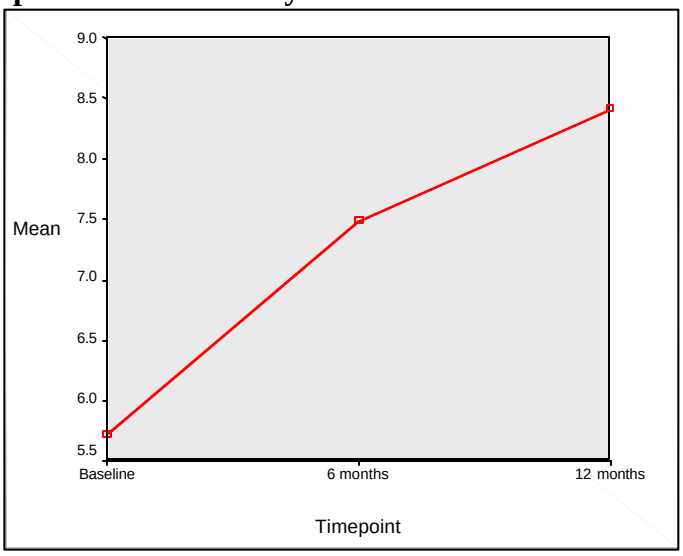
Longitudinal analyses were conducted on the original Child Safety Checklist. As seen below in **Figure 23**, among those participants who have received the minimum of eight home visits, safety knowledge increases steadily through 12 months of program enrollment and subsequently declines slightly.

Figure 23
Means and 95% Confidence Intervals for Safety Checklist through 48 months



GLM repeated measures analyses were conducted for the Child Safety Checklist scores from Baseline through 12 months (n=46). Across this time period, a significant increase in Safety scores was found ($F(2,90)=34.27$, $p<.001$), with a moderate effect size in which program enrollment time accounted for 43% of the variance in Safety scores. Follow up analyses (Sidak pairwise comparisons) indicate that scores increase significantly from Baseline to 6 months and again from 6 months to 12 months (see **Figure 24**). Due to the small N at later time periods, repeated measures analyses could not be conducted to quantify the decrease in scores at 24 through 48 months.

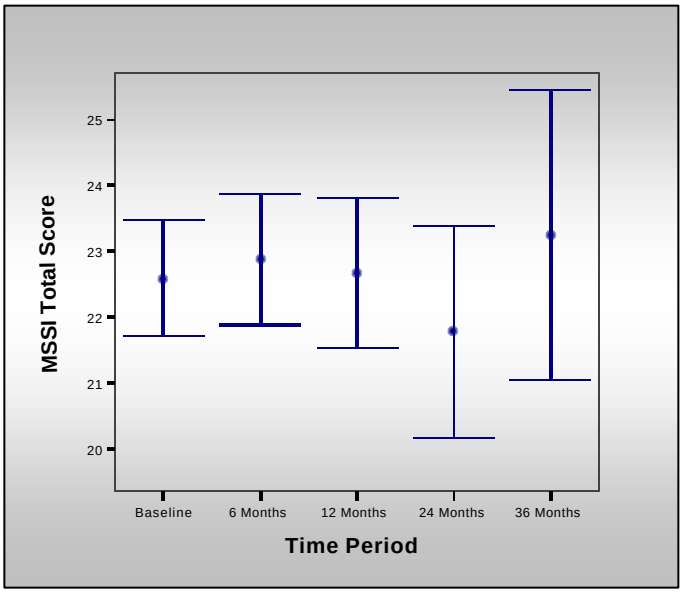
Figure 24.
Significant Improvements in Safety Checklist Scores over Three Time Points



Maternal Social Support Index (MSSI)

The MSSI is a measure of social support used to assess the degree of support that mothers perceive they are receiving from significant others, neighbors, relatives, and community groups. A score of less than 20 is considered at risk for social isolation. **Figure 25** shows the means and 95% confidence intervals for MSSI scores from Baseline through 36 months. Too few participants completed this measure at 48 months to be included in the chart. As seen in the figure, mean scores and variance remain relatively stable over time. This suggests that mothers' perceived social support remains consistent throughout program enrollment, with scores in the mid-20s indicating little to no risk for social isolation.

Figure 25
Means and 95% Confidence Intervals for MSSI Total Score through 36 Months

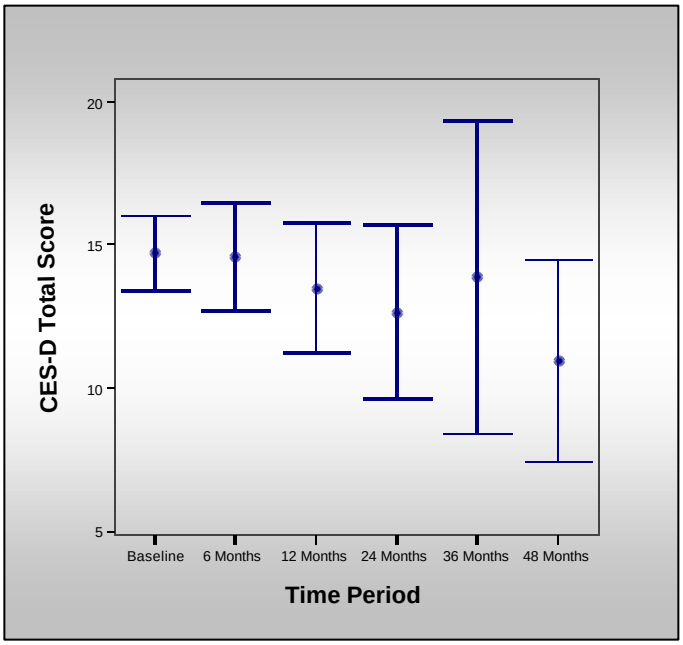


Given the stability in scores across time, results of the GLM repeated measures analyses from Baseline through 12 months (n=54), not surprisingly, produced non-significant changes across time periods ($F(2,106)=1.12$; NS.

Center For Epidemiological Studies – Depression (CES-D)

The CES-D is a measure designed to assess risk for maternal depression, with scores of 16 or greater considered at-risk. **Figure 26** shows the means and 95% confidence intervals for CES-D scores from Baseline through 48 months. Mean scores appear to change only slightly over time, with the mean for each time period between 12 and 16 (normal range). Note the large variances, particularly at 36 months; this variability in scores suggests that program mothers experience and report a wide range of depressive symptomology.

Figure 26.
Means and 95% Confidence Intervals for CES-D Scores through 48 Months



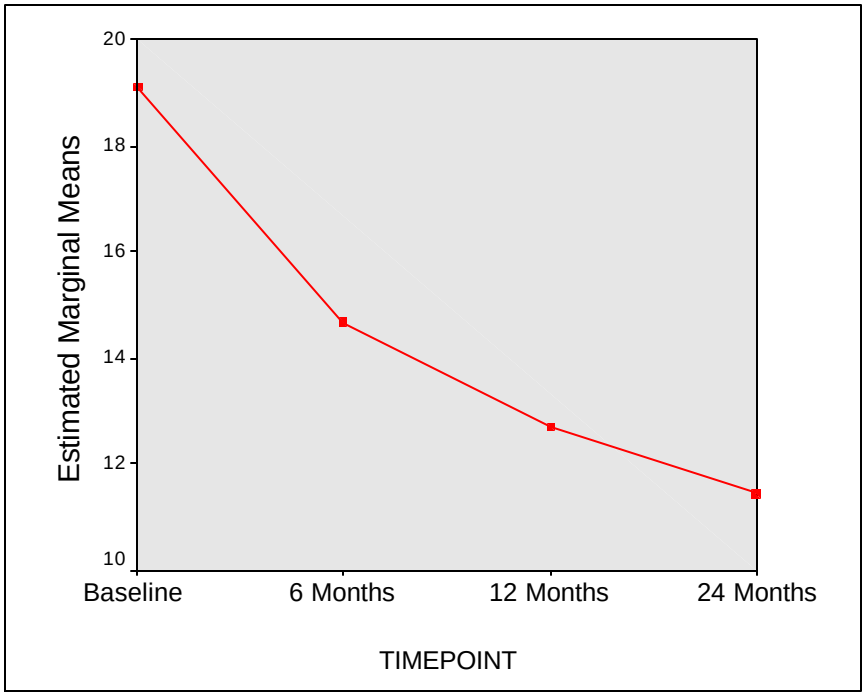
GLM repeated measures analyses conducted for the CESD from Baseline through 24 months (n=33) indicate significant differences in the overall ANOVA (Tests of Within Subjects Effects: F (3,96)=3.060, p<.05) with plot indicating, significant decreases in scores across time (see **Figure 27**).

Follow up indicates significant decreases at some time period compared to baseline:

- Baseline v. 6 months: F(1,32)=.906, p.348 – non significant change
- Baseline v. 12 months: F(1,32)=6.124, p<.05
- Baseline v. 24 months: F(1,32)=0.346, p<.005

These results indicate that it takes at least one to two years of program participation to have an impact on depressive symptomology. This timeframe, however, is not unusual for measurable effects to emerge on mental health and psychosocial variables. Based on results from previous years, indicating a sustainment of high levels of depressive symptomology in their maternal population, HFM secured additional mental health resources and linkages to help support mothers experiencing depression.

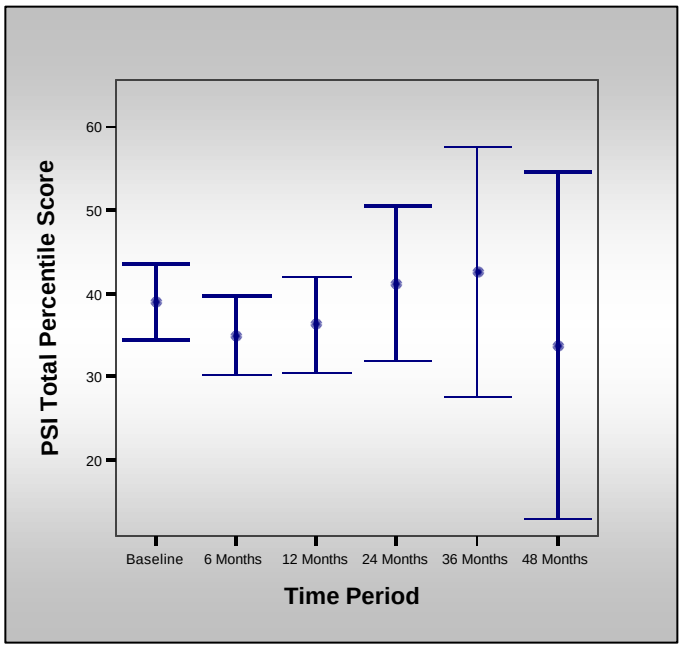
Figure 27.
Significant Decreases in Mean Scores for Depression over Four Time Points



Parenting Stress Index (PSI)

The PSI was used to assess the degree to which parents feel stress in their parenting role. The PSI focuses on the parent, the child, and their interactions and measures these three primary components of the parent-child system for the purpose of early identification of stressful circumstances related to parenting. Parents are considered at risk if they score higher than the 85th percentile. **Figure 28** displays the means and 95% confidence intervals for the PSI from Baseline through 48 months. While mean Parenting Stress appears to be relatively stable and within the normal range, it decreases slightly during the first year, and then increase slightly at two to three years. As with other measures, the larger variance in scores 48 months is due to the smaller number of participants enrolled at that time.

Figure 28
Means and 95% Confidence Intervals for PSI Scores through 48 Months



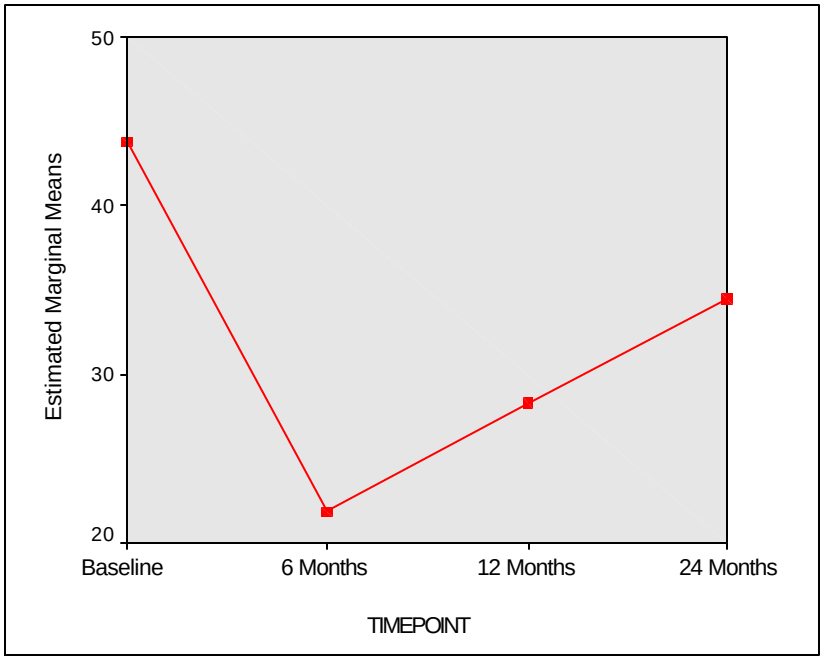
Results of the GLM repeated measures analyses conducted for the PSI from Baseline through 24 months (n=27) demonstrate significant differences in the overall ANOVA ($F(3,78)= 4.706$, $p<.01$) with plot indicating a significant decrease at 6 months, then slight increases through 24 months. Follow up analyses (Sidak pairwise comparisons) indicate that scores at 6 and 12 months were each significantly lower than scores at Baseline, as displayed in **Figure 29.** However, scores at 12 months were not significantly lower than scores at 6 months. Thus, parent reports of stress do decrease significantly in the first 6 to 12 months of program enrollment, and then increase again at 24 months.

Significant decreases at some time period compared to baseline are:

- Baseline v. 6 months: $F(1,26)=11.725$, $p.<.005$
- Baseline v. 12 months: $F(1,26)= 6.046$, $p<.05$
- Baseline v. 24 months: $F(1,26)= 2.087$, $p=.160$, non significant difference

The increase in parental stress at 24 months suggests that there may be developmental tasks, such as the child's autonomy, and parental issues of work or child care that may heighten stress at this time point.

Figure 29
Significant Changes in Mean Percentiles for Parenting Stress over Four Time Points



II. Covariate Analysis.

The analyses described above investigated outcomes at the univariate level, not taking into account potential relationships among the various outcome measures. In those analyses, significant gains were evident from Baseline through 6, 12, and 24 months of program enrollment. To investigate potential multivariate relationships and illustrate the complexity of measuring program outcomes, this section will describe relationships among the outcomes measures as well as relationships between outcomes and program participant characteristics. All analyses conducted include only those program participants who received the minimum of 8 home visits.

Relationships Among Outcome Measures

Pearson (parametric) and Spearman (non-parametric) correlations were conducted on all outcomes at 12 and 24 months to investigate the inter-relationships among the measures. Findings across the two types of correlation statistics were essentially equivalent; as such only Pearson correlations are reported here. As a comparison, correlations are also reported for these measures at Baseline.

Table 3 displays the correlations among outcome measures at Baseline. At that time, strong correlations were found between several pairs of variables, including those that measure mother's psychosocial state (PSI, CES-D, MSSI) and those that measure the home environment and knowledge of child development (HOME and KIDI). Program mothers' levels of self-

reported depressive symptomology (CES-D) was moderately correlated to parent stress (PSI; r=.323; p<.01) and to perceived social support (MSSI; r=-.244; p<.01). Among parenting measures, the HOME Inventory was moderately correlated to the KIDI (r=.283; p<.01). Of note, too, is the small but significant, negative correlation between the HOME Inventory and maternal depression (CES-D; r=-.184; p<.05) and similarly between the HOME Inventory and parenting stress (PSI; r=-.167; p<.05 .

Table 3 .
Pearson Correlations among Outcomes at Baseline

	KIDI	HOME	Safety	PSI	CES-D
HOME	.283 [a]	1			
Safety	.091	.186	1		
PSI	-.067	-.167 [b]	.032	1	
CES-D	-.031	-.184 [b]	-.128	.323 [a]	1
MSSI	.093	.162	.320 [a]	.008	-.244 [a]

Note: [a] Statistically Significant at p<.01.
[b] Statistically Significant at p<.05.

At 12 months, strong correlations were similarly found between several pairs of variables, including those that measure mother's psychosocial state (PSI, CES-D, MSSI) and those that measure the home environment and knowledge of child development (HOME and KIDI). As seen in **Table 4**, program mothers' levels of self-reported depression (CES-D) was moderately correlated to parent stress (PSI; r=.277; p<.01) and to perceived social support (MSSI; r=-.259; p<.05). Among home environment measures, the HOME Inventory was strongly correlated to the HOME Safety Checklist (r=.470; p<.01; which is not surprising considering that Safety is a subset of HOME and moderately correlated to the KIDI (r=.259; p<.05).

Table 4.
Pearson Correlations among Outcomes at 12 Months

	KIDI	HOME	Safety	PSI	CES-D
HOME	.259 [b]	1			
Safety	.037	.470 [a]	1		
PSI	.066	-.180	-.079	1	
CES-D	-.057	.015	-.070	.277 [a]	1
MSSI	-.035	.255	.167	-.051	-.259 [b]

Note: [a] Statistically Significant at p<.01.
[b] Statistically Significant at p<.05.

Similar patterns of correlations among the psychosocial variables remained at 24 months, as seen in **Table 5** below. Program mothers' levels of self-reported depression (CES-D) were strongly correlated with parent stress (PSI; r=.400; p<.01) while parent stress was also correlated

strongly to social support (MSSI; r=-406; p<.05). Not surprisingly, CES-D scores continued to be significantly negatively correlated to the HOME Inventory (r=-.355; p<.05).

Table 5.
Pearson Correlations among Outcomes at 24 Months

	KIDI	HOME	Safety	PSI	CESD
HOME	.064	1			
Safety	.363	.390	1		
PSI	.161	-.196	-.315	1	
CESD	.080	-.355 [a]	-.308	.400 [b]	1
MSSI	-.106	-.025	.	-.406 [a]	-.145

Note: [a] Statistically Significant at p<.01.
[b] Statistically Significant at p<.05.

Given the significant correlations among depression, parenting stress, and perceived social support, a multivariate repeated measures analysis was conducted to investigate "general" psychosocial changes from Baseline through 12 months (n=39). Results indicated a statistically significant model (F(6,150)=3.07, p<.005), with a small effect size indicative of enrollment time accounting for 11% of changes in global psychosocial functioning. Follow-up univariate analyses demonstrate the same findings as reported in the previous section. Taken individually, significant changes with time are seen in the CES-D (F(2, 76)=.3.64; p<.05) as well as in the PSI (F(2,76)=5.30; p<.05), but not in the MSSI (F(2,76)=1.53; NS).

Mother Demographic Profile

To investigate the impact of mother's demographic profile on the outcome measures, several variables were tested, including mother's education, age, and employment status. The impact of mother's education was examined two ways: 1) highest grade level achieved at entry and 2) high school graduate at entry. Specifically, education variables were compared with scores on the HOME, the PSI, the CES-D, the MSSI and the KIDI at baseline, 6 months, 12 months and 24 months of enrollment. Pearson product-moment correlation analyses revealed a significant, moderate relationship between highest grade level achieved at entry and both the PSI (r=.297, p<.05) and the CES-D (r=.263, p<.05) at the 6-month level, indicating that mothers with higher levels of education report greater levels of stress and depression after 6 months in the program. Highest grade level achieved at entry had no significant relationship with either the HOME or the KIDI at any timepoint.

Scores on the HOME, the PSI, the CES-D and the KIDI were also examined by high school graduate status at entry. Again, participant performance at baseline, 6 months, 12 months, and 24 months was considered. Tests for group differences revealed significant differences across all measures at various timepoints. Specifically, mothers who entered the program as high school graduates reported higher rates of depression on the CES-D at baseline (t(1, 86)=2.001, p<.05). However, by 6 months, mothers with high school degrees at entry also

demonstrated better parent-child interaction as reported on the HOME ($t(1,50)=2.023$, $p<.05$) and increased knowledge of child development as measured by the KIDI ($t(1,65)=2.651$, $p<.01$). Unfortunately, perceived stress, as measured on the PSI at 12 months, was reported by mothers with high school degrees ($t(1,49)=2.078$, $p<.05$). No other significant group differences were reported.

Mothers' age at entry was also compared to participant performance on selected outcome measures. Pearson product-moment correlation analyses revealed significant, inverse relationships between mothers' age at program entry and MSSI scores. Specifically older participants at program entry report lower social support at 6 months ($r= -.263$, $p<.05$). This perceived absence of support holds at 12 months enrollment ($r= -.267$, $p<05$) before increasing considerably at 24 months ($p= -.497$, $p<.01$). No other significant relationships were reported.

Finally, outcome measures were investigated using mothers' employment status at entry. While no significant relationships were detected with regard to employment status, analyses included here demonstrate the considerable impact of age and education on success and achievement in the Healthy Families Montgomery program. Encouraging participants in their educational pursuits can promote gains in parent-child interaction and knowledge of child development. At the same time, increased awareness of existing social support systems for older participants can help buffer growing concerns of isolation and loneliness. Such findings can inform early interaction with newly enrolled participants and ensure good outcomes for families.

Profiles of success

Given the program's success to date, it was of interest to investigate which participants in the research sample were most "successful" in Healthy Families. To do so, mother demographic characteristics, infant characteristics, and environmental/situational variables were correlated with measures of success, as defined by several criteria. These criteria included: (1) HFM program graduate at closing; or (2) high scores on the HOME Inventory (score range 37-45) at 12, 24, or 36 months; and/or (3) service level 4 at closing. Baseline scores on all outcome measures were also correlated with these criteria.

Criteria 1: In order to graduate from the HFM program, participants must successfully attain their goals as identified in their IFSPs, as well as consistently demonstrate positive parent-child interaction, maintain stability in the home, utilize effective problem-solving skills, take their child to all scheduled well care visits and to the doctor when sick, and be current with childhood immunizations. Typically, these participants must be enrolled in the HF program for at least 3 years. There were n=17 participants who met this criteria and thus were classified as program graduates at closing.

Criteria 2: High scores on the HOME Inventory reflect a demonstration of positive parent-child interaction and the provision of a developmentally stimulating home environment. These factors are highly associated with positive developmental outcomes for children, the major goal of the HF program. On the HOME, 68 participants achieved high scores at 12 months, 42 participants

had high scores at 24 months (including 30 who also scored high previously), and 20 participants at 36 months (including 15 who had also scored high previously). In all, a total of 93 participants earned high HOME scores *at least* once between 12 through 36 months of program enrollment. Six participants scored high at all three timepoints.

Criteria 3: All participants enter the HF program on service level 1, which is the most intensive level of service. Although they must typically remain on level 1 for at least 6 months, participants progress through service levels at their own pace as they demonstrate increases in parenting skill, self-sufficiency, and goal attainment. Level 4 is the highest service level before graduation, and therefore represented participant success in multiple domains. A total of 40 participants were at service level 4 or above at closing. This group includes 17 graduates, 22 participants on Work/Study status, and one on Level 4.

Factors Associated with Success

Regarding demographic and situational variables, successful participants varied across many characteristics. Despite this diversity, there were several noteworthy trends. First, a large proportion of successful participants appear to be of a Hispanic background, as evidenced by higher percentages of Hispanics in the successful sample (65-78% on criteria 1,2, and 3) than in the overall set of participants (55%). Also, a higher percentage of successful participants spoke Spanish as their primary language. In contrast, among the set of participants who were at service level 4 at closing, a relatively higher percentage of participants were non-Hispanic (57%).

Educational attainment may be related to success as well. Using Criteria 1 from above, 61.5% of HFM program graduates had graduated from high school at program entry, as compared to 45% high school graduates in the overall sample. In contrast, however, just under half of those with high HOME scores at 12, 24, and 36 months were high school graduates.

Mother's employment at program entry appears to be an important factor to success. A significantly larger percentage of the successful clients were employed at entry. All (100%) program graduates were employed at entry, with 40% in full-time work, whereas only 51% of the overall participant sample was employed at entry, with 27% working part-time and 24% working full-time. Two-thirds of those with high HOME scores at 12 months were employed at entry, evenly split between full- and part-time work. A similar pattern was found for those with high HOME scores at 24 months. Interestingly, among those with high HOME scores at 36 months, all were employed at program entry, primarily in full-time work. Similarly, more than half of those at service level 4 at closing were employed at entry, with 30% in full time work and an additional 25% in part-time work.

The household composition of the participant may also be related to success. Relative to the overall participant sample that primarily lived with husbands, birth fathers and relatives at entry, a higher proportion of program graduates lived with relatives only at program entry (53%). Only 29% of program graduates lived in households that included husbands and birth fathers. This was also true of those successful participants who had reached service level 4 at closing, with only 32% living in with husbands or birth fathers. This trend was not found for those with high HOME scores at any time point.

Ninety-four percent of the overall sample reported having a primary care physician (PCP) at program entry. In contrast, all (100%) successful participants had a PCP at program entry, as defined by each of the criteria above. Only among those with high HOME scores at 12 months, were there a few participants who did not have a PCP at program entry (1.5%).

Among the outcome measures, some interesting patterns were found for the successful participants relative to the overall participant sample. It appears that baseline HOME scores were higher for the successful participants (criteria 1, 2, and 3) relative to the overall sample.

In terms of psychosocial variables, of note was that a larger proportion of program graduates (60%) were at risk for problems with social support (MSSI) compared to the overall sample (27%). Higher rates of social support risk at baseline were also seen among those with high HOME scores at 12 months (31%), 24 months (47%), and 36 months (33%). Moreover, a higher proportion of program graduates (77%) were at risk for depression (CES-D) compared to the 43% of the overall sample at risk for depression, as were a relatively higher proportion (47%) of the successful participants who reached service level 4 at closing, although this finding is not as strong as that of the program graduates. Level of depression risk among those with high HOME scores at the three time points did not differ greatly from the overall sample.

Still, parenting stress among program graduates and those at service level 4 was lower than for the overall participant sample, although those with high HOME scores did not appear any different than the overall sample. Similarly, successful participants achieved high KIDI scores at baseline. Relative to the 16% of the overall sample that failed the KIDI at baseline, all program graduates (100%) passed the KIDI at baseline, as did 94% of those at service level 4. Results were mixed, however, among the high HOME scorers across timepoints. Specifically, 12% percent of those with high HOME scores at 12 months failed the KIDI, along with 9% of those with high scores at 24 months and 17% of high HOME scorers at 36 months. As stated earlier, this discrepancy appears to be related to the fact that the version of the KIDI administered by the program to date may not yield accurate results at timepoints of 12 months and older.

Based on these findings, the most successful HF participant is most likely to be Hispanic, with Spanish as the primary language, be a high school graduate and employed when they enter the program. These participants likely live with relatives, not with either a husband or father of the baby. They also are more likely to have had a PCP at entry and to have higher scores on the HOME and KIDI than the overall sample of participants. In terms of risk factors, successful participants are more likely to enter the program at risk for social isolation and depression. However, connection with the program through the FSW-client relationship, as well as linkage to other resources and services, can immediately address these risk factors and lay the foundation for success. These program graduates on the average remained in the program for 4 years, receiving an average of 85 home visits as compared to the overall sample where the majority of families (80%) are enrolled in the program for up to 2.5 years. However, the successful participants are not the group that received the most service. In fact, families that had the highest number of home visits actually scored lower on the HOME.

Table 6. Outcomes Matrix

Goals and Target Objectives	**HFM TARGET**	**Year I N=38**	**Year II N=71**	**Year III N=73**	**Year IV N=145**	**Year V N=159**	**Year VI N=196**
Goal I: Reduce Incidence of Child Maltreatment Enrolled families will not have founded CWS reports	*95%*	95% 1 indicated report neglect	100%	99% 1 indicated report neglect	100%	98% 1 indicated report-neglect	99%
Goal II: Promote Preventive Health Care Children will have a health care provider	*95%*	97%	97%	99%	100%	99%	98%
Eligible families will be enrolled in MA	*95%*	100% insured	99% insured	99% insured	99% insured	97% insured	99% insured
Children immunized on schedule	*90%*	92%	99%	97%	100%	100%	94%
Mothers will not have an additional birth within two years of the target child's birth.	*75%*	All Ages and Teens 100%	Adults -99% Teens - 99%	Adults - 99% Teens - 97%	Adults -94% Teen - 100%	Adults-100% Teens - 98%	Adults - 98% Teens - 98%
Mothers will deliver newborns of healthy birthweight (>2500 grams or 5.5 lbs.)	*90%*	All – 82% Excl. preterm -97%	All – 74% Excl. preterm - 96%	All – 85% Excl. preterm -97%	All – 85% Excl. preterm -95%	All – 86% Excl. preterm -97%	All – 89% Excl. preterm -97%
Mothers will complete post-partum care.	*75%*	85%	89%	97%	96%	95%	88%
Goal III: Optimize Child Development Children will demonstrate normal child functioning	*75%*	100%	99%	99%	95%	95%	95%
Goal IV: Positive Parenting Parents will have adequate knowledge of child development	*85%*	78%	90%	97%	95%	96%	96%
Parents will have adequate knowledge of child safety.	*85%*	79%	100%	100%	93%	97%	92%
Parents will demonstrate positive parent-child interaction	*85%*	77%	100%	100%	100%	99%	96%
Goal V: Improved Family Self-Sufficiency Families will have improved housing, education, employment	*75%*	Housing - 100% Educ/Empl- 68%	Housing- 100% Edu/Empl- 73%	Housing- 99% Educ/Empl- 86%	Housing- 95% Ed/Empl- 88%	Housing- 96% Edu/Emp- 90%	Housing- 97% Edu/Emp-

Table 7. Comparative Statistics Table

Goals and Objectives	HFM TARGET	Aggregate % Years I-VI	Montgomery County	State of Maryland	National
Goal I: Reduce Incidence of Child Maltreatment Enrolled families will not have founded CWS reports	95%	98.5%	1,775 investigations 465 indicated Rate of 2.3/ thous. [DHHS, CISYC, 1999]	9,169 indicated Rate of 5.8 per thousand [OCYF, 2001]	Rate of 12.4 per 1000 2,672,000 reports 903,000 founded [HHS, 2001]
Goal II: Promote Preventive Health Care Children will have a health care provider	95%	98%	89% [MD DHMH, CISYC, 1996]	90% MD DHMH, CISYC, 1996]	88% [NCHS, 2000]
Eligible families will be enrolled in MA	95%	98.5% insured	50% eligible for MA insured [MD DHMH, 1996]	50% eligible for MA insured [MD DHMH 1996]	23 million Total Medicaid [NCHS, 2000]
Children immunized on schedule	90%	97%	87% [DHHS, 1997]	78% [MD NIS 7/96-6/97]	76%** [NCHS, 2000]
Mothers will not have an additional birth within two years of the target child's birth. (Teens <20 years)	75%	Adults - 98% Teens - 98%	Adults - 68% Teens - 88% [MD DHMH, 1996]	Teens - 81% [MD Vital Stat, 2000]	Adults – 62% Teens – 80%*** [Nat'l Vital Stat, 2000]
Babies Born with Healthy Birthweight		84%		91% [NCHS, 2000]	92% [NCHS, 2000]
Mothers will complete post-partum care.	75%	92%			
Goal III: Optimize Child Development Children will demonstrate normal child functioning	75%	95%	97.8% no conf. delay [MCITP, 1995]	98% [MCITP, 1995]	96% no congenital delay [NCHS, 1995]

Part IV. Summary

Through the vision and efforts of the late Mary C. Jackson, former Director of Grants and Children's Programs at The Family Services Agency, Inc., Healthy Families Montgomery (HFM) was established in 1996 with funding from the Freddie Mac Foundation. The program pioneered home visiting services to families at risk for child abuse and neglect in Montgomery County, MD. The success of HFM in achieving positive outcomes was instrumental in the awarding of State funds for the Healthy Families Maryland Statewide Initiative, which supported the establishment of 16 additional Healthy Families sites throughout the State. In Year I of the HFM program, 45 families received home visiting services. The program now has a capacity for 150 families, while statewide Healthy Families programs serve over 1,500 families.

A major factor contributing to the success of the Healthy Families Montgomery program has been its ability to sustain a high level of quality and consistency in program implementation and model fidelity over a period of growth and expansion. This has been accomplished despite significant staffing and organizational changes and while continually adapting to the evolving needs of the diverse families it serves. The program has also made excellent formative use of its ongoing evaluation to refine the program and to leverage for enhancements. As such, HFM continues to provide leadership through its mental health, school readiness and DADS initiatives. The high quality and comprehensiveness of services offered by the HFM program, have placed it in high demand as the program of choice for the highest risk families in the County. Over the past six years, HFM has seen an increasingly greater number of families referred and enrolled with multiple risk factors, including severe mental health, substance abuse, and/or health and developmental impairment. Although these issues place an incredible burden on a prevention program like HFM, it has responded by aggressively pursuing funding to address these risk factors. Despite these efforts, HFM's program capacity falls significantly short of meeting the outstanding need in the community. Indeed, across the last four years, only 11% of all positive screens were enrolled in the program due to the capacity limitations.

Over the past six years, the Healthy Families Montgomery Program has consistently met with success not only in achieving positive outcomes with its high risk families, but also in exceeding local County, State and National comparative statistics for the general population. These accomplishments are most clearly illustrated in the Summary Charts ***(see Tables 6 and 7),*** where the most significant outcome is in the area of preventing child maltreatment. In six years of serving over 385 families identified to be at-risk for child abuse and neglect, HFM has only had four founded cases of neglect.

HFM has also demonstrated particular success in the areas of family health and child development. Achievement of outcomes in these area are generally accomplished within 6-months to a year, most likely due to the concrete nature of support required. Aggregated percentages for the past six years indicate that almost all families and children are linked to a medical provider (98%), have health insurance if they are eligible (98.5%), and receive routine preventive health care. Almost all children are up to date on their immunizations (97%) and

reach developmental milestones within the expected timeframe (95%). Additionally, the majority of three- and four-year old children were assessed to be 'ready for school'. All children receive regular developmental screening and referrals for intervention if necessary. Almost all mothers complete their post-partum visit (92%), which is of particular interest for teen mothers in order to prevent having a second child within 24 months of their first child (98%).

The role of parenting is critical in optimizing the positive outcomes for children and preventing child maltreatment. Efforts to improve parent's knowledge and behavior typically take longer than those targeting health objectives. As HFM has matured as a program, it has steadily decreased the amount of time it takes to see measurable improvement in these areas. For example, on a measure of parent knowledge of child development (KIDI), scores were found to improve significantly after 6-months and 12-months, with results indicating that their length of time in the program was influential. In Years I and II of the HFM program, it took at least 12 months to achieve significant improvement in this area.

Likewise, on a measure of the adequacy of the child's home environment and the parent-child interaction (HOME), scores at 6, 12, and 24 months were significantly higher than at Baseline for all comparisons. Analysis further indicated that length of time in program made a significant difference. A strong effect for length of enrollment was also found on a measure of parent's knowledge and implementation of safety in the home (Safety Checklist). Across the baseline through 12-month time period, a significant increase in Safety scores was found in which program enrollment time accounted for a large amount of the improvement.

Even more critical to the prevention of child maltreatment is the reduction of risk factors, such as depression and parental stress. These factors are highly associated with risk for child abuse and neglect and are more difficult to modify, particularly if mental health resources are scarce. A large percentage of HFM mothers (57%) are at risk for depression when they enroll in the program. On a measure of maternal risk for depression (CES-D), analysis indicated significant decreases in risk scores from Baseline through 24 months. These results suggest that it takes at least one to two years of program participation to have an impact on depressive symptomology. This timeframe, however, is not unusual for measurable effects to emerge on mental health and psychosocial variables. Of particular note are results from HFM's early years, which indicated a sustainment of high levels of depressive symptomology in their maternal population. In response to these findings, HFM secured additional mental health resources and linkages to help support mothers experiencing depression. Clearly, this program enhancement has had a positive impact on the participants' risk for depression as the program now has achieved significant decreases in this risk.

Likewise, on a measure of stress associated with parenting (PSI), results from Baseline through 24 months demonstrate significant differences. However, more interesting is that the plot indicates a significant decline in parental stress at 6 months, which then reverses and parental stress increases slightly through 24 months. These increases in parental stress at 24 months, although still significantly lower than baseline, suggest that there may be developmental tasks, such as the child's autonomy, and parental issues of work or child care that may heighten

stress at this time point. Also, the stressors that occur between 12 and 24 months may account for the peak in participant attrition that occurs, on the average at 18 months.

It is important to note that these risk factors do not operate in isolation. Instead, analysis indicates that they enhance the effect of each other. Results revealed significant correlations among depression risk, parenting stress, and perceived social support. Further analysis, which combined these risk factors, investigated "general" psychosocial changes from Baseline through 12 months. Results indicated that significant change occurred in global psychosocial functioning which was accounted for in some measure by length of time in the program. As the HFM program experiences an increase in families with multiple risk factors, it is important to understand the enhanced risk level this represents. Therefore, it is very encouraging that significant changes in global psychosocial functioning were accomplished by the HFM program. It is also evident that, due to covariant nature of these factors, decreases accomplished for one factor may reduce the risk of another. For example, if the program decreases depressive symptomology among its mothers, there could likely be a reduction in their stress associated with parenting.

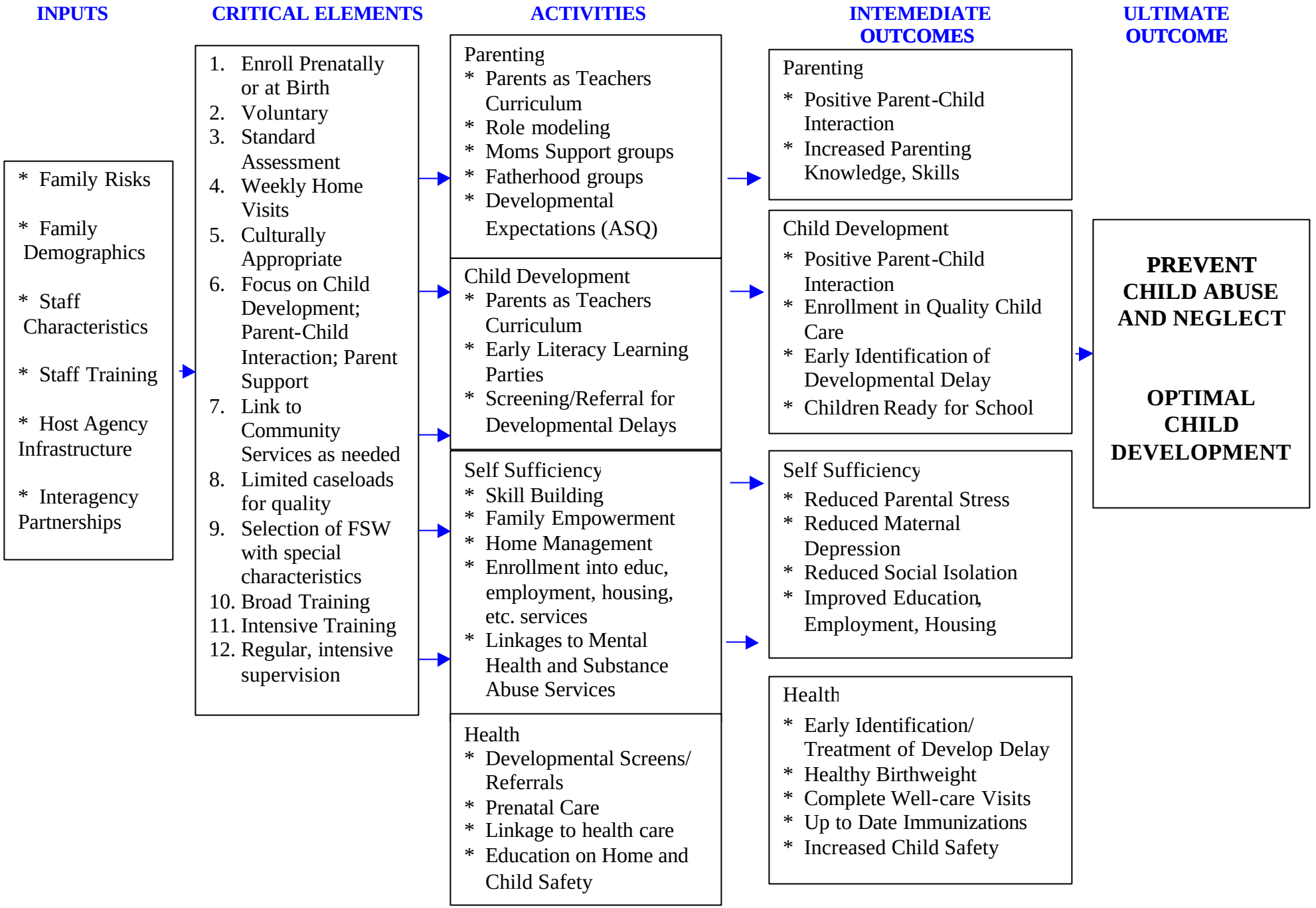
Further analysis of factors affecting outcomes examined characteristics of the HFM program graduates, ostensibly the most successful participants. A profiling of the most successful HFM participants revealed that the most successful HF participant is most likely to be Hispanic, with Spanish as the primary language, be a high school graduate and employed when they enter the program. These participants likely live with relatives, not with either a husband or father of the baby. They also are more likely to have had a primary care provider at entry and to have higher scores on the HOME and KIDI than the overall sample of participants. These graduates on the average remained in the program for 4 years, receiving an average of 85 home visits. In contrast, the majority of families (80%) for which data is available are enrolled in the program for up to 2.5 years, with enrollment numbers steadily decreasing after that and the average length of participation in the program is 1.6 years.

However, more program participation does not necessarily lead to better outcomes. Dosage analysis indicated that the participants who received the greatest number of home visits had the lowest scores on the HOME at follow-up datapoints. This finding is consistent with other studies examining dosage effects with at-risk populations. Typically, the highest risk families at Baseline tend to seek out more program service and are in crisis more frequently. These families, although they demonstrate improvement, have poorer performance at follow-up timepoints also. These seemingly contradictory findings confirm the mediating influence of initial risk status on both program participation and achievement of positive outcomes. The flexibility of the HFM service level system and the voluntary nature of the program allow families with varying risk levels to progress at different rates, receive a wide range of service intensity and duration, and leave the program when they have reached their own goals. Findings suggest that for the majority of families who enter the program at moderate to high risk, improvement in health and developmental status, as well as parenting knowledge and skill can be accomplished in 6 to 12 months of enrollment. The significant reduction of psychosocial risk (i.e., depression and parental stress) is accomplished in 12 to 24 months of participation.

In conclusion, HFM's impressive performance in achieving positive outcomes can be attributed to both program and participant characteristics. At the core of this success, where inevitably the match is made between these two, is the relationship that develops between the Family Support Worker and the family. It is within the context of that rapport that the essential work to affect change occurs. The mediating influences of the participant's demographic, cultural and risk profile are recognized here. The HFM program has achieved success by responding to these while it has also maintained a strong program foundation and infrastructure; highly committed staff who receive regular and high quality supervision, and a commitment to quality through evaluation findings. It has further been HFM's good fortune to be housed at the The Family Services Agency, Inc, who has provided ongoing support, resources, and advocacy on HFM's behalf. As a result, HFM has been able to leverage its successes into sustained political support and funding, as well as additional resources for expansion and program enhancements.

APPENDIX A

HFMontgomery Logic Model



APPENDIX B

HFM Measures Descriptions

1. Home Observation for Measurement of the Environment (HOME) 3rd Edition, 2001

Auhors

Bettye M. Caldwell & Robert H. Bradley

Description

The HOME is used to measure the quality of the home environment. Currently, there are three versions of the HOME, Infant/Toddler (Ages 0-3), Preschool (Ages 3-6), and Elementary (Ages 6-10). It has a strong track record in previous research and has been used with a variety of different racial/ethnic groups. Studies using the HOME have repeatedly found that cognitive stimulation in the homes of young children is associated with language development, intellectual development, and academic achievement.

Items/Scales

The Infant/Toddler HOME (IT-HOME) is comprised of 45 items designed to assess the following domains: (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) parental involvement with child, and (6) opportunities for variety in daily stimulation. Scores are categorized in three groups: 0-25 - Lowest Quartile; 26-36 - Middle Half; and 37-45 - Upper Quartile.

The Early Childhood HOME (EC-HOME) is comprised of 55 items designed to assess the following domains: (1) learning materials, (2) language stimulation, (3) physical environment, (4) emotional and verbal responsivity, (5) academic stimulation, (6) parental modeling of desirable and acceptable behavior, (7) provision of variety and experiential enrichment, and (8) acceptance of child's behavior. Scores are categorized in three groups: 0-29 - Lowest Quartile; 30-45 - Middle Half; and 46-55 - Upper Quartile.

Population

HOME data was gathered on 174 families in Little Rock, Arkansas. One-third were welfare families, and fathers were absent in 29% of the cases. The average educational level for mothers and fathers was 12.6. Mean Total score for this normative sample was 31.2 (SD-7.3; SEM-2.6). It is designed as a screening instrument to be used with families of infants and toddlers, and has been used extensively in research with the general population, high-risk families, and low SES families. It is intended to be non-discriminatory in content and therefore suitable for use with a variety of cultural populations.

Administration

The HOME is a semi-structured, sixty-minute observation/interview which is conducted in the child=s home. It may be administered by a paraprofessional in the home at a time when the child is awake and can interact with his/her mother or primary caregiver. Approximately 70% of information regarding the child=s environment is attained through interview, while 30% is acquired through observation.

Reliability

?? Internal Consistency - .89

Validity:

?? Correlations between HOME and SES factors - .08 - .57
?? Correlations between HOME and Mental Test scores - .301- .718
?? Correlations between HOME and Language Scores - .39 - .61

Source

Bettye M. Caldwell & Robert H. Bradley, University of Arkansas at Little Rock, College of Education, 2801 South University, Little Rock, AR 72204 (Fax: 501-569-8503)

Ordering information:

HOME Inventory, LLC
c/o Lorraine Coulson
13 Saxony Circle
Little Rock, AR 72209
(501) 565-7627 (Phone & Fax)
lrcoulson@ualr.edu

2. Knowledge of Infant Development Inventory: (KIDI / KIDI-P)

Author

David MacPhee, Ph.D.

Description

The Knowledge of Infant Development Inventory (KIDI) and the Knowledge of Infant Development Inventory – Preschool Version (KIDI-P) are designed to assess one=s knowledge of parental practices, developmental processes, health and safety awareness, and infant/child norms of behavior. The use of this instrument in evaluation is supported by its prior use in the Infant Health and Development Study (IHDS) where it demonstrated strong psychometric properties and proved sensitive to intervention effects. Studies also indicate that the KIDI is strongly correlated to the HOME, especially to scales related to age-appropriate stimulation.

Items/Scales

The KIDI consists of 58 items, which reflect parents= knowledge of how infants and children behave, how they develop, and how to best care for them. Three responses are provided

for each item: "Agree", "Disagree", and "Not Sure."

Populations

Standardization was established using data collected from 198 pediatricians, 100 PhD child psychologists, 320 college students in child psychology, and 256 mothers from all social classes. Half the mothers had more than one child and their mean education level was 13.5 years. The average mother=s age was 26 years, 77% were married, and 59% were Caucasian. The KIDI is designed to be accessible to individuals without extensive education; it is written at the 6^{th} to 7^{th} grade reading level.

Administration

The KIDI may be self-administered or administered by interview. It is used as a baseline measure to obtain information on parental knowledge of infant development, and at follow-up points of 6, 12, and 24 months. It takes an average of 30 minutes to complete.

Reliability

- Internal: Alpha coefficient - .82
- Test-Retest: two-week retest coefficient - .92

Validity

- Content: Most issues commonly found in the literature on parent concerns or well-child care are included on the KIDI.

Source

David MacPhee, Ph.D., Associate Professor, Human Development and Family Studies, Colorado State University, Fort Collins, CO 80523-1570. (970-491-5558)

3. Healthy Families Maryland Safety Checklist

Description

The Safety Items included on the HFMD Safety Checklist measure a parent=s knowledge and use of safety practices within the home and car. It focuses on parents= awareness of potential safety hazards in the child=s environment.

Items/Scales

This 8-item instrument measures such hazards as access to poisons, stairs, windows, and electrical outlets. Parents are also asked about presence of smoke alarms and age-appropriate automobile safety restraints.

Administration

The safety items are administered in an interview format and can be done during the same visit in which the HOME is conducted. It takes approximately 5 minutes to complete.

4. Center for Epidemiologic Studies - Depression Scale (CES-D)

Author

L.S. Radloff

Description

The CES-D scale is designed as a short self-report screening instrument for predicting risk for depression. It may be administered as an interview, with respondents referring to response cards as they reply to a series of questions.

Items/Scale

The CES-D consists of a series of questions designed to assess depressive symptomology by asking the frequency with which each of 20 events was experienced during the previous week. Parents reply by indicating one of four possible response options: *Rarely or none of the time, Some or a little of the time, Occasionally or a moderate amount of the time,* and *Most of the time.* The coded values for the 20 items are summed into a total score. High scores (= >16) are considered indicative of risk for depression.

Populations

The CES-D was tested in household interview surveys and in psychiatric settings and was found to have very high internal consistency. The factor structure of the CES-D and its reliability and validity were found to hold across a variety of demographic characteristics in samples of the general population tested.

Administration

The CES-D, when administered in an interview format, takes approximately 10 minutes to complete.

Reliability

- Correlation with NIMH Depressed Mood Subscale of General Well-Being Scale-.71
- High test-retest correlation
- Shown to detect adult patients with depressive symptoms fairly accurately in primary care settings
- Sensitivity of 89% and specificity of 70% when related to standardized psychiatric instruments, such as the DIS

Validity

- Construct validity supported by demonstrated associations with related constructs.
- Good discriminant validity

Source

L.S. Radloff. Applied Psychological Measurement, 1, 385-401.

5. Parenting Stress Index - Short Form (PSI/SF)

Author

Richard R. Abidin, EdD

Description

The PSI/SF measures the three primary components of the parent-child system for the purpose of early identification of stressful circumstances related to parenting. It focuses on the parent, the child, and their interactions.

Items/Scales

The PSI/SF contains 36 statements which are divided into three subscales: Parental Distress, Parent-Child Dysfunctional Interaction, and Difficult Child. The Parental Distress subscale assesses the distress a parent is experiencing as a result of his/her role as a parent. The Parent-Child Dysfunctional Interaction subscale focuses on the parent's perception that his/her child does not meet expectations and interactions with the child are not reinforcing his/her as a parent. The Difficult Child subscale looks at basic behavioral characteristics of children that make them either easy or difficult to manage. The statements are rated on a 5 point Likert scale, ranging from "strongly agree" to "strongly disagree." High scores in any of these subscales may indicate problems with adjustments to parenting, weak or threatened parent-child bonds, or the need for professional assistance in child management strategies. Parents who obtain a Total Stress score of 90 or above are considered to be experiencing clinically significant levels of stress.

Administration

The PSI/SF may be administered by clinicians and researchers who work with parents and children. It is given individually in an interview format, and takes approximately 20-30 minutes to complete.

Reliability

- Internal: Alpha coefficient - .91
- Test-Retest: six month retest coefficient - .84

Validity

- Correlation between PSI/SF and PSI - .94

Source

Psychological Assessment Resources, Inc., PO Box 998, Odessa, FL 33556 (1-800-331-8378)

6. Maternal Social Support Index (MSSI)

Author

John M. Pascoe, MD

Description

The MSSI is a brief questionnaire that is used to assess the degree of support that a mother is receiving from significant others, neighbors, relatives, and community groups.

Items/Scales

The MSSI consists of 18 questions which focus on the following areas: Help with Daily Tasks, Satisfaction from Visits with Relatives, Help with Crises, Emergency Child Care, Satisfaction from Communication with Partner and Another Support Person, and Community Involvement. The items may be grouped into two clusters, child care and non-child care. Scores under 20 are generally considered to be indicative of maternal risk for social isolation.

Populations

The MSSI may be used for clinical research or for obtaining a structured assessment of social support in a clinical setting. If mothers are pregnant for the first time (primigravida), they are asked if they can ANTICIPATE anyone helping with the tasks referenced in the child care items.

Reliability/Validity

Yuk C. Chan (1994) found the MSSI to be the best single predictor of child abuse when compared to the Life Stress Scale, the Parenting Stress Index, and the number of children in the family.

Source

John M. Pascoe, MD, University of Wisconsin, Dept. Of Pediatrics, 600 Highland Ave., H5/440 Clinical Science Center, Madison, WI 53792 (608-263-9405)

7. Ages & Stages Questionnaire (ASQ)

Authors

Jane Squires, LaWanda Potter, and Diane Bricker

Description of the Measure

The ASQ is a child-monitoring system designed to identify infants and young children who demonstrate potential developmental problems. Questionnaires are used when the child is 4, 8, 12, 16, 20, 24, 30, 36, 48, and 60 months of age, with optional forms available at 6 and 18 months. Children are identified as needing further testing and possible referral for early intervention services when scores fall below designated cutoff points. In addition to being used as a screening mechanism, the ASQ is a valuable tool for family support workers to use in

teaching parents appropriate expectations for their children's developmental stages as well as play strategies to foster language, motor skills, and cognitive growth.

Items/Scales

Each questionnaire consists of 30 developmental items divided into five areas: communication, gross motor, fine motor, problem solving, and personal-social. For each item, the parent responds "Yes" to indicate that the child performs the behavior specified, "Sometimes" to indicate an occasional or emerging behavior, or "Not Yet" to indicate that the child does not yet perform a specified behavior. Responses are converted to point values, which are totaled and compared to established screening cutoff points.

APPENDIX C

Healthy Families Montgomery School Readiness Pilot Report

I. Introduction

The *School Readiness Pilot* is being conducted in collaboration with the Healthy Families Montgomery site at the Family Services Agency, Inc in Gaithersburg, MD. Launched in July 1996, Healthy Families Montgomery (HFM) is in its seventh year of program operation, allowing for the program's first and second year cohorts of babies to now be of kindergarten age. Efforts to assess the school readiness of HFM participants included: administration of the DIAL 3 and Ounce Scale to current participants' children; contacting first year families for permission to access their children's kindergarten readiness scores; developing a strategy to access scores from Maryland State Department of Education (MSDE); and attempting to collect first year screening information from the health department in order to establish a comparison group.

This report summarizes results of the DIAL 3 and Ounce assessments of FY '02 HFM participants. Unfortunately, attempts to secure permissions from first year families to access their children's readiness scores were unsuccessful. All solicitation letters for the release of information were returned as undeliverable, indicating all the families had moved and no forwarding address was available. Also, attempts to establish a comparison group were thwarted by health department issues. As a result of these obstacles encountered in FY '02, a different approach will be implemented for the FY '03 School Readiness Pilot and evaluation.

The evaluation component was designed to capture the impact of the HFM program on its earliest cohorts of children in preparing them to be ready for school. Additionally, the evaluation focused on assessing the success of the program in preparing current three- and four-year olds for school. As these children are quickly approaching kindergarten age, it was essential that the program have formative information regarding the readiness of its oldest participants. Some of the research questions the evaluation hoped to be able to answer include:

- Are HF kids ready for school? Are they more ready than a matched sample?
- In what domains are they strong or weak? How do their trends compare to matched sample and/ or general population?
- How many are in Special education as compared to a matched sample and general population?
- Does ethnicity, Limited English Proficiency, and economic status impact performance as a covariate? How significant is this impact for HF kids vs a matched sample or general population?
- Were HF youth more likely to have formal child care one year prior to kindergarten? How did this impact readiness as a covariate?

✍ What aspects of the Healthy Families program/curriculum promote school readiness? What school readiness domains are most affected by the HF program activities?

II. Assessment of Current HFM Three- and Four-Year Olds

Three to five-year olds in the Healthy Families Montgomery (HFM) Program were screened individually using the Developmental Indicators for the Assessment of Learning – Third Edition (DIAL-3). This instrument was chosen due to its strong correlation with the Early Childhood Observation Record (ECOR) and the Maryland Model for School Readiness (MMSR), both used in assessing readiness skills in Montgomery County. The DIAL-3 is designed to identify children who may be in need of further developmental assessment and is based on competencies that PreK, Kdg, and 1st Grade teachers indicate are necessary for success in regular classroom settings. The measure yields scores that are categorized by two overall screening decisions: "OK" or "Potential Delay." As seen in **Table 1** below, the skills directly assessed on the DIAL-3 fall into three domains: Motor, Concepts, and Language.

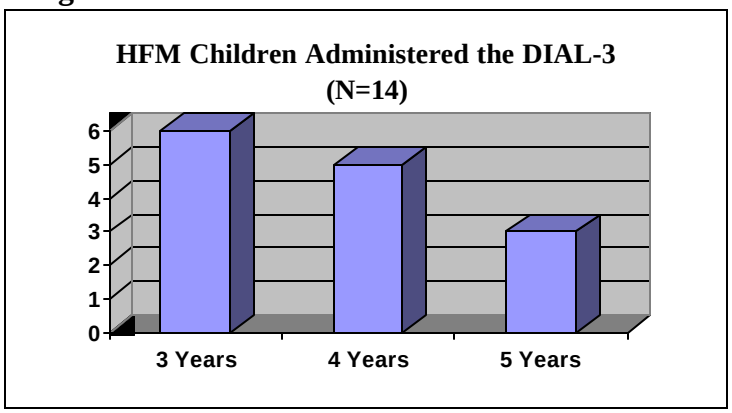
Table 1

Area	Skills	Relation to School
Motor	Gross, Fine Perceptual motor, coordination	Writing
Concepts	Spatial, counting, colors Memory, stored knowledge Language	Math
Language	Receptive/Expressive Letters/sounds Stored knowledge	Reading

Self-Help and Social Development skills are assessed using parental observations recorded on the Parent Questionnaire supplement. This form also allows parents to record information regarding their child's health and environment, while giving them the opportunity to express any concerns they have.

Two HFM Supervisors and one HFM Family Assessment Worker (FAW) administered the DIAL-3 to14 participants during June and July 2002. The group consisted of eight girls and six boys, ages 3-0 to 5-3. The ages of the children are displayed in **Figure 1** below.

Figure 1



Results of DIAL-3

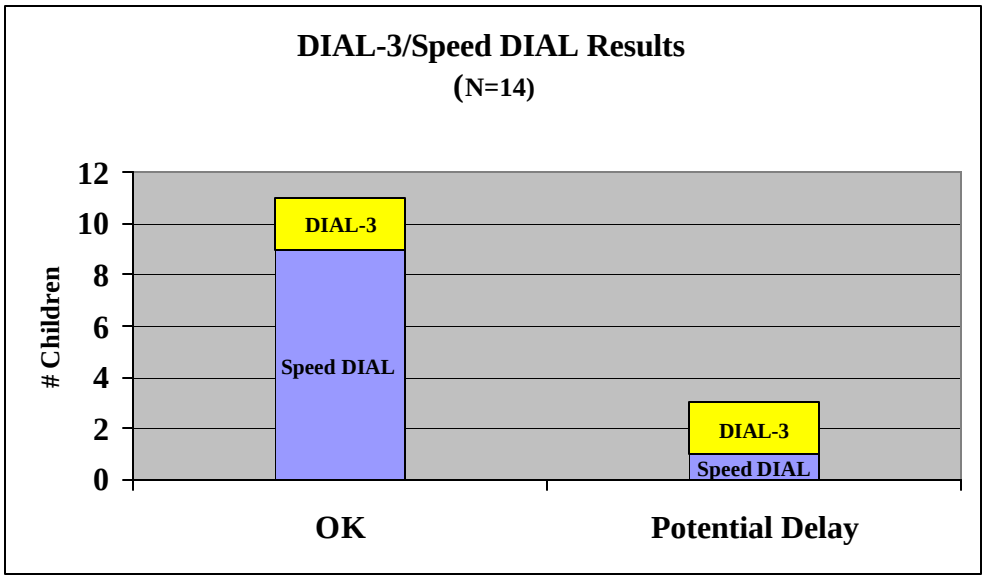
The complete DIAL-3 battery was administered to four children. Feedback from the Supervisor who served as testing coordinator revealed that completing the measure in a home visiting situation was challenging, as administration took an average of one hour and the children had difficulty attending for that length of time. It was then decided to use the Speed DIAL, an abbreviated form of the DIAL-3, for subsequent administrations in an effort to solicit more attentive behavior on the part of the children. The remaining ten children, therefore, were administered the Speed DIAL.

The parameters for interpretation of the DIAL results are determined by establishing the *cutoff level* used to identify those children who may be in need of further assessment. This level defines the approximate percentage of children whose scores fall in the lower end of the continuum when compared to children their own age. These are identified as Potential Delay. The cutoff level for this administration was set in the middle range, which identifies those children who score more than 1.5 standard deviations *(SD)* from the mean (approximately 7% of the population). Using these guidelines for identifying possible developmental delay, 79% of children (n=11/14) earned scores resulting in an overall screening decision of "OK."

Two of the four children who received the complete battery earned scores that placed them in the developmentally "OK" range in all areas. One child's performance in the Language Area earned a score in the Potential Delay range, while the remaining child earned scores indicating Potential Delay in all three skill areas measured directly (Motor, Concepts, and Language). All four children scored "OK" in the parent-reported skill areas of Self-Help and Social Development.

Of the ten children who were administered the Speed DIAL, only one earned a score indicating "Potential Delay." The Speed DIAL, which consists of 10 DIAL-3 items from the Motor, Concepts, and Language Areas, yields only a total score. Although only one score is derived on the Speed DIAL, its solid reliability and correlation with the DIAL-3 allow for comparability between the two measures. Aggregate results are, therefore, illustrated below in

Figure 2



Comparison of DIAL-3 and Ages and Stages Questionnaire (ASQ)

As recipients of Healthy Families services, the children are regularly screened using the Ages and Stages Questionnaire (ASQ). In order to gain further insight into the developmental abilities of this group of children, their DIAL results were compared with their ASQ results. ASQ information was available on 13 of the 14 children; one child missing ASQ results scored "Potential Delay" in the area of Language on the DIAL. The remaining two children who scored "Potential Delay", one in all three areas and the other on the Speed DIAL, had earned passing scores on their most current ASQ. Each did, however, have at least one area of concern on a previously administered ASQ. No other ASQ scores indicated risk for developmental delay.

As stated earlier, administration of the DIAL-3 in a home visiting situation presented challenges for the HFM staff. Some potent observations were made by one of the Program Supervisors involved in conducting these screenings. Several children who had difficulty with tasks on the DIAL-3 had done well on the ASQ. HFM staff examined possible reasons for this discrepancy. The basis for these differences appears to be centered on two factors. First, the format for administering the ASQ is very flexible while the DIAL-3 must be conducted in a more structured manner. The ASQ encourages FSWs to paraphrase items, rephrase questions, and adapt materials in terms of the individual family's culture and values. In contrast, the DIAL-3 emphasizes the importance of using verbal directions only as provided in the manual, refraining from additions or deletions to the text. The second factor cited by HFM staff is the fact that while the ASQ allows for parental report regarding skill acquisition, the tasks on the DIAL-3 require direct observation by the test administrator. The format of the ASQ system as it is used in the home visiting situation provides opportunity for FSW follow-up on skills not observed

(though reported) during administration. DIAL-3 scores, however, are contingent upon direct observation of the test administrator.

In considering the feedback from the staff regarding the use of these two measures, each clearly has its advantages and disadvantages. While the ASQ offers greater flexibility in its administration, the HFM supervisor reported that "reliance on parental report when there is not agreement on definition (i.e., understanding concepts) may lead to misleading information on how the child is progressing developmentally." On the other hand, while the lengthy administration of the DIAL-3 requires a very structured format, the HFM staff felt that it yielded important developmental information valuable in initiating referral for further assessment.

The results of both screening measures appear to indicate that the HFM program plays a vital role in providing opportunities for participating children to develop the skills necessary for school readiness. When the DIAL-3 results of the three children who scored "Potential Delay" were examined in light of their individual family circumstances, several illuminating factors were revealed. One child, who earned a delayed score only in the Language area had, in fact, made remarkable progress during her one year of HFM program enrollment. This particular family, newly immigrated at intake, spoke no English and experienced severe acculturation issues. Home visiting services, coupled with a recent referral to Montgomery County's EEEP program, have been a major factor in the tremendous strides this child has made in the past year. A second child, scoring "Potential Delay" on the Speed DIAL, appears to be suffering from Attention Deficit Hyperactivity Disorder (ADHD) and has been referred for EEEP services, although placement is pending space availability. The HFM program is working with this family in addressing the significant disorganization in the home situation and its impact on the child's behavioral development and skill acquisition. A third child earned scores indicating "Potential Delay" in all three skill areas: Motor, Concepts, and Language. This particular child was long suspected by HFM staff to be experiencing delays, but due to the mother's reluctance to consider the recommendation of more in-depth assessment and possible intervention services, his delays remained undiagnosed. After observing her child's attempts at tasks required on the DIAL-3, however, this mother was motivated to accept a referral to Child Find. It is clear that in all three cases of potential delay, the HFM program has been instrumental in providing critical support for developing fundamental readiness skills.

HFM staff stressed the importance of environmental factors, as opposed to organic or developmental disabilities, in contributing to the difficulties many children experienced with items on the DIAL-3. They noted that children enrolled in child-care consistently performed better than those with more limited out-of-home experience. The effects of inadequate exposure to environments that stimulate language development were evident in the results obtained. Additionally, the HFM supervisor offered further perspective on the underlying role that certain environmental factors play in compromising school readiness. She cites the following as primary considerations:

- Poor parent-child interaction is evidenced in lack of parental responsiveness.
- Lack of routine in the home results in erratic schedules. Severe overcrowding in some homes compromises privacy and quiet learning time.

- Acculturation issues exist resulting in isolation experienced by recent immigrants. Many undocumented parents are reluctant to seek social services.
- Poverty often compels parents to hold multiple low-paying jobs, limiting parent-child time together.
- Parents' low education levels often result in illiteracy, not only in English, but in many immigrants' primary language. This was evident in the limited vocabulary and lack of basic concepts demonstrated by many parents during administration of the DIAL-3.
- Parental mental health issues often go untreated. HFM staff are aware that a significant number of mothers experience depressive symptomology, as measured on the CES-D; however access to mental health care, particularly bilingual care, is limited. Some mothers exhibit overt symptoms, while others refuse treatment. Additionally, initial assessments often suggest the presence of Post-Traumatic Stress Disorder, although this has been left largely unaddressed.
- Although children enrolled in private child-care performed better on DIAL-3 tasks, many children are placed in unregulated child-care for over 60 hours per week. These situations do not provide adequate opportunity for developmentally appropriate activities.

In bringing these serious underlying issues to light, the HFM staff hopes to develop a more "needs-driven" focus regarding service delivery and referral. They recognize the urgency in addressing the many stressors that ultimately weaken the core foundation of school readiness. The basic needs of the family, such as mental health, acculturation, literacy, and proper child-care, must be met, while promoting healthy emotional growth. According to the one supervisor, "Utilizing a model of early development that emphasizes the acquisition of physiological regulation of parent and child, contingent and reciprocal parent-child interactions, differentiation of needs, affects, and roles of parent and child should be considered to address underpinnings of school readiness." Additionally, she strongly suggests that staff receive training in developing and assessing healthy parent-child relationships.

Introduction of the Ounce Scale Assessment System

In emphasizing positive parent-child interaction as key to pre-academic skill development, the staff is interested in re-examining the tools used to measure school readiness. Experienced with using both the ASQ and the DIAL-3, the HFM staff recommends reconsideration of their use as screening tools for identifying developmental delay. The program was recently asked to pilot a new measure for tracking readiness skills. Currently under development, the Ounce Scale Assessment System is an observational assessment for evaluating child development from birth to age 3½. In focusing on the parent-child relationship and encouraging parental responsiveness and communication, this three-component system provides an ongoing interactive structure for parents to document their child's development, which dovetails with observation records and profiles kept by the program. According to HFM staff, this measure, as well as Work Sampling, appear to be well aligned with the MMSR.

III. Summary

The *Healthy Families Montgomery School Readiness Pilot* was designed to assess past and current success of the HFM program in preparing children to be ready for school. Initial efforts focused on identification of an effective readiness tool for children under five years of age that was aligned with the Maryland State Department of Education (MSDE) model for school readiness. It was critical to identify a measure that correlated with the Maryland Model for School Readiness (MMSR) and the Work Sampling System (WSS) used by MSDE. Moreover, the measure needed to be appropriate for administration within a home visiting context. As such, the DIAL-3 was selected for its strength-based approach, educational focus, and overlap with the MSDE model. Simultaneously, HFM was asked to pilot the newly developed 'Ounce Scale', providing opportunity to compare results across the DIAL-3, the Ounce Scale, and the Ages and Stages Questionnaire (ASQ) – the screening tool typically used by HFM.

Efforts to assess HFM's past success were thwarted by difficulties in contacting first year families for permission to access their children's kindergarten readiness scores. Additionally, attempts to collect first year screening information from the health department to establish a comparison group were unsuccessful. Parallel efforts at the State level were more successful and a strategy was developed to obtain aggregated readiness data from MSDE on HFM's earliest cohorts of children, who have by now entered kindergarten.

HFM's readiness assessments of current participants using the DIAL-3, the ASQ, and the Ounce Scale provided vital information regarding the utility and validity of each measure in a home visiting environment. Further, it illuminated to staff and supervisors the underlying role that certain environmental factors play in compromising school readiness. The DIAL-3 was individually administered to 14 children who currently participate in the Healthy Families Montgomery program. Conducting this measure in a home visiting setting proved challenging to the staff for several reasons. Many of the tasks presented on the DIAL-3 were difficult for the children, particularly those who are not enrolled in child-care outside the home. This resulted in lengthy administrations, which taxed the attention spans of many of the children. Although future use of the DIAL-3 as a screening tool is uncertain, it did provide information that resulted in several essential referrals.

Although only a small sample of the HFM target children participated in the DIAL-3 screening, results indicated that the program plays a major role in providing children with opportunities for fundamental skill development. With 79% (n=11/14) of children identified as developing satisfactorily with no serious difficulties foreseen, it appears that the program is successful in addressing environmental factors impacting skill acquisition and securing services for those children who are in need of more intensive, needs-specific intervention.

Comparative analysis of the three different measures used by HFM to assess readiness and identify developmental concerns provided valuable information. While the ASQ offers greater flexibility in its administration, its reliance on parental report compromises its validity resulting in underreporting of developmental risk. On the other hand, while the lengthy administration of the DIAL-3 requires a very structured format, it yielded important

developmental information valuable in initiating referral for further assessment. These results prompted HFM to reconsider use of either tool for identifying developmental delay. The Ounce Scale, as well as Work Sampling, appear to offer a potentially valid alternative that is well aligned with the MMSR. The feedback and recommendations of the HFM staff highlight critical issues to consider in evaluating school readiness. The environmental factors impacting acquisition of readiness skills must be addressed in programs that emphasize the underlying elements fundamental to healthy parent-child relationships. Likewise, the tools used to assess school readiness must evaluate these basic factors, as well as skills compatible with those measured on the MMSR.

Based on the findings obtained on readiness assessments of current HFM three- and four-year olds, the challenges experienced by staff in administering readiness measures in the home visiting environment, and the barriers encountered to obtain readiness data on HFM Year I and II cohorts, the following recommendations are made for FY '03:

- Extend FY'02 readiness efforts to include additional rising kindergarten cohorts. Kindergarten Readiness scores can be requested in aggregate reporting format from MSDE.

- Continue attempts to acquire copies of initial screens and identify a control group through the Health Department.

- As a backup strategy, efforts should also be made at the State level to identify a matched sample of kindergarten children, obtain aggregated results for that sample, and conduct comparative analysis of both groups' results.

- HFM program should utilize procedures to secure a 'Release of Information' for kindergarten readiness scores from all current participants.

- Continue to conduct readiness assessments on current participants by HFM staff as part of their ongoing developmental screening and participation in the Ounce Scale/WSS pilot. These scores can be collected by the evaluators for analysis of program success in preparing children to be ready for school.

- Data on referrals to Infants and Toddlers Program; participation in child care or preschool programs; and family data on ethnicity, limited English proficiency, parent education levels, and scores on HFM parenting measures should be collected and included as covariates in school readiness analysis.

APPENDIX D

Healthy Families Montgomery
Goals and Objectives

In addition to the goals and objectives set forth in the original grant proposal, goals were developed by the state of Maryland, incorporating objectives associated with state indicators on family and child well-being. The full array of outcomes measured by HFM, as well as the state of Maryland *(italicized)* includes:

I. Promote Preventive Health Care

1. 95% (State Target - 90%) of participating children will have a primary health care provider or will complete certification for Medicaid within 2 months of enrollment.
2. 90% of participating children will receive all immunizations on schedule and by age two years.
3. 75% of mothers will not have additional births within two years of target child's birth.
4. 75% of enrolled mothers will complete post-partum care.*
5. 80% of all mothers enrolled within their first two trimesters (6 months of pregnancy) will meet the expected number of prenatal care visits as recommended by the Kotelchuck Index of Received Services schedule.
6. 90% of mothers enrolled within the first two trimesters will deliver newborns weighing 2500 grams (5.5 lbs.) or more.
7. The infant mortality rate for target children will be less than or equal to the state average.
8. The number of injuries (motor vehicle accidents, accidental poisonings, ingestions, intentional or undetermined injuries) to target children aged 0-4 that result in a health care encounter will be monitored.
9. The rate of fatalities of target children aged 1 - 4 will be less than 36 per 1000.

II. Optimize Child Development.

1. 95% of children will demonstrate normal child functioning through well-baby check-ups, parent-child interaction, child development measures, and ASQ developmental screening.
2. 100% of children will be screened for developmental delays.
3. 100% of children who screen at risk for developmental delay will be referred to the Montgomery County Infant and Toddlers Program (MCITP) for assessment/services (parental consent required)

III. Promote Positive Parenting and Parent -Child Interaction.*

4. 85% of participants will score at or above normal range for knowledge of child development after 1 year and annually thereafter as measured on the KIDI.*
5. 85% of participants will score at or above program-determined level for knowledge of child safety after 1 year and annually thereafter as measured on Safety Items.*
3. 85% of participants will demonstrate positive parent-child interaction after 1 year and annually thereafter as measured on the HOME.*

IV. Family Self-Sufficiency.

6. 75% of families will have improved self-sufficiency within 12 months of enrollment as measured by improved housing, education, or employment status.
7. Out of home placements for the Healthy Families target children will be monitored.
8. Paternal participation with the target child will be monitored.

V. Reduce Incidence of Child Maltreatment.

9. 95% *(State Target – 85%)* of families with no previous CWS history will not have founded reports to Child Welfare Services while enrolled.
10. The number of injury-related deaths of target children aged 0 – 4 will be monitored.

VI. Satisfaction with Care (HFM Process Measure)

11. Participant satisfaction with the program will be assessed.

*These goals/objectives were not included in the original grant proposal.

APPENDIX E

HFM Service Level System Descriptions

ACTIVE LEVELS		
Level	**Definition**	**Number of Home Visits Due**
1-P1	Up to 7 months prenatal.	2 per month (biweekly)
1-P2	7 months prenatal to birth.	4 per month (weekly)
1-SS	Special Services.	PRN (as needed)/1 per week minimum
1-D	Parent has a disability.	As possible
1	Begins at birth of the baby.	4 per month
2	When criteria for promotion are met.	2 per month
3	When criteria for promotion are met.	1 per month
4	When criteria for promotion are met.	1 per quarter
W/S	Family working or in school full-time (family requests less frequent visits).	2 per month
XA	Creative Outreach - Families on creative outreach. (FSW has been unable to locate or have regular contact with family, or family no longer wishes service. Families usually stay on XA for 12 weeks.)	As possible
XB	Service Temporarily Suspended-Families temporarily out of the area (> or = to 2 weeks).	None
XC	Inactive - Pending closing. Families who have moved out of the area are placed on XC. Cases are kept open for three months in the event that the family moves back to service area.	None
XD	Emergency Coverage - FSW unavailable for > or = to 2 weeks-phone emergency coverage available. Also ASQs and Evaluation instruments completed by other staff.	As possible
INACTIVE LEVEL		
C	Case Closed.	

APPENDIX F

HEALTHY FAMILIES MONTGOMERY STAFF TENURE DATES
1996 – 2002

NAME	TITLE	% TIME	START DATE	EXIT DATE
Brenda Barnes-Tucker	Program Coordinator	100	1/96	6/96
Rita Pridgen	FSW III	100	02/11/96	09/28/01
Janet Tkaczyk	Administrative Director	100	03/06/96	
Maria Paganini	DHHS/FSW	50	04/01/96	05/29/98
Katrina Delaney	DHHS/FSW	50	04/02/96	07/31/96
Janet Ceasar	Program Director	100	07/05/96	12/15/00
Amy Hernandez	DHHS/FSW	50	12/09/96	02/27/98
Peggy Matthews-Nilsen	Supervisor	50	04/16/97	10/16/97
Luz Escobar	FSW/FAW	100	05/06/97	
Lucia Torres	FSW III	100	05/06/97	07/15/02
LeShaun Williams	FSW	100	05/06/97	03/31/98
Liz Craig	Supervisor	100	10/28/97	07/02/99
Marlene Weiss	DHHS/FSW	100	04/01/98	02/01/99
Rhonda Banks	FSW	100	06/29/98	07/14/00
Gloria Iannini	FSW III	100	01/21/99	
Tanya Brown	FSW	100	05/15/99	09/21/01
Noelle Cochran	FSW	100	09/13/99	08/09/00
Mayra Luna	FSW	100	09/13/99	02/23/01
Georgia Rios	FSW	100	09/13/99	07/17/00
Jessica Robertson	Administrative Assistant	100	09/13/99	
Estela Villa-Galeano	FSW	100	09/13/99	10/06/00
Cheryl Grant	Supervisor	100	10/04/99	07/07/00
Jennifer Simpson	Early Intervention Specialist	50	11/22/99	11/2000
Jodi Glick	Supervisor	100	12/01/99	05/2000
David Rocha	Dads Coordinator	100	12/16/99	07/14/00
Elizabeth O'Connell	Nurse	100	03/01/00	11/2000
Marta Aragon	FSW I	100	04/16/00	
Ashley Poindexter	FSW I	100	10/30/00	
Adah Clarke	FSW I	100	10/30/00	
Peggy Easley	Program Director	100	11/06/00	
Hilda Filomeno	FSW II	100	01/16/01	
Stacie Banks Hall	Supervisor	100	02/16/01	05/15/01
Cynthia Samples	Supervisor	100	02/26/01	
Carmen Aparicio	FSW I	100	06/01/01	
Victor Quiroz	Dads Coordinator	100	06/01/01	02/28/02
America Caballero	Supervisor	100	07/23/01	
Maritza Buitrago	FAW	100	08/06/01	
Patricia Paredes	Nurse	100	09/04/01	
Helma Irving	Early Intervention Specialist	50	09/10/01	
Leigh-Ann Nauser	FSW I	100	12/03/01	
Melodye Berry	FSW I	100	12/03/01	