

# IN-HOME VISITATION PROGRAMS: A REVIEW OF THE LITERATURE

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## Summary

At least 550,000 U.S. children are currently enrolled in home visitation programs that serve pregnant women and families with young children. The programs that serve these children have a variety of goals, including preventing child maltreatment, promoting effective parenting, improving pregnancy outcomes, and advancing the social, emotional and intellectual development of children. While the programs differ in many dimensions, such as the population that they serve, how they deliver their services, and the outcomes that they measure, they are rooted in common beliefs. In particular, they believe that parents play a critical role in shaping the outcomes of their children and that early childhood is the crucial time to provide support. Moreover, they believe that resources should be brought to families – through visits to the home – rather than left in the community for families to seek individually.

This report documents and compares the major features of five nationally recognized models of home visitation, four of which are currently implemented across the nation:

- **Hawaii Healthy Start**, which serves families identified from a universal screening of medical records for children at risk of abuse or neglect;
- **Healthy Families America**, which evolved out of Hawaii Healthy Start and is currently implemented at 270 sites nationwide;
- **Nurse Home Visitation Program**, which evolved out of two trial sites (in Elmira, NY and Memphis, TN) and is currently replicated at 140 sites in the U.S.;
- **Parents as Teachers**, which is a universal program that focuses specifically on parents and their role in determining children’s outcomes; and
- **Comprehensive Child Development Program**, which was a five-year federal demonstration implemented at 24 sites and committed to serving parents and children simultaneously.

After comparing the major features of these programs, we review the results from a series of evaluations of the effectiveness of these home visitation programs in improving outcomes for young children and their families. Lastly, it concludes with a discussion of the elements from these programs that appear to be “best practices.”

## What do Evaluations of the Models Find?

Interpreting results from evaluations of different models of home visitation is complicated, as findings vary across programs, within a program for different subgroups of participants, and across different replications of the same model. Table 1 summarizes the effects of the profiled models, indicating for each domain whether a program had at least one positive effect, had no statistically significant effects, or did not record any outcome measures.\* Several models of home visitation had at least one positive effect on reducing child abuse and neglect, an underlying goal of many programs. Programs that had health as a focus did see some improvements in the health status or use of preventive health care for children. Almost all of the programs are associated with at least one improvement in the home environment or in parenting skills, while a few appear to favorably alter the mother's life course. As with health, programs focusing on child development were most likely to have positive results in this area with far weaker outcomes in other programs. The one study with long-term follow-up did find some positive effects children's behavior into adolescence.

Despite the evidence of some beneficial effects attributable to various models of home visitation, a clear mapping from a program to desired outcomes does not emerge due to the inconsistency of the results across outcomes in the same domain, across programs, and across subgroups of participants. Analysis is further complicated by the gap between the elements defining a program and the way in which the service is actually delivered. All of these programs were unable to deliver the full range of planned services; on average, they provided half of the intended visits and lost 15 to 65 percent of their clients before completion of the program.

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\*The table provides a quick illustration of program effects, but one should regard it with caution, recognizing that programs have unique goals, serve different populations, and record different sets of outcome measures. Moreover, a box with a "+" in it indicates that at least one positive effect was found, but in almost all instances, there were also several non-significant effects within the same domain.

## Which elements appear to be best practices?

The scattered results of the evaluations strengthen the appeal of identifying the best elements from the wide array of models rather than determining the “best” program model. The proposed “best practices” are the characteristics and strategies most likely to induce positive outcomes, but they are clearly not guaranteed to affect change. A careful review of empirical studies suggests the following:

1. **Philosophy/culture:** comprehensive in focus and view program as part of a broad community support system
2. **Home services:** create a well-defined curriculum compatible with a family’s needs, culture, and language
3. **Target population:** targeted rather than universal
4. **Client participation:** voluntary
5. **Attrition:** address specific barriers to client continuation in program
6. **Staff caseloads:** restricted to fixed number of clients per visitor
7. **Credentials of staff:** nurses, trained paraprofessionals, and visitors with an advanced degree in a related discipline can induce positive outcomes
8. **Duration and frequency:** intensity (weekly or biweekly visits) is more important than duration
9. **Other:** maintain flexibility and attention to individual client needs; establish clear channels of communication among all parties involved and the community; implement continuous evaluation and modification as needed.

As SPHERE turns to the issue of home visitation programs in Orange County, we believe these findings underline the importance of strengthening the connections between individual programs and the larger service structure, including connections to other home visitation programs, an extra level of complexity that has yet to be considered in the literature. Success of these programs and for an integrated county-wide service delivery system depends on an environment that values and supports ongoing monitoring, assessment and adjustment within and across programs.

**Table S.1 Summary of the Outcomes Effects of Five Models of Home Visitation**

<b>Nationally Recognized Models:</b>	<b>Child Outcomes</b>			<b>Maternal Outcomes</b>	
	<b>Development and Behavior</b>	<b>Health</b>	<b>Abuse and Neglect</b>	<b>Home Environment</b>	<b>Life Course</b>
<b>Hawaii Healthy Start</b>	○	○	○	+	+
<b>Healthy Families America</b>	○	?	?	+	?
<b>Nurse Home Visitation Program</b>					
Elmira, NY	+	+	+	+	+
<i>Poor unmarried women only</i>	+	+	+	+	+
Memphis, TN	○	+		+	+
<b>Parents as Teachers</b>					
Salinas Valley	+	○		○	○
<i>Latina subgroup</i>	+	○		+	
Teen PAT	+	+	+	○	○
<b>Comprehensive Child Development Program</b>	+	○		+	○

**Key:**

+ - At least one positive and statistically significant effect (p # .05)

○ - No statistically significant effects

? - Mixed results

Empty cells indicate that no effects were measured in this domain.

# Table of Contents

Summary .....	i
Table of Contents .....	v
1 Introduction.....	1
2 Nationally-Implemented Models Of Home Visitation .....	3
2.1. Primary Goals .....	5
2.2. Home Services .....	6
2.3. Other Services.....	8
2.4. Target Population.....	9
2.5. Staff Caseloads.....	12
2.6. Staff Credentials.....	13
2.7. Duration and Frequency of Visits .....	14
2.8. Rate of Attrition.....	15
2.9. Costs.....	16
3 What Do Evaluations Of The Models Find?.....	18
3.1. Child Development and Behavior.....	20
3.2. Child Health Status .....	22
3.3. Child Abuse and Neglect .....	26
3.4. Home Environment.....	27
3.5. Maternal Life Course .....	31
3.6. Long-Term Effects .....	34
3.7. Costs.....	36
3.8. Comments on Evaluation Findings.....	38
4 What Elements Appear To Be Best Practices? .....	39
4.1. Philosophy and Culture .....	41
4.2. Home Services .....	42
4.3. Target Population.....	43
4.4. Nature of Client Participation.....	44
4.5. Staff Caseload .....	45
4.6. Staff Credentials.....	45
4.7. Duration and Frequency of Visits .....	47
4.8. Attrition.....	48
4.9. Other Best Practices.....	49
5 Conclusions .....	51
Appendix.....	53

## List of Tables

Table S.1 Summary of the Outcomes Effects of Five Models of Home Visitation.....	iv
Table 2.1 Primary Goals of Programs.....	5
Table 2.2 Home Services Provided.....	7
Table 2.3 Other Services Provided .....	9
Table 2.4 Target Populations .....	10
Table 2.5 Staff Caseloads.....	13
Table 2.6 Staff Credentials .....	14
Table 2.7 Duration and Frequency of Visits .....	15
Table 2.8 Client Attrition.....	16
Table 2.9 Costs.....	17
Table 3.1 Effects on Child Development and Behavior .....	21
Table 3.2 Effects on Child Health Status .....	24
Table 3.3 Effects on Child Abuse and Neglect.....	27
Table 3.4 Effects on Home Environment.....	29
Table 3.5 Effects on Maternal Life Course.....	32
Table 3.6 Long-Term Effects Found in NHVP Evaluation.....	35
Table 4.1 Best Practices from Empirical Evidence.....	40

# 1 Introduction

Even prior to the passage of Proposition 10, home visitation programs were growing in popularity as a way to serve families in California and elsewhere. The Packard Foundation estimated in 1993 that home visitation programs intended to prevent child abuse, prevent low birth weight births or improve school readiness were then serving 200,000 children and their families. By 1999, they estimated that enrollment in just the six best-known programs had grown to 550,000 and that the total number of home visitation programs nationwide had risen into the thousands. Since 1999, most county Children and Families Commissions have embraced home visitation as a strategy for improving the emotional, physical and intellectual environment for young children in California.<sup>1</sup>

This document represents the first of three steps in a review of home visitation programs in Orange County seeking the best approaches to fit these programs together in an integrated quality service delivery system. This first step lays the foundation for the project by examining the current state of knowledge on home visitation programs. Subsequent work will describe existing home visitation programs in Orange County and evaluate the present degree of integration across these programs. The final step in this review will develop a service delivery plan for implementing a comprehensive, coordinated home visiting service delivery system in Orange County.

This review of the literature has four goals: 1) to understand the characteristics of major home visitation programs; 2) to examine what is known about the effectiveness of these programs; 3) to consider the elements of home visitation that are most likely to bring about positive changes for children; and 4) to relate these findings into the task of integrated service delivery. Therefore, the rest of the report is organized as follows: Section 2 compares the

characteristics of five nationally-implemented models of home visitation that have established the terms of the debate on home visitation. These programs are also the most rigorously evaluated programs in the U.S. In Section 3, we consider the results of these evaluations in demonstrating the effectiveness of home visitation as a general practice and of these particular approaches for improving outcomes for young children and their families. Section 4 draws on these findings and related literature to suggest best practices in the implementation of home visitation programs. Finally, Section 5 concludes with a discussion of the lessons for the rest of this project.

## 2 Nationally-Implemented Models Of Home Visitation

Home visitation programs can be defined most simply as social service programs that employ visits to the home as the core service. With the rising popularity of these programs, home visits are also increasingly incorporated into more general service programs as an additional service delivery strategy. However, for the purpose of this report, we focus exclusively on programs that are primarily about home visitation and exclude programs that have home visits as an add-on to other services.<sup>2</sup> Home visitation is a particularly popular strategy for reaching young children and their families because there are fewer alternative ways—such as in school or through community activities—to intensively reach some of the neediest young children.

Home visitation programs defined in this way still cover a broad range. They include programs that target low birth-weight infants and those that target toddlers in disadvantaged families; programs targeting children or their parents, or programs that direct services at both; programs that strive to improve the health status of children and those aimed at improving mothers' life course. To understand the role of different program elements, it is necessary to narrow the focus to programs that are fairly comparable. For this reason, we concentrate on five models of home visitation that share the characteristics of being voluntary programs delivering services to children from birth (or prenatally) to five years of age—the age range addressed by the Children and Families Commission.<sup>3</sup> These models are:

- Hawaii's Healthy Start (HHS);
- Healthy Families America (HFA);
- Nurse Home Visitation Program (NHVP);
- Parents as Teachers (PAT); and
- Comprehensive Child Development Program (CCDP).

We believe these five models are not only acceptably representative of home visiting programs across the nation, but they also stand out for several other reasons. Notably, they are all being, or have been in the past, implemented on a national scale. In fact, four of them are currently in operation across the United States, and three have national headquarters, which serve as a base for new replications of the model. The only program included that is not currently in operation is the Comprehensive Child Development Program, which was a federal demonstration during the early 1990's. These five versions are also among the best-studied models of home visitation, and they have all been the subjects of randomized trials, which enable more rigorous evaluations.

All five of the programs share the belief that early childhood provides a window of opportunity for interventions aimed at improving future outcomes of at-risk children and their families. They also believe that parents play a pivotal role in shaping the lives of their children, and moreover, that the best way to reach families with young children is to bring services to them, rather than to expect them to seek resources from the community. Most of these adopted philosophies are rooted in theories of child development, such as human ecology, self-efficacy, and human attachment.

Aside from a common general philosophy, there is not a single formula or generic model of home visitation, and the profiled programs differ across several dimensions. This section focuses on nine of these elements: 1) primary goals, 2) home services, 3) other services, 4) target population, 5) staff caseload, 6) staff credentials, 7) duration and frequency of visits, 8) rate of attrition, and 9) costs. The following subsections consider these nine elements in term, comparing and contrasting the five programs on each element. To see summaries of the five programs according to these elements, please refer to Tables A.1.a-e in the appendix.

## 2.1. Primary Goals

**Table 2.1 Primary Goals of Programs**

Hawaii’s Healthy Start (HHS)	<ul style="list-style-type: none"> <li>‡ Prevent child abuse and neglect</li> <li>‡ Improve family coping</li> <li>‡ Promote positive parenting</li> <li>‡ Strengthen parent-child interaction and promote family functioning</li> <li>‡ Promote optimal child development/school readiness</li> <li>‡ Improve use of community resources, particularly access to a continual “medical home”</li> </ul>
Healthy Families America (HFA)	<ul style="list-style-type: none"> <li>‡ Prevent child abuse and neglect</li> <li>‡ Prevent negative birth outcomes (if started prenatally)</li> <li>‡ Promote positive parenting</li> <li>‡ Promote use of existing social systems</li> <li>‡ Ensure each child had a “medical home”</li> </ul>
Nurse Home Visitation Program (NHVP)	<ul style="list-style-type: none"> <li>‡ Improve pregnancy outcomes</li> <li>‡ Improve quality of maternal care giving</li> <li>‡ Improve child health and development/school readiness</li> <li>‡ Improve families’ economic self-sufficiency/mothers’ personal functioning</li> </ul>
Parents as Teachers (PAT)	<ul style="list-style-type: none"> <li>‡ Prevent and reduce child abuse</li> <li>‡ Empower parents to give children best start in life</li> <li>‡ Increase parents’ feelings of competence/confidence</li> <li>‡ Give children solid foundation for school success</li> <li>‡ Develop home/school/community partnerships on behalf of children</li> </ul>
Comprehensive Child Development Program (CCDP)	<ul style="list-style-type: none"> <li>‡ Promote school readiness</li> <li>‡ Provide support to parents and other family members</li> <li>‡ Assist families in becoming economically self-sufficient</li> </ul>

Table 2.1 compares the basic goals of the five programs. Despite the range of goals defined by the various programs, some common themes prevail. Three of the programs, Hawaii’s Healthy Start (HHS), Healthy Families America (HFA), and Parents as Teachers (PAT), specifically aim to prevent child abuse and neglect.<sup>4, 5, 6</sup> Preventing child maltreatment is also an implicit goal of the Nurse Home Visitation Program (NHVP), which strives to improve maternal care giving and thereby to prevent child maltreatment and childhood injuries.<sup>7, 8, 9</sup> A few programs strive to improve children’s health status, either at birth or during childhood.

NHVP and HFA (when initiated during pregnancy) strive to improve pregnancy outcomes.<sup>10</sup> In a related effort, HHS and HFA are committed to ensuring each child has access to a “medical home,” or a continuous source of pediatric primary care. Most programs also attempt to promote optimal child development and school readiness. For example, the Comprehensive Child Development Program (CCDP) specifically aims to enhance the physical, social, emotional, and intellectual development of children.<sup>11</sup>

In addition to child-focused goals, there are also goals directed at the parent, family or community level. For example, all of the programs attempt to strengthen families, either by encouraging effective parenting, increasing parent confidence, or improving family coping skills. NHVP and the CCDP are also committed to improving families’ economic self-sufficiency. Lastly, several of the programs strive to increase families’ use of other community resources or social support systems. In fact, one of PAT’s goals is targeted at a wider audience as the program seeks to develop partnerships on behalf of the children among individual homes, schools, and the surrounding community.<sup>12</sup>

## **2.2. Home Services**

A main distinction in the services delivered by home visitation models is whether they are focused directly on the child or on both the parent and child. Table 2.2 outlines this characteristic, as well as other major service elements of the five models. Four of the profiled programs are “two-generation” or integrated models, which deliver services aimed at the child, the parent, and the child-parent interaction. PAT is the only “one-generation” model, established specifically to provide education to the parent. This latter type of service provision is rooted in the philosophy that the role of a parent is critical in determining the outcomes of his or her child.

**Table 2.2 Home Services Provided**

Hawaii’s Healthy Start (HHS)	<ul style="list-style-type: none"> <li>‡ Two generation</li> <li>‡ Identify existing crises through listening</li> <li>‡ Help families identify and build on strengths</li> <li>‡ Role model problem solving skills and effective parent-child interaction</li> <li>‡ Link families with needed services (e.g. housing, income and nutritional assistance, child care, and educational training)</li> <li>‡ Ensure each child had a “medical home” (continuing source of pediatric care)</li> </ul>
Healthy Families America (HFA)	<ul style="list-style-type: none"> <li>‡ Two generation</li> <li>‡ Enhance parent-child interaction</li> <li>‡ Foster child growth and development</li> <li>‡ Improve family functioning in problem solving and use of social support/community resources</li> </ul>
Nurse Home Visitation Program (NHVP)	<ul style="list-style-type: none"> <li>‡ Two generation</li> <li>‡ Sensory and developmental screening at 12 months and 24 months – refer for treatment if needed</li> <li>‡ Nurse home visits that promote               <ul style="list-style-type: none"> <li>a) health-related behaviors during pregnancy and after</li> <li>b) quality care given by parents</li> <li>c) parents’ family planning, educational attainment, work force participation</li> </ul> </li> <li>‡ Link families with needed health care and human services</li> </ul>
Parents as Teachers (PAT)	<ul style="list-style-type: none"> <li>‡ One generation</li> <li>‡ Provide information on child’s development</li> <li>‡ Model and involve parents in age-appropriate activities with child</li> <li>‡ Respond to questions</li> <li>‡ As of 1999, teach <i>Born to Learn</i> Curriculum</li> <li>‡ Monitor child progress to detect problems as early as possible</li> <li>‡ Link families with community services</li> </ul>
Comprehensive Child Development Program (CCDP)	<ul style="list-style-type: none"> <li>‡ Two generation</li> <li>‡ Educate parents in infant/child development, health care, nutrition, parenting skills and life skills</li> <li>‡ Refer families to services in the community</li> <li>‡ Provide counseling and support to family members, especially mothers</li> <li>‡ Complete screenings to diagnosis learning problems</li> <li>‡ Foster early child development</li> </ul>

The individual services provided by home visitors also vary in other ways, but there are three approaches implemented in all five models. First, all programs encourage effective parenting, which is commonly taught through the role modeling of problem solving and

appropriate parental-child interaction. All models also use home visits to link families with community resources, such as TANF and food stamps provision, housing assistance, childcare, job training, and alcohol abuse treatment. This is often accomplished by providing information about existing community services, as well as by giving referrals to other resources as needed. Lastly, all models foster child growth and development in one way or another. For example, PAT, CCDP and NHVP use regular screenings to monitor children's sensory and developmental progress, thereby providing the opportunity to identify problems as early as possible.

There are also some services that are unique to a single model or to a subset of the programs. The NHVP specifically works with parents (mothers) to reach their educational achievement and career goals, while PAT and the CCDP educate parents on child development. Mothers participating in the NHVP are taught proper health-related behaviors during pregnancy and after their children are born. These mothers, as well as those in HHS and HFA, are also taught the importance of having a "medical home," or a continuing source of pediatric care for their child.

### **2.3. *Other Services***

As our definition suggests, the home visitation models discussed in this section deliver the majority of services through home visits. This is in contrast to several earlier models of home visitation implemented in the in the 1970's and 1980's that combined home visitation with center-based educational day care.<sup>13</sup> Moreover, as Table 2.3 shows, all of the programs generally stand alone, as opposed to being intimately linked to a Family Resource Center or other community entity. One exception to this last claim is PAT, which is often sponsored by a school district, health department, or other social service center. PAT also sponsors monthly group meetings of parents, providing a forum for parents to share their experiences, concerns,

and frustrations. The only other program that offers supplementary services on a regular basis is the NHVP, which provides free transportation to prenatal and well-child care visits.

**Table 2.3 Other Services Provided**

Hawaii=s Healthy Start (HHS)	None
Healthy Families America (HFA)	None
Nurse Home Visitation Program (NHVP)	! Free transportation for prenatal and well-child care visits
Parents as Teachers (PAT)	! Group meetings of parents
Comprehensive Child Development Program (CCDP)	None

#### **2.4. Target Population**

Table 2.4 describes the populations targeted by each of the five models, including whether the program is “targeted” or “universal” access, how families are screened or recruited into the program, and at what age (of child) services begin.

Home visitation models are typically defined as either “targeted” or “universal” access, although each of these terms must be carefully defined to clarify the distinction between the two approaches. Both types of programs aim to attract and serve high-risk families, but they use different strategies to determine whether or not a family falls into their high-risk category.

Programs that are “universal” systematically screen all families living in a variety of community niches by employing individual risk assessment tools, such as a checklist. In contrast to this individual-based strategy, programs that are “targeted” establish some eligibility criteria based on demographic or population-based characteristics, such as teen motherhood or first-time parent. Thus universal programs are theoretically open to all families and determine whom to

serve based on individual-level requirements, while targeted programs do not screen on an individual level but instead employ broader population-based standards to determine whom to serve.

**Table 2.4 Target Populations**

Hawaii’s Healthy Start (HHS)	<ul style="list-style-type: none"> <li>‡ Families with newborns identified as at risk for abuse</li> <li>‡ Universal screening: Medical records of all newborn families screened for risk in 15 areas (marriage status, unemployment, low income, unstable housing, no phone, no high school degree, inadequate emergency contacts, marital problems, history of abortions, adoptions sought, history of drugs, history of psychiatric care, history of depression, inadequate prenatal care)</li> <li>‡ Initiated at birth</li> </ul>
Healthy Families America (HFA)	<ul style="list-style-type: none"> <li>‡ Families with newborns identified as at risk for abuse</li> <li>‡ Universal screening: Assess all families in intended population for service area (e.g. 1<sup>st</sup> time parents or all families in a given neighborhood)</li> <li>‡ Initiated prenatally or at birth (about one-third begin prenatally)</li> </ul>
Nurse Home Visitation Program (NHVP)	<ul style="list-style-type: none"> <li>‡ First-time mothers</li> <li style="padding-left: 20px;">Elmira: unmarried, low-income, and/or less 19 years old (mostly white)</li> <li style="padding-left: 20px;">Memphis: unmarried, low education, and/or unemployed (mostly African American)</li> <li>‡ Recruited from clinics/doctors offices</li> <li>‡ Initiated during pregnancy</li> </ul>
Parents as Teachers (PAT)	<ul style="list-style-type: none"> <li>‡ Universal: offered to all families.</li> <li>‡ Recruited from WIC offices, medical clinics and school districts</li> <li>‡ Initiated prenatally or at birth</li> </ul>
Comprehensive Child Development Program (CCDP)	<ul style="list-style-type: none"> <li>‡ Families with income below federal poverty level and with pregnant mother or child under one year</li> <li>‡ (43% African-American, 26% Hispanic, 26% White)</li> <li>‡ Initiated at birth</li> </ul>

HHS, HFA, and PAT fall under the category of universal access programs, while the NHVP and the CCDP are targeted ones. In particular, HHS and HFA complete systematic assessments of all newborns in an intended population within a community to identify those at risk of child abuse.<sup>14</sup> The programs use a checklist based on medical records, and those children in families who are deemed at risk for child abuse or neglect are then invited to participate.

PAT, on the other hand, is extended to any family wanting to participate, regardless of income or

any other individual characteristic. However, PAT programs are often established in areas where the need is higher and they concentrate recruitment efforts on families who are more disadvantaged, making many of the programs targeted by default.

Turning to the second approach – targeting instead of screening of a given universe – we have the NHVP and CCDP. The CCDP targeted according to demographic characteristics: it invited only families including a pregnant mother or child less than one year old and having an income below the federal poverty level to participate. The NHVP is extended only to first-time mothers, especially those that are young, unmarried, low-income, and/or less educated. For the purposes of evaluation, the NHVP is commonly broken out into its original two “trial” models, which served quite different demographic groups. In the first NHVP trial (held in Elmira, NY), participating mothers were primarily white, while those in the second evaluation (in Memphis, TN) were mostly African-American. This distinction matters for understanding the evaluation outcomes; it is not inherent in the NHVP model.

All of the programs begin before the child is one year old, although some begin during pregnancy and others shortly after birth. The NHVP is the only program that had a mandatory prenatal beginning. HFA and PAT offer services that begin both prenatally and at birth. One evaluation of HFA found that about one-third of HFA participants began during the mothers’ pregnancy, while the other two-thirds began within 90 days of the child’s birth, the cutoff for initiation of the program. In contrast, both the CCDP and HHS were not offered until the child was born. Families are invited to participate in HHS within three months of birth. CCDP, on the other hand, recruited families up until the child was one year old.

Among potentially eligible families, the recruitment location and persistence often determines who is actually served in a program. Generally, the recruiting strategies are closely

linked to the target population. For example, since HHS and HFA aim to screen all newborns in a specified population, they recruit families from birth hospitals, where assessments are based primarily on infant medical records. In the case of HFA, some reports suggest that recruitment is quite aggressive, and a mother identified as at risk may be pursued by the program for up to three months if she declines the initial offer.<sup>15</sup> None of the other programs describe policies of pursuing families who do not agree to participate. The NHVP and CCDP both seek potential participants in medical clinics and doctors' offices, while PAT also looks at WIC offices and school districts.

### **2.5. *Staff Caseloads***

All program models restrict the visitors' caseload, most commonly at 20 to 25 families, as shown in Table 2.5. At the low end of this range are the CCDP, which restricted visitors to only 20 families and PAT, which mainly employs part-time workers who visit 20 families each. In the NHVP, new programs are expected to carry a minimum of 100 families for the full two-year program. The staff requirements for implementation, which are not flexible under program regulations, are four full-time nurses, one part-time nurse supervisor, and one part-time clerical support person.<sup>16</sup>

One question that naturally arises in relation to the staff caseload is what happens when all visitors at a program site reach their maximum limit. While not directly specified, it is likely that most programs limit recruitment efforts and/or create a waiting list for services in this case. If waiting lists are created, it is likely they are referred to frequently given the high rates of attrition faced by the programs. HHS is the only program that specifically notes maximized visitor caseloads as a problem that has led to the inability to serve all eligible participants. The

response by HHS has been to focus on linking high-risk mothers with other appropriate social and health services.<sup>17</sup>

**Table 2.5 Staff Caseloads**

Hawaii’s Healthy Start (HHS)	‡ Caseload of 20 to 25 families per visitor
Healthy Families America (HFA)	‡ Caseload of 20 to 25 families per visitor
Nurse Home Visitation Program (NHVP)	‡ Caseload of 20 to 25 families per visitor ‡ Replication sites are expected to commit to minimum of 100 families, which requires 4 full-time nurses, 1 part-time nurse supervisor, and 1 part-time clerical support person
Parents as Teachers (PAT)	‡ Most visitors work part-time and service 20 families
Comprehensive Child Development Program (CCDP)	‡ Caseload of 20 families per visitor

**2.6. Staff Credentials**

The type of visitor employed is one of the defining characteristics of these programs, and the main distinction is usually between a paraprofessional and an educated specialist. The term paraprofessional is used to describe an individual who has no academic credentials in a relevant field, such as nursing, education, or social work. An educated specialist, in contrast, is someone with education past high school in one of these related disciplines. Table 2.6 shows the credentials required by the five programs.

HFA and HHS hire paraprofessionals based on their personal qualities of warmth, self-assurance, cultural sensitivity, and competence with parenting. However, while these programs place more emphasis on visitor characteristics than on education and do not require that their applicants have post-high school education, they do not exclude visitors with more education. In fact, one study showed that 87 percent of visitors in HFA had prior home visitation experience

and 82 percent had college degrees with a specialty in child development.<sup>18</sup> The CCDP also initially sought to employ paraprofessionals, focusing on those with life experiences similar to the participating families. Some of these hired visitors also had advanced degrees. However, as the original visitors left the program, their replacements were required to have some education after high school, such as an Associate’s degree. In contrast, PAT and NHVP maintain stricter educational requirements for visitors. PAT requires that they are credentialed parent educators and most PAT visitors have advanced degrees. The NHVP has the strictest criteria: visitors must be public health nurses, and they are typically required to have a Bachelor’s degree as well.

**Table 2.6 Staff Credentials**

Hawaii’s Healthy Start (HHS)	<ul style="list-style-type: none"> <li>‡ Visitors: trained paraprofessionals with qualities of warmth, self-assurance, cultural sensitivity, and good parenting skills</li> <li>‡ Program director: public health nurse</li> <li>‡ Supervisors: professionals with training in social work or early education</li> </ul>
Healthy Families America (HFA)	<ul style="list-style-type: none"> <li>‡ Visitors: trained paraprofessionals (called Family Support Workers) selected on basis of personal characteristics rather than education (87% visitors have prior home visitation experience, 82% have college degree specialized in child development)</li> </ul>
Nurse Home Visitation Program (NHVP)	<ul style="list-style-type: none"> <li>‡ Nurses (typically required to have minimum of Bachelor’s degree)</li> <li>‡ Optimally family receives visits from same nurse over course of program</li> </ul>
Parents as Teachers (PAT)	<ul style="list-style-type: none"> <li>‡ Visitors: trained and credentialed parent educators (some have Bachelor or advanced degrees)</li> </ul>
Comprehensive Child Development Program (CCDP)	<ul style="list-style-type: none"> <li>‡ Visitors: Initially, trained paraprofessionals from community with similar life experiences of program families (some had post-high school degrees)</li> <li>‡ As visitors left program, replacements were required to have Associate’s degrees or some post-high school training.</li> </ul>

**2.7. Duration and Frequency of Visits**

As described in section 2.4 with respect to the target population, all profiled programs begin services either during the mother’s pregnancy or shortly after birth. As we see in Table 2.7, most of the programs continued until the child reached three or five years of age (assuming

that the family did not drop out of the program). Only the NHVP ends earlier, two years after a child is born.

**Table 2.7 Duration and Frequency of Visits**

Hawaii’s Healthy Start (HHS)	<ul style="list-style-type: none"> <li>‡ Begin services: birth (up to 3 months)</li> <li>‡ End services: three or five years old</li> <li>‡ Frequency: tiered from weekly to quarterly depending on assessment of family need (which can change over course of program for a family).</li> </ul>
Healthy Families America (HFA)	<ul style="list-style-type: none"> <li>‡ Begin services: prenatally or at birth (up to 3 months)</li> <li>‡ End services: three or five years old</li> <li>‡ Frequency: tiered from weekly to quarterly according to individual need</li> </ul>
Nurse Home Visitation Program (NHVP)	<ul style="list-style-type: none"> <li>‡ Begin services: prenatally</li> <li>‡ End services: two years old</li> <li>‡ Frequency: weekly, fading to monthly, (on average, 9 visits during pregnancy, 23 visits from birth - 2 years), 60-90 minute visits with visit-by-visit program protocols</li> </ul>
Parents as Teachers (PAT)	<ul style="list-style-type: none"> <li>‡ Begin services: prenatally or at birth</li> <li>‡ End services: three or five years old</li> <li>‡ Frequency: monthly, biweekly, or weekly depending on family needs and funding, 60 minute visits</li> </ul>
Comprehensive Child Development Program (CCDP)	<ul style="list-style-type: none"> <li>‡ Begin services: birth to one year old</li> <li>‡ End services: five years</li> <li>‡ Frequency: biweekly, 60 minute visits</li> </ul>

Intensity of visits also varied across programs, ranging from weekly to quarterly. In the NHVP, visits begin weekly, but then taper to monthly as a family progresses through the program. The CCDP offered biweekly visits for five years. The other three models, HHS, HFA, and PAT, have tiered levels of service provision ranging from weekly to quarterly, according to an assessment of family needs.

**2.8. Rate of Attrition**

All programs have faced high rates of attrition, shown in Table 2.8. Although not built into the models, it is important to recognize these attrition rates because together with the frequency and duration of visits, they determine how much service a family typically receives

through the program. Of the five programs, the NHVP had the lowest attrition rate, about 10 percent. The other programs lost at least half of their participants before the completion of the planned services. The difference in continuation rates may be partly due to the shorter duration of NHVP, which gives participants less time to drop out. According to one evaluation of HHS, the most common reason for attrition was a family’s refusal to agree to continued visits. Other reasons include families moving, losing eligibility, returning to work/school, or the program’s inability to contact a family.<sup>16</sup>

**Table 2.8 Client Attrition**

Hawaii’s Healthy Start (HHS)	‡ 51% (after 1 year)
Healthy Families America (HFA)	‡ 20-30%
Nurse Home Visitation Program (NHVP)	‡ 10%
Parents as Teachers (PAT)	‡ 43-57%
Comprehensive Child Development Program (CCDP)	‡ 64-67%

## 2.9. Costs

The final element we use to compare the five programs is costs. As with any program, much of the debate over the adoption of home visitation programs has to do with their costs, which can be quite high per family. Program costs include (but are not limited to) compensation and training for visitors and other staff members, costs for screening, recruitment and monitoring/evaluation tools, and administration costs. The credentials of the visitors clearly affect costs; however, many programs face a tradeoff between more expensive educated/specialized visitors and a greater need for professional supervisors when less expensive paraprofessionals are used. Table 2.9 shows that the costs of the profiled models range from about \$3,200 per family for HHS to over \$12,000 per year for each family in the CCDP. The

NHVP rests in the middle of the spectrum at about \$6,600 per family for the entire course of intended services.<sup>19</sup> (All costs are shown in constant year 2000 dollars.)

**Table 2.9 Costs**

Hawaii's Healthy Start (HHS)	<ul style="list-style-type: none"> <li>‡ Family cost: \$3,250 for full services</li> <li>‡ Financed through state funds (90%) and money raised by private agencies</li> </ul>
Healthy Families America (HFA)	<ul style="list-style-type: none"> <li>‡ Approximately one billion dollars spent on 320 sites nationwide in 1997</li> <li>‡ Finance primarily through taxpayers (70%)</li> </ul>
Nurse Home Visitation Program (NHVP)	<ul style="list-style-type: none"> <li>‡ Family cost: \$6,600 for services through two years</li> </ul>
Parents as Teachers (PAT)	<ul style="list-style-type: none"> <li>‡ Family cost: \$2,240 per year</li> </ul>
Comprehensive Child Development Program (CCDP)	<ul style="list-style-type: none"> <li>‡ Family cost: \$12,603 per year</li> <li>‡ 5-year demonstration cost: \$279 million</li> </ul>

### 3 What Do Evaluations Of The Models Find?

For any social program, policymakers naturally ask whether it achieves its defined goals, as well as whether it has other positive or negative effects on the population it serves. This is even more critical for programs as expensive to administer as home visitation programs. While measuring and attributing the effects of programs is always difficult, the complex social changes sought by home visitation programs are particularly complicated to evaluate and to compare across models. Many of the outcomes are measured by self-reported variables, which may be unreliable and are surely interpreted differently by responding individuals. The “treatment” that each participant receives is unique due to the differences in the ways in which visitors deliver the intended services according to their own personal characteristics and objectives. Thus, averaging results across visitors may mask results. Similarly, analyses are confounded by the gap between intended services and those actually provided, as well as by significant rates of attrition. Of course, the voluntary nature of the programs makes it difficult to predict whether the findings can be generalized to other populations. Moreover, the unique combination of services and the variety of outcome measures recorded by each program hinders unambiguous comparisons.

Despite the difficulties in assigning causation to home visitation programs, there have been several rigorous analyses based on randomized trials that use statistical techniques to minimize the problems. Results from these studies are mixed and inconsistent. When positive effects are found, they are not always extended across models with similar services, across different subgroups in one program, or across different replications of the same program. In this section, we consider the findings for outcomes grouped into five broad categories: child development and behavior, child health status, child abuse and neglect, the home environment,

and maternal life course. We also examine the evidence on the cost effectiveness of these programs.

As with the previous section, we present a table comparing the five programs for each outcome category. These tables are all formatted using the same structure: each table lists the specific outcomes measured in the evaluations, indicating whether a statistically significant positive effect ( $p \# .05$ ) was found (+), no significant effect was found (o), or effects were mixed across different evaluations of the same program (?).<sup>20</sup> Positive effects are highlighted by bold type in the tables. If separate analyses were completed for particular subgroups of participants or for individual program sites, these results are also included. If a standardized test was used, it is indicated. (Table A.2 in the appendix provides a brief description of the various assessment measures). Lastly, note that the tables do not indicate the magnitude of specific effects, a factor that is required to judge whether a statistically significant effect is large enough to have relevance for policy.<sup>21</sup>

The tables presented in each subsection also report only those effects that were measured before the child's fifth birthday. Only the NHVP has been evaluated for longer-term effects, according to two follow-up studies. Children who participated in the Elmira, NY site were followed through their 15<sup>th</sup> birthday, while mothers involved at the Memphis site were tracked until their children reached their 5<sup>th</sup> birthday, three years after the program ended. Rates of retention for these follow-up studies were surprisingly high – approximately 80 percent. To compare like with like, we leave the discussion of the long-term findings for the NHVP to section 3.6, following the main discussion of the evaluation findings.

### ***3.1. Child Development and Behavior***

Table 3.1 presents the findings on child development and behavior. Results in this area are weak and mixed. None of the programs found positive effects on child development on all measures used, and only a few found a positive effect on a subset of measures. The few significant effects in this domain were found in PAT and the CCDP, two programs that specifically list school readiness as a primary goal. According to a standardized test measuring development in cognitive, communication, social, self-help and physical skills, children participating in the Salinas PAT program appeared to have better self-help skills at three years of age than those who did not participate. When the analysis was restricted to Latina participants, PAT children outscored their counterparts on cognitive and social skills as well. In contrast, evaluation of a different PAT site, geared primarily at teen mothers, showed that participants performed better only in cognitive skills at two years. In the CCDP, children receiving services did receive higher scores on the development checklist used, but the magnitude of the effect was so small that the difference is unlikely to have any meaningful effect on children's lives.<sup>11</sup>

With respect to child behavior, only the NHVP and the CCDP collect data in this domain, and neither of them found any difference between participants and their control counterparts.

**Table 3.1 Effects on Child Development and Behavior**

Program	Effects Detected
Hawaii's Healthy Start (HHS)	<u>at 2 years</u> <i>Development (BSID):</i> Mental "" Physical ""
Healthy Families America (HFA)	<u>at 1 and 2 years</u> Mental development ""
Nurse Home Visitation Program (NHVP):  P Elmira NY site - <i>poor unmarried women subgroup</i>  P Elmira NY site - <i>whole sample</i>  P Memphis TN site	<u>at 6 months</u> <b>Reports of child's positive mood +</b>  <u>at 1,2,3 and 4 years</u> Mental development ""  same measures as above tested, only those with positive effect listed  <u>at 4 years</u> <b>Mental development for children of smokers +</b>  <u>at 2 years</u> Mental development (BSID) "" Behavior problems ""
Parents as Teachers (PAT):  P Salinas Valley - <i>Latina subgroup</i>  P Salinas Valley - <i>whole sample</i>	<u>at 3 years</u> <i>Development (BSID):</i> Mental "" Physical ""  <i>Development profile (DPII):</i> <b>Cognitive +</b> Communication "" <b>Social +</b> <b>Self-help +</b> Physical ""  <b>Vocabulary (PPVT-R) +</b>  same measures as above tested, only those with positive effect listed  <u>at 3 years</u> <i>Development profile (DPII):</i> <b>Self-help +</b>

Program	Effects Detected
Parents as Teachers (PAT): (cont'd) P Teen PAT	<u>at 2 years</u> <i>Development profile (DPPII):</i> <b>Cognitive +</b> Communication "" Social "" Self-help "" Physical ""  Vocabulary (PPVT-R) ""
Comprehensive Child Development Program (CCDP)	<u>at 3-5 years</u> <i>Cognitive ability (K-ABC):</i> Mental "" Achievement ""  Vocabulary (PPVT-R) "" Child behavior (CBCL) "" Adaptive social behavior (ASBI) ""  <u>at 5 years</u> <b>Development checklist +</b>

### 3.2. Child Health Status

Indications of positive effects of home visitation on children's health status are scattered throughout the evaluations. We can break results on child health into three sub areas: birth outcomes, access to and use of preventative medical services, and emergency room visits. These results are listed in Table 3.2.

Two models, the NHVP and one site of HFA that began prenatally, assessed birth outcomes. Both found positive results in some but not all areas. Children receiving services from the HFA program had fewer birth complications, lower pregnancy risk scores, and higher birth weight than those in a control group. No effect, however, was found for gestation age in this group. In the NHVP, positive effects on birth outcomes were found only for small subgroups of clients. For example, pre-term birth occurred less frequently for women who

smoked at least four cigarettes a day compared to their nonparticipating counterparts and low birth weight was found less frequently for mothers younger than 17 years old. These effects were not extended to the sample as a whole, nor to the larger subgroup of higher-risk women.

Another measure used to assess children's health status is their access to or use of preventative medical services. Most of the programs measured immunization rates and none found positive effects. Several also looked at the number of well-child care visits and again found no effects. Similarly, there was no difference in the likelihood of having a primary care provider for children participating and not participating in HHS. The absence of effects in this case is particularly noteworthy because ensuring that each child had a "medical home," or a continual source of pediatric care, is a primary goal of the HHS.

The number of visits to the emergency room was also recorded in all models but the CCDP. In addition to signaling child health, this variable may also serve as a proxy measure of child maltreatment. However, a significant reduction was found only for children participating in the NHVP as compared to their control group. All other programs found no measurable difference. At two and four years, children in the Elmira trial of the NHVP had fewer visits to the emergency room, health encounters for injuries or ingestions, and days in the hospital. This finding was only partially confirmed by the Memphis trial of this model, which found reductions in recorded injuries or ingestions and days spent in the hospital, but found no difference in trips to the emergency room.

Finally, it is worth mentioning that, parallel to the results on child development, positive effects on children's health were found only in those programs that specifically focused on improving health outcomes. For example, improving child health and pregnancy outcomes is a specific goal of the NHVP, which did lead to positive effects on several measures in this domain.



Program	Effects Detected
<p>Nurse Home Visitation Program (NHVP):  <b>P</b> Elmira NY site - <i>whole sample (cont'd)</i></p> <p><b>P</b> Memphis TN site</p>	<p><b>Pre-term birth for children of smokers (&gt; 4 per day) +</b>  <b>Low birth weight for mothers &lt;17 year olds +</b>  <b>WIC, childbirth classes +</b></p> <p><u>at 2 years</u>  <b># ER visits +</b>  <b># injuries or ingestions +</b></p> <p><u>at 4 years</u>  <b># behavioral problems in medical records +</b>  <b># ER visits +</b>  <b># days hospitalized +</b></p> <p>Birth weight ""  Gestational age ""  5-minute Apgar score ""  % of low birth weight ""</p> <p><u>at 2 years</u>  # well-child visits ""  <b># health encounters for injuries or ingestions +</b>  <b># outpatient visits +</b>  # ER visits ""  # hospitalizations ""  <b># days in hospital +</b>  Current immunizations ""</p>
<p>Parents as Teachers (PAT):</p> <p><b>P</b> Salinas Valley - <i>Latina subgroup</i></p> <p><b>P</b> Salinas Valley - <i>whole sample</i></p> <p><b>P</b> Teen PAT</p>	<p><u>at 3 years</u>  Current immunizations ""  Well-child care visit in last 6 months ""  Treated for injury in last year ""  ER visit in last year ""</p> <p>same measures as above tested, no significant effects found</p> <p><u>at 2 years</u>  Current immunizations ""  Treated for injury in last year ""</p>
<p>Comprehensive Child Development Program (CCDP)</p>	<p>Average # medical visits per year ""  Average # dental visits per year ""  Mortality ""</p>

### 3.3. *Child Abuse and Neglect*

Most of the programs aim to prevent child abuse and neglect, either as the central goal of the program (HHS and HFA), as one of the many defined goals (PAT), or as a tacit aim approached indirectly through other objectives (NHVP). However, as we see in Table 3.3, it is not clear from the recorded outcomes that home visitation programs can have a positive effect in this domain. Moreover, greater success is not necessarily related to the defined program goals. Both PAT and NHVP are associated with positive findings in this domain, but they are concentrated on very specific subgroups of program participants. In particular, reports of abuse for two-year olds of teenaged, unmarried and low-income mothers who participated in NHVP were recorded less frequently than for their corresponding control group. Similarly, the evaluation of Teen PAT analyzed the number of pending abuse cases and also found fewer reports for participants. Together, these two findings may indicate that home visitation programs have the greatest potential to reduce child abuse when the mother is younger than 18 years old. On the other hand, HHS and HFA found no significant difference in reported rates of child abuse between participants and non-participants, thus failing to achieve their primary goal.

These results are sobering, given that many advocates of home visitation promote these programs as a strategy to prevent child maltreatment. Still, the findings are not necessarily a realistic assessment of the true effects on child abuse. Reports to the child protective services (CPS) are a frequently used indicator of child abuse, but likely suffer from severe under-reporting. Using this measure to compare families involved in home visitation with those who are not receiving home visits is also problematic because visited families are *a priori* more likely to be reported than non-visited families by the mere fact that an outsider enters the home. Furthermore, since existing rates of child abuse are fairly low in general, large changes must occur for a meaningful effect to be found.<sup>22</sup> These complexities may largely explain why several

programs do not measure outcomes related to child abuse or neglect, but rather try to proxy for it with the home environment, parental attitudes, or recorded medical care.

**Table 3.3 Effects on Child Abuse and Neglect**

<b>Program</b>	<b>Effects Detected</b>
Hawaii's Healthy Start (HHS)	<u>at 2 years</u> Families with confirmed CPS reports ""  CTS2: Any neglect "" Frequent psychological aggression "" Frequent minor physical assault "" Severe physical assault ""
Healthy Families America (HFA)	Substantiated reports of child abuse/neglect ?
Nurse Home Visitation Program (NHVP):  P Elmira NY site - <i>poor unmarried women subgroup</i>  P Elmira NY site - <i>whole sample</i>  P Memphis TN site	<u>at 2 years</u> CPS cases "" <b>Substantiated reports of child abuse/neglect for teen mothers +</b>  same measures as above tested, no significant effects found
Parents as Teachers (PAT):  P Salinas Valley - <i>Latina subgroup</i>  P Salinas Valley - <i>whole sample</i>  P Teen PAT	<u>at 2 years</u> <b>Open case of child abuse/neglect +</b>
Comprehensive Child Development Program (CCDP)	

### 3.4. Home Environment

More encouragingly, all of the programs except PAT recorded positive changes in at least one aspect of children's home environment, including their mother's parenting efficacy, use of nonviolent discipline or beliefs about child abuse, and the quality of the child-parent interaction.

These findings are provided in Table 3.4. Once again, however, the measures on which they succeeded are not consistent across the models, and no program found positive results on all measures used. For example, all of the programs relied on the Home Observation for Measurement of the Environment (HOME) to assess the quality of a home for child cognitive, social and emotional development, but only families participating in HFA and one trial of the NHVP (Memphis) scored significantly better than their control counterparts on this examiner-administered evaluation. Similarly, while HFA found participating families had better child-parent interaction in general, HHS found improvement in only one aspect of this interaction—parenting efficacy—and the NHVP and CCDP found no significant differences in this domain. It is also interesting to point out that PAT, the single one-generation model—which specifically concentrated on parent education—is the only program that found no difference between participants and non-participants on home environment measures.<sup>23</sup> Overall, results across the studies suggest that home visitation programs may induce parents to change their behavior or attitudes, but it is not clear exactly how these changes might affect later child development.

**Table 3.4 Effects on Home Environment**

Program	Effects Detected
Hawaii's Healthy Start (HHS)	<p>at 2 years</p> <p>Home quality (HOME) "</p> <p><i>Parent-child interaction (NCAST):</i></p> <p>Care giver "</p> <p>Child "</p> <p><b>Parenting efficacy +</b></p> <p><b>Frequent use of nonviolent discipline +</b></p> <p>Parenting stress "</p>
Healthy Families America (HFA)	<p>at 2 years</p> <p><b>Home quality (HOME) +</b></p> <p><b>Parent-child interaction (NCAST) +</b></p> <p><b>Parenting knowledge (PSI) +</b></p> <p>Parenting self confidence (PSOC) ?</p> <p>Social support ?</p>
<p>Nurse Home Visitation Program (NHVP):</p> <p><b>P</b> Elmira NY site - <i>poor unmarried women subgroup</i></p> <p><b>P</b> Elmira NY site - <i>whole sample</i></p> <p><b>P</b> Memphis TN site</p>	<p>at 46 months</p> <p>Home quality (HOME) "</p> <p><b>Language stimulation and educational materials +</b></p> <p><b>Home hazards +</b></p> <p>Car seat use "</p> <p>Maternal warmth/control "</p> <p><b>Punishment +</b></p> <p>same measures as above tested, only those with positive effect listed</p> <p>at 46 months</p> <p><b>Home hazards +</b></p> <p>at 2 years</p> <p><b>Attempted breast-feeding +</b></p> <p><b>Beliefs about child abuse +</b></p> <p><b>Home quality (HOME) +</b></p> <p><i>Parent-child interaction (NCAST):</i></p> <p>Maternal Teaching "</p> <p>Child responsiveness "</p>



### **3.5. *Maternal Life Course***

Even though the goals of the home visitation programs are centered on improving child outcomes, all of the programs also recorded maternal outcomes, under the hypothesis that children's outcomes are indirectly affected by the circumstances of one or both of their parents. Variables measured include the mother's employment and education experience, use of cash assistance or food stamps, subsequent pregnancies or births, and substance abuse. None of the programs were able to affect all or even a majority of the measures used to assess a mother's life course, and neither PAT nor the CCDP had any positive effects (even though promoting family economic self-sufficiency was one of the three primary goals of the CCDP). The only difference between participants and non-participants in the HHS was reduced partner violence resulting in injury, an effect that may also indicate reductions in child maltreatment.

The NHVP appears to have the greatest impact on maternal life outcomes, which is consistent with its goals; however, the effects are primarily concentrated in maternal health during pregnancy. For example, mothers participating in NHVP had fewer kidney infections, incidences of hypertension, and appeared to practice better health behaviors, smoking less and eating a better diet. NHVP mothers in the Memphis trial and those in the poor and unmarried subgroup of the Elmira trial also had fewer subsequent pregnancies before their child was two in Memphis and four in Elmira. This outcome – having fewer children – may help women secure employment and become economically self-sufficient. According to a broader perspective across all programs, however, it is not clear that home visitation programs in general are capable of producing measurable effects on maternal outcomes, especially compared to other types of programs devoted to improving the economic status of mothers.

**Table 3.5 Effects on Maternal Life Course**

Program	Effects Detected
Hawaii's Healthy Start (HHS)	<p><u>at 2 years</u>            Degree or enrolled in school ""            Mother/someone in household worked ""            Substance abuse ""            Depression ""            Poor general mental health ""  <b>Partner violence resulting in injury +</b>            Life skills ""            Social support ""            Confidence in adult relations ""</p>
Healthy Families America (HFA)	<p><u>at 2 years</u>            Teen repeat births ""            Public assistance ?            Use of AFDC, food stamps and Medicaid ?</p>
<p>Nurse Home Visitation Program (NHVP):</p> <p><b>P</b> Elmira NY site - <i>poor unmarried women subgroup</i></p> <p><b>P</b> Elmira NY site - <i>whole sample</i></p> <p><b>P</b> Memphis TN site</p>	<p><u>during pregnancy</u>            Kidney infections, bladder infection, hypertension, bleeding ""            Informal support ""            Smoking behavior, better diet ""</p> <p><u>at 4 years</u>            Employed ""  <b>Subsequent pregnancies +</b></p> <p>same measures as above tested, only those with positive effect listed</p> <p><u>during pregnancy</u>  <b>Kidney infections +</b>  <b>Informal support +</b>  <b>Smoking behavior +</b>  <b>Better diet +</b></p> <p><u>at 4 years</u>  <b>Employed +</b></p> <p><u>during pregnancy</u>  <b>Hypertension +</b>  <b># yeast infections +</b>            gestational weight gain, blood pressure, # prenatal visits, # hospitalizations, # STD-s ""  <b>Use of other community service +</b></p>

**Table 3.5 Effects on Maternal Life Course (cont'd)**

Program	Effects Detected
<p>Nurse Home Visitation Program (NHVP)  <b>P</b> Memphis TN site (cont'd)</p>	<p>at <u>2 years</u>  # months employed ""  <b>Subsequent pregnancies +</b>  <b>Subsequent live births +</b>  Abortions, miscarriages ""  # months on AFDC ""  <b>Sense of mastery +</b>  Maternal anxiety, depression ""</p>
<p>Parents as Teachers (PAT):  <b>P</b> Salinas Valley - <i>Latina subgroup</i>  <b>P</b> Salinas Valley - <i>whole sample</i>   <b>P</b> Teen PAT</p>	<p>at <u>3 years</u>  Employed or in job-training ""  Received AFDC ""  Highest grade level attained ""  Subsequent births ""</p> <p>at <u>2 years</u>  Employed or in job-training ""  Received AFDC ""  Enrolled or completed high school ""  Subsequent births ""</p>
<p>Comprehensive Child Development Program (CCDP)</p>	<p>at <u>2-5 years</u>  Household income ""  Enrolled in school/job training ""  % with degrees ""  % time mother or husband/partner employed over study ""  % receiving AFDC ""  % receiving Food Stamps ""  Depression ""</p> <p><i>Pregnancy behavior for subsequent children:</i>  % with inadequate prenatal care ""  % use tobacco, alcohol, illegal drugs ""</p>

### **3.6. Long-Term Effects**

As noted earlier, the NHVP was the subject of two follow-up studies to evaluate the long-term effects of the home visitation program on children and their mothers. One of the chief reasons for focusing on young children is the belief that interventions concentrated early in life may have potential benefits far into the future. Therefore, the findings from the 15-year follow up on NHVP participants are key to understanding the real benefits of home visitation programs. The effects captured in this long-term study are shown in Table 3.6.

Fifteen years after the start of the Elmira NHVP program, evaluators found significant differences between participants and non-participants with respect to child behavior, child abuse, and maternal life course. By the time they were 15 years old, infants that participated in the NHVP had fewer convictions and probation violations. For the subgroup born to poor unmarried mothers, the evaluation found that participants also had fewer incidents of running away, arrests, sexual partners, and drank less.<sup>7</sup> After fifteen years, both the full sample and the higher-risk subgroup of participants had fewer substantiated reports of child abuse and neglect.

Lastly, results from this 15-year follow-up on the Elmira site as well as a five-year follow-up on the Memphis site suggest that the NHVP had a clear positive impact on some of the participating mothers' life outcomes, a finding that is much stronger than those found across programs in the short term. These positive effects were concentrated among poor unmarried women in the Elmira trial, but extended to the entire population of the Memphis evaluation. By the time their children reached 15 years, poor unmarried mothers in the Elmira trial had fewer subsequent pregnancies and births, waited longer between bearing their first and second child, received AFDC payments and food stamps for fewer months, and had fewer arrests and

substance use impairments. Similarly, mothers involved in the Memphis NVHP experienced positive effects with respect to reduced subsequent births and reliance on public assistance.

These two studies offer the first evidence of long-term effects of home visitation. Moreover, they suggest that these programs may be more beneficial to higher-risk groups over the long run.

**Table 3.6 Long-Term Effects Found in NHVP Evaluation**

<b>Child development and behavior</b>	
† Elmira NY site - <i>poor unmarried women subgroup</i>	at 15 years <b>Incidence of running away +</b> Minor antisocial acts, major delinquent acts "" Externalizing/internalizing problems "" # of short-term or long-term school suspensions "" # times stopped by police, sent to youth correction "" <b># arrests +</b> <b>Convictions and probation violations +</b> Ever had sex "" <b># of sexual partners +</b> Ever pregnant/made someone pregnant "" # of cigarettes smoked per day "" <b># days drank alcohol +</b> # days used drugs ""
Elmira NY site - <i>whole sample</i>	same measures as above, only those with positive effect listed at 15 years <b>Convictions and probation violations +</b>
<b>Child abuse and neglect</b>	
† Elmira NY site - <i>poor unmarried women subgroup</i>	at 15 years <b>Substantiated reports of child abuse/neglect +</b>
† Elmira NY site - <i>whole sample</i>	same measures as above, only those with positive effect listed at 15 years <b>Substantiated reports of child abuse/neglect +</b>

**Table 3.6 Long-Term Effects Found in NHVP Evaluation (cont'd)**

<b>Maternal life course</b>	
‡ Elmira NY site - <i>poor unmarried women subgroup</i>	<u>at 15 years</u> <b>Subsequent pregnancies +</b> <b>Subsequent births +</b> <b>Months between 1<sup>st</sup> and 2<sup>nd</sup> child +</b> <b>Months receiving food stamps, AFDC +</b> Months receiving Medicaid " <b>Days in jail +</b> <b>Substance use impairments +</b> <b>Arrests, convictions +</b>
‡ Elmira NY site - <i>whole sample</i>	same measures as above, no significant effects found
‡ Memphis TN site	<u>at 5 years</u> <b>Subsequent pregnancies +</b> Subsequent live births " Abortions " <b># months between 1<sup>st</sup> and 2<sup>nd</sup> child +</b> # months worked " <b># months on AFDC +</b> <b># months on Food Stamps +</b> # months on Medicaid " # months on WIC " Highest level education " Current socioeconomic status "

### 3.7. Costs

Assessing the cost effectiveness of a program is very difficult for several reasons. As we have seen, the benefits of programs are not necessarily easily identified nor are they easily measured. Benefits in the area of child well-being, like the benefits of many social service programs, are difficult to put a price tag on, making it hard to understand the tradeoff between costs and benefits. Benefits accrue over time and extend to a number of parties, including the participating children and families, the government through reduced spending on welfare, and society at large through reduced crime, among other things. By the time these benefits are realized, it is difficult to trace causation back to the program. Furthermore, policymakers have to

balance the clear and immediate costs with future benefits, and people place different discount rates on future benefits compared with current benefits.

These challenges suggest that cost effectiveness may not be the proper metric to assess the worth of a program, or at least that a failure to find benefits that outweigh costs should not immediately signal a program's lack of worth. Certainly cost effectiveness measures are far easier when considering two programs with different costs but the same or similar effects. As we have seen, these relatively easy comparisons are not possible between home visitation programs.

Despite these challenges, one group of researchers used the results of the 15-year follow-up of the NHVP to conduct a rigorous analysis assessing the cost effectiveness of the program over that time. It compared the costs of the program with the benefits that accrued to participating children by the time they were 15 years old. The comparison assigned monetary values to the following outcomes: months a mother was employed, months a mother received AFDC payments, number of maternal arrests, number of child arrests, and the number of visits to the emergency room by the child from 25-50 months of age. This study found that savings to the government and society outweighed the costs of the program (approximately \$6,600 (in \$2000) per family for the full treatment) by a factor of four for higher-risk families.

There are two important caveats in interpreting these optimistic results, however. First, the study found the opposite relationship for lower-risk families; that is, the costs outweighed the savings. These contrasting results highlight the fact that benefits rise relative to costs when interventions are targeted at those with greater needs. When programs deliver to a group including children who have low need levels, the services cost money but are unlikely to produce positive effects or savings. Second, it is important to recognize that 80 percent of the cost

savings in the higher-risk group were due to reduced reliance on and thus government spending on AFDC over the fifteen-year follow-up period. Given the dramatic decline in welfare reciprocity since welfare reform in 1996, it is not clear whether these results would hold up under the new welfare structure.<sup>24</sup>

None of the other models of home visitation have been subject to a rigorous analysis of costs and benefits, largely because they have not measured the necessary long-term benefits for a defensible assessment of cost effectiveness. Even without such assessment, the CCDP has been dubbed as not cost effective: at about \$12,600 per family annually, it was very expensive and results were very limited.<sup>11</sup>

### ***3.8. Comments on Evaluation Findings***

In summary, it is clear that effects on outcomes attributable to home visitation programs are mixed. Some programs appear to be beneficial in one domain or in one aspect of a domain, while others seem to affect different areas of child or maternal outcomes. Benefits are rarely, if ever, demonstrated for all of a program's goals, and they often vary according to subgroups of the sample served or across different replications of the same model. A 15-year follow-up evaluation suggests that benefits may not be realized for several years after the program's end. The great variety in program services and goals, as well as differences in the outcomes measured and the corresponding results, makes it difficult to directly link certain program elements with the desired outcomes. However, the next section attempts to do this by synthesizing the existing research into a set of "best practices" for home visitation.

## 4 What Elements Appear To Be Best Practices?

The mixed results on the evaluations of home visitation make it difficult to conclude that any single program is the most “effective” model. At the most basic level, the varying outcomes result partially from the different emphases of the models. Moreover, the success of a given model sometimes draws on the very high degree of commitment—on the part of program designers, administrators, and even evaluators—to that particular model. Nevertheless, it is not necessary to pick any given model to find elements and practices of home visitation programs that offer the greatest potential of producing positive outcomes; in other words, we can devise a so-called list of “best practices.”

“Best practices,” as Neil Guterman explains, “. . . are not programs but rather *ideal practice principles* serving as guides for programmatic decision making and entire fields of practice, independent of context-specific conditions or changes.”<sup>25</sup> Applying this definition, we examine both the scientific evidence from evaluations of as many programs as possible and the reported experiences of long-time practitioners to identify individual elements that appear most promising on a field-wide scale, according to our reading of the existing body of literature.

We structure the discussion in this section around the nine program elements discussed in Section 2. Table 4.1 provides an overview of our conclusions regarding best practices, and the text below provides greater detail.

**Table 4.1 Best Practices from Empirical Evidence**

Philosophy and culture	<p><b>P</b> Recognize families face complex and multiple stressors and establish comprehensive focus to address full range of family needs (rather than focus on single domain of functioning, such as increasing birth weigh or reducing child abuse)</p> <p><b>P</b> Home visiting program need not be comprehensive in and of itself, rather can be an integral part of broader early intervention/family support program</p> <p><b>P</b> Respect each family’s personal space</p>
Home services provided	<p><b>P</b> Initial focus should be family needs and stressors, before curriculum</p> <p><b>P</b> Curriculum must have clear objectives and structured protocols that are compatible with each family’s culture, language, and needs</p> <p><b>P</b> Establish core educational curriculum, with modeling, role playing, and observation as key components</p> <p><b>P</b> Services should include frequent assessments of parental alcohol and drug use; if substance abuse is identified, visitor should work to reduce risks to the child and family by emphasizing abstinence and alternative care opportunities if parent is drunk, as well as suggesting/initiating formal supports (rehabilitation centers) and informal supports (family, friends, support groups)</p> <p><b>P</b> Promote positive partnership (with father or partner)</p> <p><b>P</b> Help families develop their own informal support system by assessing existing social network, strengthening social skills, organizing quasi-informal support groups of mothers with similar experiences</p> <p><b>P</b> Promote parental confidence and sense of control by acknowledging/commending personal successes across all domains (such as social network relationships, securing employment, dealing with public bureaucracy), as well as teaching communication and conflict management skills</p> <p><b>P</b> Teach parents skills that serve as bridge to future use of community resources and functioning in social environment</p> <p><b>P</b> Ensure families linked to medical provider and other services as necessary (e.g. child care, job training, FRC, substance abuse, etc.)</p>
Target population	<p><b>P</b> Target services to populations most likely to benefit (as opposed to universal program)</p> <p><b>P</b> Design target group that is based on population/demographic characteristics instead of using screening entire population for individual characteristics</p> <p><b>P</b> Populations that have experienced positive effects through home visitation: teen parents, first time parents, women with low psychological resources</p> <p><b>P</b> Realize that effects for families with high levels of existing domestic violence may be limited</p>
Nature of client participation	<p><b>P</b> Voluntary</p> <p><b>P</b> Use outreach programs to build client trust</p>
Attrition	<p><b>P</b> Assess attrition: address specific barriers to continuation in program (such as the perceived needs of mothers, the stigma of participation, time obstacles, values with respect to privacy)</p> <p><b>P</b> Mothers who are healthier and in greater need of social support are more likely to remain in services</p>

<p>Credentials of staff</p>	<p>P No clear domination of a particular professional or education discipline, nor trained paraprofessional or nurses</p> <p>P There is debatable evidence that nurses have a greater effect than paraprofessionals (no college degrees)</p> <p>P The type of visitor must well-matched with the goals of the program</p> <p>P Select staff on both characteristics (compassion, etc) and education/experience</p> <p>P Do not establish multidisciplinary teams of visitors</p>
<p>Duration and frequency</p>	<p>P Intensity is more important that duration, thus intensive and short programs are better than less-intensive programs that continue longer</p> <p><i>Duration:</i></p> <p>P Visits initiated prenatally are associated with better outcomes and higher retention rates</p> <p>P Continue visits for at least 6 months, or for as long as 3- 5 years</p> <p><i>Frequency:</i></p> <p>P Intensive – weekly or biweekly for families with greatest need</p>
<p>Other</p>	<p>P Program must be flexible and individualized to clients: after enrollment decision made, complete a clinical assessment of individual family to tailor goals and activities to a family</p> <p>P Establish well-defined goals, which are developed by all stakeholders and clearly communicated to all parties involved, including families</p> <p>P Partnership necessary across programs and communities</p> <p>P Base evaluation on the process, rather than the outcome: implement continuous examination of outcomes measures, attrition, perspectives of visitors and clients and maintain option of mid-course adaptations</p>

#### 4.1. *Philosophy and Culture*

Although it is difficult to determine a “best” program philosophy or culture, neither being easily defined concepts by construction, three notions appear to be important. First, programs cannot take a one-size-fits-all approach to service provision. They must acknowledge that each family faces a unique set of complex stressors. Accordingly, programs should adopt a comprehensive focus and seek to address the full range of family needs, rather than to concentrate on a single domain of functioning within the family, such as increasing birth outcomes or reducing child abuse. This claim is supported by Olds and Kitzmen’s review of empirical studies showing that programs with a limited focus (only one or a few domains) were unlikely to have a meaningful or lasting effect.<sup>26, 27, 28</sup> A related principle states that home

visitation programs should not attempt to be a panacea for child abuse, poor child development, or any other adverse outcome. Instead, they should identify themselves as an integral part of a community-wide and comprehensive system of support for families and children.<sup>27</sup> Lastly, the philosophy of the program should place a premium on a family's personal space, recognizing the invasive nature of home visitation by construction. Only by respecting a family's needs and values on privacy can significant effects be achieved.<sup>25</sup>

#### ***4.2. Home Services***

From the beginning, the initial focus should be on an individual family's needs and stressors, rather than on the intended curriculum. The families being served are likely to face a multitude of problems, including the lack of housing or food, partner abuse, and illness, and the program should not attempt to push these concerns aside in order to remain on the program course. This is a practice adopted either by construction or default in most models, and the flexibility should be integrated into a model's intended services.

That said, a core curriculum for home services should be established with clear objectives and structured protocols that are compatible with each family's culture, language and needs. The complexity of culturally based variations in child rearing practices is just one of the many reasons this sensitivity is necessary. Because many of the clients served will belong to minority culture and class groups, it is important to avoid imposing "traditional" (white middle-class) beliefs on these families.<sup>25</sup> Equally important is that the services are delivered to clients in a language in which they are fluent. Reports from one nurse home visitor in the Esperanza Project, a current home visitation model in Los Angeles, reinforce this practice. She notes her frustration with the strict standardization of the program, which only provides education materials in English, even though nine of her 25 clients speak only Spanish.<sup>29</sup> In addition to being tailored to

clients' culture, this core curriculum should largely rely on modeling, role-playing and observation of effective behaviors.<sup>30</sup>

Services should be provided in a two-generation model, one that focuses on both the child and the parent, as well as on the child-parent interaction. Services to parents (usually the mother) should promote positive partnership with either the father or mother's partner, encourage a family's use of informal support networks, cultivate parental confidence and control, and include regular assessments of and reaction to alcohol abuse. The focus on parenting confidence and comfort with existing social networks is supported by research assessing the links between social network factors and child maltreatment risk. Broad patterns in the findings suggest that parents' isolation from social networks or community services restricts the availability of the support ingredients necessary for positive parenting. Home visitation models should try to prevent or lessen this potential isolation by helping families to assess and engage the existing informal support systems available. Services should also be geared toward teaching parents the skills necessary to function in the social environment in the future, as well as to make use of other community services. In doing so, models should also be careful to avoid serving as a surrogate social support.<sup>25</sup>

#### ***4.3. Target Population***

Section 2.3 described the difference between so-called targeted and universal access programs, the first which restricts the sample according to a certain demographic characteristic – such as low-income or first-time parent – while the other completes a systematic assessment of an intended population according to individual characteristics – such as one's risk for child abuse. The way in which a program's population should be defined comprises one of the biggest debates in this field, but research supports the advantage of targeted access. Accordingly,

targeted groups should be defined by demographic characteristics that are associated with individuals who have the greatest need or are most likely to benefit from services.<sup>25</sup> The review of program effects in Section 3, which highlights numerous cases of benefits that accrued only to a subgroup of the sample, provides evidence to support this practice. It also suggests three promising target groups – teen mothers, first time mothers, and those with low psychological resources<sup>31</sup> – all of whom have experienced positive effects from home visitation.<sup>4, 6, 7, 8</sup>

There is also recent research suggesting that domestic violence limits the effectiveness of home-visitation programs in preventing child maltreatment; therefore, families with high levels of existing abuse may not be an optimal target group. Based on 15-year follow-up of the Elmira NHVP site, analyses reveal that the home visitation program had no effect on limiting child abuse and neglect for mothers who reported 28 or more violent incidents (21 percent of the sample), but it successfully reduced the number of child maltreatment reports for families who reported fewer than 28 violent episodes. The mechanism to explain this difference is not clear. Researchers of the Elmira study find that the distinction between the two groups of women is not attributable to less engagement on the part of the mothers in abusive situations; however, another study reveals that families in which the mother was at extreme risk or exhibited unilateral violence toward her partner were less likely to receive the full number of visits.<sup>18, 32</sup>

#### ***4.4. Nature of Client Participation***

Remaining within the definition of home visitation presented in section 2—programs that are voluntary in nature and use home visits as their primary service—it seems apparent that the decision to participate should be made by the potential client. The U.S. Advisory Board on Child Abuse and Neglect provided an official prescription for home visitation of this nature in 1991.<sup>30</sup> Since then, HFA has also promoted the importance of voluntary programs.<sup>4</sup> This practice

is also supported by existing research that provides strong evidence of the relationship between child maltreatment and parents' feelings of powerlessness or loss of control. Accordingly, home visitation programs should promote personal experiences of success and help parents feel a sense of control over their parenting.<sup>25</sup> To this end, a service that is voluntary allows a parent to make a conscious decision in the interest of her child and herself; an involuntary program takes away this important element of control. Given the preference for voluntary models of visitation in which participation is a product of clients' willingness and motivation, programs must consider ways to recruit and engage families, as well as to develop their belief in the program.<sup>4, 25, 30</sup>

#### **4.5. *Staff Caseload***

There are no studies that have sought to determine the optimal caseload for visitors, but it is clear that the number should be restricted to maintain visitor quality and prevent visitor burnout.<sup>4, 30</sup> Furthermore, there is some indication that staff turnover stifles potential program effects. For example, a comparison of results from the Elmira and Memphis evaluations of the NHVP reveals smaller effects in the latter trial, a difference that has been partially attributed to higher levels of turnover among Memphis nurses due to a nursing shortage that coincided with conduct of trial.<sup>33</sup> The existing research also lacks an understanding of the tradeoffs between higher caseloads and waiting lists or restricting services to the most disadvantaged clients. Although there is no evidence to suggest optimal program policies, the issue should be considered by programs with respect to their individual funding sources, community, and population needs.

#### **4.6. *Staff Credentials***

The optimal credentials for home visitors may be the most controversial debate in the field. No matter how strong a curriculum, home visitors are the core of the program: the success

of an individual model rests largely on the services provided by its visitors, as well as their quality, dedication, sensitivity and creativity.

The most prominent question centers on the use of nurses as opposed to paraprofessionals, a distinction that is likely prompted by the divergent strategies employed by two of the most well known programs, the NHVP (which uses nurses) and HFA (which uses paraprofessionals). The controversy is further fueled by the absence of a clear answer to this question in the empirical research. New findings by Olds et al, who directly test this question by randomizing clients between nurses and paraprofessionals delivering the same model (the NHVP), suggest that the nurses produced statistically significant effects on maternal and child development while paraprofessionals did not.<sup>34</sup> Results from this same experiment indicate that nurses and paraprofessionals provide home visiting services in different ways – including the number, length and emphasis of visits – even when they are trained to deliver the identical program model.<sup>35</sup>

This evaluation is the first to directly test the question, yet there are several problems with the set-up of the experiment that may render the results unreliable for field-wide extensions. First, because the long-running NHVP specifically is designed to be delivered by nurses, the model may *a priori* advantage nurses. Second, the paraprofessionals used in this trial experienced much higher rates of turnover (about 50 percent) than nurses, which may have been partly due to feelings of discomfort among paraprofessionals with delivering services intended for nurse provision. Regardless, different rates of turnover make the nurse and paraprofessional groups difficult to compare. Lastly, the paraprofessionals selected for the trial were required to have no education past high school, which reduces the comparability of this sample to

paraprofessionals used in the field, who frequently have degrees in relevant fields such as education, child psychology, or social work.<sup>25</sup>

In summary, the nurses versus trained and supervised paraprofessionals debate remains unresolved and it appears that both types of visitors, as well as individuals educated in other related disciplines, can produce positive effects.<sup>22, 25</sup> Rather than focus on the exact credential requirements, attention should be redirected at creating high-quality matches between visitor expertise and program goals.<sup>25</sup> Furthermore, staff should be selected on personal characteristics, such as compassion and dedication, as well as education or experience.<sup>4</sup> Lastly, caution should be given to programs considering to use a multidisciplinary team of professionals. Some approaches (including the Cal-SAHF model) have included teams with social workers, nurses, paraprofessionals, child welfare professionals, and substance abuse specialists. Surprisingly, models of this type have not yet proven themselves to be any more successful than earlier approaches.<sup>25</sup>

#### ***4.7. Duration and Frequency of Visits***

The intensity of program services, or the frequency of the visits, is more important than the duration. Thus, an intensive program – one providing weekly to biweekly visits – delivered over a short horizon is likely to produce greater effects than a longer, but less intensive one. Intensity is likely to increase “buy in” to the program by clients and reduce attrition, and it allows the program to concentrate services early in a child’s life, when his or her family may be more receptive to outside support. A program should therefore aim to deliver biweekly or more frequent visits for a minimum of six months to a year, and possibly for as long as five years.<sup>4, 25, 30, 36</sup> However, higher attrition rates in longer programs—those that extend until the child is three

to five years rather than ending after two years—may indicate an advantage to slightly shorter programs.<sup>4, 7, 11</sup>

The timing of visits has also been labeled a key variable, and the most relevant question in this domain is whether programs should begin prenatally or at birth. The available evidence in this area suggests that programs beginning prenatally have an advantage. These programs have been associated with both higher engagement rates and more positive outcomes.<sup>25, 37</sup> Moreover, programs that begin before the child is born have found some positive effects on birth outcomes, such as fewer birth complications, higher birth weight, and decreased premature births.<sup>4, 8, 30</sup>

#### **4.8. Attrition**

Programs should address attrition rates, within the boundaries of realistic expectations for client participation and continuation. They should assess and minimize the impact of specific barriers to continuation, including the perceived needs of mothers, any possible stigma of participation, and the necessary balance between home visitation, time obstacles, and values regarding family privacy and personal space.<sup>5, 18, 25</sup> Programs must also acknowledge that families will have an evolving set of needs throughout the program; therefore, to keep families engaged, they should continually attempt to match program services to these varying needs.

Likewise, programs should gather information to help predict which clients will drop out and either target their program around these demographic groups or direct resources to engage these individuals. For example, a study of one maternal home visitation program found that long-term participants were more likely to have been African American, married, nonsmokers, enrolled during their second trimester of pregnancy, and they were more likely to have had greater perceived emotional and instrumental support needs.<sup>37</sup> There is also evidence that teen

mothers were more likely than older mothers to accept an invitation to participate in the program.<sup>18</sup>

#### **4.9. Other Best Practices**

A program must take into account the complexity and diversity among its clients and remain flexible and individualized to these changing needs throughout the entire duration of the program. A program must be able to evolve at the same time as its clients develop. To this end, Guterman suggests a six-stage process for a program to follow, a process that fits easily with the practices discussed above:

1. Identify eligible target groups based on demographic characteristics
2. Recruit families, receive referrals, and reach out to families
3. Secure a family's participation in the program
4. Engage a family in identifying service goals and establish a mutually-agreeable service plan
5. Maintain a family's cooperation in ongoing services to address goals
6. Promote a family's self-motivated participation in program (and community) services.<sup>25</sup>

Additionally, communication among all parties involved, including stakeholders, program developers and administrators, visitors, and participating families should be continually maintained. For example, the overarching goals of the program and the individualized goals of the families must be well defined and clearly understood by all. Communication should also be extended to the community level in order to foster partnerships across programs and communities in an area.<sup>5, 8, 25</sup>

Another primary concept that must be at the forefront of a "best" program is the implementation of continuous evaluation that is concentrated as much on the process as on the outcomes. Factors such as attrition, actual services received, fulfilled referrals to other services, the perspective of visitors, and the satisfaction of clients must be evaluated in combination with outcomes. Most important, the program should allow for any mid-course modification that may be suggested by analysis of these factors.<sup>25, 26</sup>



## 5 Conclusions

Despite the popularity of and the growing body of research on home visitation programs for young children and their families, the verdict on home visitation is not yet in. As one group of researchers explains, “Theoretically, involving parents, changing parenting attitudes and behaviors, and improving parent-child interactions should have both short- and long-term positive effects on child development . . . However, there is little research evidence to support the assumption that parent services affect child outcomes.”<sup>6</sup>

For programs studied using rigorous evaluation techniques, there is some evidence of positive impacts attributable to these programs on the well-being of young children and their families, but these positive effects are sometimes sparsely scattered alongside a larger number of indicators showing no significant effects. As the number of such programs increases, there are also indications of which elements might be most likely to bring about these positive effects, elements that we include in our list of identified best practices.

On the other hand, the costs of these programs and the limited magnitude of the impacts are among several factors suggesting that home visitation (or home visitation alone) is not the most effective way to affect and improve child outcomes. Home visitation must therefore be viewed in the context of a broader set of services geared toward improving the outcomes for young children and their families. With this perspective and recognition of the limitations of home visitation, recent reviews suggest that the best approach for programs may be to concentrate on improvements in the current service while remaining open-minded about other strategies and possibilities.<sup>25, 26</sup>

As SPHERE turns to the issue of home visitation programs in Orange County, we take several lessons from the findings here. First, the results reinforce the idea that there is no one-

size-fits-all approach to home visitation programs, but rather there is room for different programs emphasizing different goals for families. That said, it is critical to find the right fit between families' needs and the goals of different programs. Second, it is clearly important to strengthen the connections between individual programs and the larger service structure. In a county with many different home visitation programs—as well as programs with other core service strategies but home visitation as an added component—these connections must also extend to other home visitation programs, an extra level of complexity that has yet to be considered in the literature. Finally, the best chance for success of these programs and for an integrated county-wide service delivery system depends on an environment that values and supports ongoing monitoring, assessment and adjustment within and across programs.

# Appendix

**Table A.1.a: Hawaii’s Healthy Start (HHS)**

Background	<ul style="list-style-type: none"> <li>‡ Began in 1985, now 14 sites in Hawaii</li> </ul>
Philosophy and culture	<ul style="list-style-type: none"> <li>‡ Early identification: Identify families before their day-to-day stresses, isolation and lack of parenting knowledge give rise to abusive and neglectful parenting.</li> </ul>
Primary goals	<ul style="list-style-type: none"> <li>‡ Prevent child abuse maltreatment</li> <li>‡ Improve family coping</li> <li>‡ Promote positive parenting</li> <li>‡ Strengthen parent-child interaction and promote family functioning</li> <li>‡ Promote optimal child development/school readiness</li> <li>‡ Improve use of community resources, particularly access to a continual “medical home”</li> </ul>
Home services	<ul style="list-style-type: none"> <li>‡ Two generation</li> <li>‡ Identify existing crises through listening</li> <li>‡ Help families identify and build on strengths</li> <li>‡ Role model problem solving skills and effective parent-child interaction</li> <li>‡ Link families with needed services (e.g. housing, income and nutritional assistance, child care, and educational training)</li> <li>‡ Ensure each child had a “medical home” (continuing source of pediatric care)</li> </ul>
Other services	<ul style="list-style-type: none"> <li>‡ None</li> </ul>
Target population	<ul style="list-style-type: none"> <li>‡ Families with newborns identified as at risk for abuse</li> <li>‡ Universal screening: Medical records of all newborn families screened for risk in 15 areas (marriage status, unemployment, low income, unstable housing, no phone, no high school degree, inadequate emergency contacts, marital problems, history of abortions, adoptions sought, history of drugs, history of psychiatric care, history of depression, inadequate prenatal care).</li> <li>‡ Initiated at birth</li> </ul>
Nature of client participation	<ul style="list-style-type: none"> <li>‡ Voluntary</li> <li>‡ State funding sufficient to provide services to about 40% identified at-risk families</li> </ul>
Rate of attrition	<ul style="list-style-type: none"> <li>‡ From program (after 1 year): 51%</li> <li>‡ From evaluation (after 2 years): 12%</li> </ul>
Staff caseloads	<ul style="list-style-type: none"> <li>‡ Caseload of 20 to 25 families per visitor</li> </ul>
Staff credentials	<ul style="list-style-type: none"> <li>‡ Visitors: trained paraprofessionals with qualities of warmth, self-assurance, cultural sensitivity, and good parenting skills</li> <li>‡ Program director: public health nurse</li> <li>‡ Supervisors: professionals with training in social work or early education</li> </ul>

**Table A.1.a: Hawaii's Healthy Start (continued)**

Duration and frequency	<ul style="list-style-type: none"><li>‡ Begin services: birth (up to 3 months)</li><li>‡ End services: three or five years old</li><li>‡ Frequency: tiered from weekly to quarterly depending on assessment of family need (which can change over course of program for a family).</li></ul>
Outcome measure areas	<ul style="list-style-type: none"><li>‡ Child: Development and behavior, Health, Abuse and neglect</li><li>‡ Maternal: Home environment, Life course</li></ul>
Costs	<ul style="list-style-type: none"><li>‡ Family cost: \$3,250 for full services</li><li>‡ Financed through state funds (90%) and money raised by private agencies</li></ul>

**Table A.1.b: Healthy Families America (HFA)**

Background	<ul style="list-style-type: none"> <li>‡ Launched by Prevent Child Abuse America and inspired by Hawaii’s Healthy Start</li> <li>‡ More than 320 sites nationwide</li> </ul>
Philosophy and culture	<ul style="list-style-type: none"> <li>‡ The organizing principle for the prevention is not the avoidance of a particular set of social dilemmas (e.g. child abuse, substance abuse, etc.), but rather the establishment of familial and community conditions conducive to optimal child development.</li> <li>‡ Commitment to own set of best practices.</li> </ul>
Primary goals	<ul style="list-style-type: none"> <li>‡ Prevent child abuse and neglect</li> <li>‡ Prevent negative birth outcomes (if started prenatally)</li> <li>‡ Promote positive parenting</li> <li>‡ Promote use of existing social systems</li> <li>‡ Ensure each child had a “medical home”</li> </ul>
Home services	<ul style="list-style-type: none"> <li>‡ Two generation</li> <li>‡ Enhance parent-child interaction</li> <li>‡ Foster child growth and development</li> <li>‡ Improve family functioning in problem solving and use of social support/community resources</li> </ul>
Other services	<ul style="list-style-type: none"> <li>‡ None</li> </ul>
Target population	<ul style="list-style-type: none"> <li>‡ Families with newborns identified as at risk for abuse</li> <li>‡ Universal screening: Assess all families in intended population for service area (e.g. 1<sup>st</sup> time parents or all families in a given neighborhood)</li> <li>‡ P Initiated prenatally or at birth (about one-third begin prenatally)</li> </ul>
Nature of client participation	<ul style="list-style-type: none"> <li>‡ Voluntary</li> <li>‡ If at risk mother decline options, she may be pursued for up to 3 months</li> </ul>
Rate of attrition	<ul style="list-style-type: none"> <li>‡ 20-30%</li> </ul>
Staff caseload	<ul style="list-style-type: none"> <li>‡ Caseload of 20 to 25 families per visitor</li> </ul>
Staff credentials	<ul style="list-style-type: none"> <li>‡ Visitors: trained paraprofessionals (called Family Support Workers) selected on basis of personal characteristics rather than education (87% visitors have prior home visitation experience, 82% have college degree specialized in child development)</li> </ul>
Duration and frequency	<ul style="list-style-type: none"> <li>‡ Begin services: prenatally or at birth (up to 3 months)</li> <li>‡ End services: three or five years old</li> <li>‡ Frequency: tiered from weekly to quarterly according to individual need</li> </ul>
Outcome measure areas	<ul style="list-style-type: none"> <li>‡ Child: Development and behavior, Health, Abuse and neglect</li> <li>‡ Maternal: Home environment, Life course</li> </ul>

Costs	‡ Approximately one billion dollars spent on 320 sites nationwide in 1997 ‡ Finance primarily through taxpayers (70%)
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**Table A.1.c: Nurse Home Visitation Program (NHVP)**

Background	<ul style="list-style-type: none"> <li>‡ Evaluation sites in Elmira 1978, Memphis 1990 and Denver 1994</li> <li>‡ Now 140 replication sites (9 in CA)</li> </ul>
Philosophy and culture	<ul style="list-style-type: none"> <li>‡ Foundation in theories of human ecology, self-efficacy, and human attachment</li> <li>‡ Try to influence the mother's mastery of child-rearing</li> <li>‡ Protocols and record keeping system followed closely</li> </ul>
Primary goals	<ul style="list-style-type: none"> <li>‡ Improve pregnancy outcomes</li> <li>‡ Improve quality of maternal care giving</li> <li>‡ Improve child health and development/school readiness</li> <li>‡ Improve families economic self-sufficiency/mothers= personal functioning</li> </ul>
Home services	<ul style="list-style-type: none"> <li>‡ Two generation</li> <li>‡ Sensory and developmental screening at 12 months and 24 months – refer for treatment if needed</li> <li>‡ Nurse home visits that promote               <ul style="list-style-type: none"> <li>a) health-related behaviors during pregnancy and after</li> <li>b) quality care given by parents</li> <li>c) parents' family planning, educational attainment, work force participation</li> </ul> </li> <li>‡ Link families with needed health care and human services</li> </ul>
Other services	<ul style="list-style-type: none"> <li>‡ Free transportation for prenatal and well-child care visits</li> </ul>
Target population	<ul style="list-style-type: none"> <li>‡ First-time mothers               <ul style="list-style-type: none"> <li>Elmira: unmarried, low-income, and/or less 19 years old (mostly white)</li> <li>Memphis: unmarried, low education, and/or unemployed (mostly African American)</li> </ul> </li> <li>‡ Recruited from clinics/doctors offices</li> <li>‡ Initiated during pregnancy</li> </ul>
Nature of client participation	<ul style="list-style-type: none"> <li>‡ Voluntary</li> </ul>
Rate of attrition	<ul style="list-style-type: none"> <li>‡ From program: 10%</li> <li>‡ After 4 years: 15-21%</li> <li>‡ After 15 years: 19-21%</li> </ul>
Staff caseload	<ul style="list-style-type: none"> <li>‡ Caseload of 20 to 25 families per visitor</li> <li>‡ Replication sites are expected to commit to minimum of 100 families, which requires 4 full-time nurses, 1 part-time nurse supervisor, and 1 part-time clerical support person</li> </ul>

**Table A.1.c: Nurse Home Visitation Program (continued)**

Staff credentials	<ul style="list-style-type: none"> <li>‡ Nurses (typically required to have minimum of Bachelor’s degree)</li> <li>‡ Optimally family receives visits from same nurse over course of program</li> </ul>
Duration and frequency	<ul style="list-style-type: none"> <li>‡ Begin services: prenatally</li> <li>‡ End services: two years old</li> <li>‡ Frequency: weekly, fading to monthly, (on average, 9 visits during pregnancy, 23 visits from birth - 2 years), 60-90 minute visits with visit-by-visit program protocols</li> </ul>
Outcome measure areas	<ul style="list-style-type: none"> <li>‡ Child: Development and behavior, Health, Abuse and neglect</li> <li>‡ Maternal: Home environment, Life course</li> </ul>
Costs	<ul style="list-style-type: none"> <li>‡ Family cost: \$6,600 for full services through two years</li> <li>‡ Savings to government/society greater than costs of program by factor of 4 for higher-risk families, but not for lower-risk families. About 80% of savings due to reduced use of AFDC</li> </ul>

**Table A.1.d: Parents as Teachers (PAT)**

Background	<ul style="list-style-type: none"> <li>‡ Now more than 2000 sites nationwide</li> </ul>
Philosophy and culture	<ul style="list-style-type: none"> <li>‡ Single focus (parents) program</li> <li>‡ Parents play a critical role in determining their children=s outcomes</li> <li>‡ Babies are born learners</li> </ul>
Primary goals	<ul style="list-style-type: none"> <li>‡ Empower parents to give children best start in life</li> <li>‡ Increase parents= feelings of competence/confidence</li> <li>‡ Give children solid foundation for school success</li> <li>‡ Prevent and reduce child abuse</li> <li>‡ Develop home/school/community partnerships on behalf of children</li> </ul>
Home services	<ul style="list-style-type: none"> <li>‡ One generation</li> <li>‡ Provide information on child=s development</li> <li>‡ Model and involve parents in age-appropriate activities with child</li> <li>‡ Respond to questions</li> <li>‡ As of 1999, teach <i>Born to Learn</i> Curriculum</li> <li>‡ Monitor child progress to detect problems as early as possible</li> <li>‡ Link families with community services</li> </ul>
Other services	<ul style="list-style-type: none"> <li>‡ Group meetings of parents</li> </ul>
Target population	<ul style="list-style-type: none"> <li>‡ Universal: offered to all families.</li> <li>‡ Recruited from WIC offices, medical clinics and school districts.</li> <li>‡ Initiated prenatally or at birth</li> </ul>
Nature of client participation	<ul style="list-style-type: none"> <li>‡ Voluntary</li> </ul>
Rate of attrition	<ul style="list-style-type: none"> <li>‡ From program: 43-57%</li> <li>‡ From evaluation: 27-48%</li> </ul>
Staff caseload	<ul style="list-style-type: none"> <li>‡ Most visitors work part-time and service 20 families</li> </ul>
Staff credentials	<ul style="list-style-type: none"> <li>‡ Visitors: trained and credentialed parent educators (some have Bachelor or advanced degrees)</li> </ul>
Duration and frequency	<ul style="list-style-type: none"> <li>‡ Begin services: prenatally or at birth</li> <li>‡ End services: three or five years old</li> <li>‡ Frequency: monthly, biweekly, or weekly depending on family needs and funding, 60 minute visits</li> </ul>
Outcome measure areas	<ul style="list-style-type: none"> <li>‡ Child: Development and behavior, Health</li> <li>‡ Maternal: Home environment, Life course</li> </ul>
Costs	<ul style="list-style-type: none"> <li>‡ Family cost: \$2,240 per year</li> </ul>

**Table A.1.e: Comprehensive Child Development Program (CCDP)**

Background	<ul style="list-style-type: none"> <li>‡ 21-site randomized trial began in 1990-95</li> <li>‡ Funded by Department of Health and Human Services</li> </ul>
Philosophy and culture	<ul style="list-style-type: none"> <li>‡ Based on ecological theory of human development: children’s development is influenced by families and communities in which they live.</li> </ul>
Primary goals	<ul style="list-style-type: none"> <li>‡ Promote school readiness</li> <li>‡ Provide support to parents and other family members</li> <li>‡ Assist families in becoming economically self-sufficient</li> </ul>
Home services	<ul style="list-style-type: none"> <li>‡ Two generation</li> <li>‡ Educate parents in infant/child development, health care, nutrition, parenting skills and life skills</li> <li>‡ Refer families to services in the community</li> <li>‡ Provide counseling and support to family members, especially mothers</li> <li>‡ Complete screenings to diagnosis learning problems</li> <li>‡ Foster early child development</li> </ul>
Other services	<ul style="list-style-type: none"> <li>‡ None</li> </ul>
Target population	<ul style="list-style-type: none"> <li>‡ Families with income below federal poverty level and with pregnant mother or child under one year</li> <li>‡ (43% African-American, 26% Hispanic, 26% White)</li> <li>‡ Initiated at birth</li> </ul>
Nature of client participation	<ul style="list-style-type: none"> <li>‡ Voluntary</li> </ul>
Rate of attrition	<ul style="list-style-type: none"> <li>‡ From program: 64-7%</li> <li>‡ From evaluation: 11-17%</li> </ul>
Staff caseload	<ul style="list-style-type: none"> <li>‡ Caseload less than 20 families per visitor</li> </ul>
Staff credentials	<ul style="list-style-type: none"> <li>‡ Visitors: Initially, trained paraprofessionals from community with similar life experiences of program families (some had post-high school degrees)</li> <li>‡ As visitors left program, replacements were required to have Associate=s degrees or some post-high school training.</li> </ul>
Duration and frequency	<ul style="list-style-type: none"> <li>‡ Begin services: birth to one year old</li> <li>‡ End services: five years</li> <li>‡ Frequency: biweekly, 60 minute visits</li> </ul>
Outcome measure areas	<ul style="list-style-type: none"> <li>‡ Child: Development and behavior, Health</li> <li>‡ Maternal: Home environment, Life course</li> </ul>
Costs	<ul style="list-style-type: none"> <li>‡ Family cost: \$12,603 per year</li> <li>‡ 5-year demonstration cost:\$279 million</li> </ul>

**Table A.2 Description of Standardized measures used by Home Visitation Models**

ASBI Scott and Hogan Adaptive Social Behavior Inventory	‡ designed to assess adaptive or prosocial behaviors in high-risk 3 year olds
BSID Bayley Scales of Infant Development	‡ measure of infant mental and motor development, examiner administered
CBCL Child Behavior Checklist	‡ provides profile of behavioral problems and social competence, parent interview
CTS2 Conflict Tactics Scale	‡ assesses adult behavior towards children in 4 areas: neglect, psychological aggression, minor and severe physical assault, maternal interview
DPII Development Profile II	‡ measure of physical, social, and mental development, parent and teacher interview
HOME Home Observation for Measurement of the Environment	‡ assesses quality of home for child cognitive, social and emotional development, examiner observation
K-ABC Kaufman Assessment Battery for Children	‡ measure of cognitive ability, examiner administered
KIDI Knowledge of Infant Development	‡ questionnaire designed to assess knowledge of infant care, development and behavior, parent interview
NCAST Nursing Child Assessment Satellite Training Teaching Scale	‡ assesses quality of parent-child interaction, examiner observation
PPVT-R Peabody Picture Vocabulary Test-Revised	‡ evaluation of the receptive vocabulary of children, no reading ability required, examiner administered
PSI Parenting Stress Index	‡ measure of parent temperament and emotional problems, examiner administered
PSOC Parenting Sense of Competence Scale	‡ questionnaire to assess attitudes about parenting and confidence in parenting; parent interview or self-administered

Note: For a more detailed description of outcome measures, please refer to Gomby, Deanna S (1999). "Understanding Evaluations of Home Visitation Programs," *The Future of Children* 9(1): 27-43.

**Table A.3: Effects of Five Models of Home Visitation**

<p><u>LEGEND:</u>                      + positive and statistically significant effect (p# .05)                      " no statistically significant effect                      ? mixed results</p>	Child Outcomes			Maternal Outcomes	
	Development and Behavior	Health Status	Abuse and Neglect	Home Environment	Life Course
<b>Nationally Recognized Models</b>					
<p>Hawaii Healthy Start</p> <p><u>Sample size:</u>                      Visited group: 373                      Control group: 270</p>	<p><u>at 2 years</u>  <i>Development (BSID):</i>                      Mental "                      Physical "</p>	<p><u>at 2 years</u>                      Current immunizations "                      Adequate # of well-child visits "                      Ever had medical care for injury "                      Ever used ER "                      Ever hospitalized "                      Had primary care provider "</p>	<p><u>at 2 years</u>                      Families with confirmed CPS reports "                      CTS2:                      Any neglect "                      Frequent psychological aggression "                      Frequent minor physical assault "                      Severe physical assault "</p>	<p><u>at 2 years</u>                      Home quality (HOME) "                      Parent-child interaction (NCAST):                      Caregiver "                      Child "  <b>Parenting efficacy</b> +  <b>Frequent use of nonviolent discipline</b> +                      Parenting stress "</p>	<p><u>at 2 years</u>                      Degree or enrolled in school "                      Mother/someone in household worked "                      Substance abuse "                      Depression "                      Poor mental health "  <b>Partner violence resulting in injury</b> +                      Life skills "                      Social support "                      Confidence in adult relations "</p>
<p>Healthy Families America (based on 2 randomized and 2 quasi-randomized trials)</p> <p><u>Sample size:</u>                      varies across studies</p>	<p><u>at 1 and 2 years</u>                      Mental development "</p>	<p>Current immunizations ?                      Visits to ER "                      for VA site beginning prenatally:                      Full-term birth "  <b>Birth complications</b> +</p>	<p>Substantiated reports of child abuse/neglect ?</p>	<p><u>at 2 years</u>  <b>Home quality (HOME)</b> +  <b>Parent-child interaction (NCAST)</b> +  <b>Parenting knowledge (PSI)</b> +</p>	<p><u>at 2 years</u>                      Teen repeat births "                      Public assistance ?                      Use of AFDC, food stamps and Medicaid ?</p>

<b>LEGEND:</b> + positive and statistically significant effect (p# .05) " no statistically significant effect ? mixed results	Child Outcomes			Maternal Outcomes	
	Development and Behavior	Health Status	Abuse and Neglect	Home Environment	Life Course
		<b>Pregnancy risk scores +</b>  <b>Birth weight +</b>		Parenting self confidence (PSOC) ?  Social support ?	
Nurse Home Visitation Program - Elmira, NY <i>poor unmarried women only</i>	<u>at 6 months</u> <b>Reports of child-s positive mood +</b>  <u>at 1,2,3 and 4 years</u> Mental development "  <u>at 15 years</u> <b>Incidence of running away +</b>  Minor antisocial acts, major delinquent acts "  Externalizing/internalizing problems "  # of short-term or long-term school suspensions "  # times stopped by police, sent to youth correction "  # arrests +  <b>Convictions and probation violations +</b>  Ever had sex "	Pre-term birth "  Low birth weight "  Prenatal visits "  WIC, childbirth classes "  <u>at 2 years</u> <b># ER visits for injuries and ingestions +</b>  <u>at 50 months</u> <b># injuries and ingestions in medical records +</b>  scheduled health visits, # hospital admissions "  <u>at 4 years</u> # behavioral problems in medical records "  <b># ER visits +</b>  # days hospitalized "	<u>at 2 years</u> CPS cases "  <b>Substantiated reports of child abuse/neglect for teen mothers +</b>  <u>at 15 years</u> <b>Substantiated reports of child abuse/neglect +</b>	<u>at 46 months</u> Home quality (HOME) "  <b>Language stimulation and educational materials +</b>  <b>Home hazards +</b>  Car seat use "  Maternal warmth/control "  <b>Punishment +</b>	<u>during pregnancy</u> Kidney infections, bladder infection, hypertension, bleeding "  Informal support "  Smoking behavior, better diet "  <u>at 4 years</u> Employed "  <b>Subsequent pregnancies +</b>  <u>at 15 years</u> <b>Subsequent pregnancies +</b>  <b>Subsequent births +</b>  <b>Months between 1<sup>st</sup> and 2<sup>nd</sup> child +</b>  <b>Months receiving food stamps, AFDC +</b>  Months receiving Medicaid "

<b>LEGEND:</b> + positive and statistically significant effect (p# .05) " no statistically significant effect ? mixed results	Child Outcomes			Maternal Outcomes	
	Development and Behavior	Health Status	Abuse and Neglect	Home Environment	Life Course
	# of sexual partners +				
(continued) Nurse Home Visitation Program - Elmira, NY <i>poor unmarried women only</i>	Ever pregnant/made someone pregnant " # of cigarettes smoked per day " # days drank alcohol + # days used drugs "				Days in jail + Substance use impairments + Arrests, convictions +
Nurse Home Visitation Program - Elmira, NY <i>whole sample</i>  <u>Sample size:</u> Visited group: 216 Control group: 184	same outcomes as above, only outcomes with positive effect listed  <u>at 4 years</u> <b>Mental development for children of smokers +</b>  <u>at 15 years</u> <b>Convictions and probation violations +</b>	same outcomes as above, only outcomes with positive effect listed  <b>Pre-term birth for children of smokers (&gt; 4 per day) +</b>  <b>Low birth weight for mothers &lt;17 year olds +</b>  <b>WIC, childbirth classes +</b>  <u>at 2 years</u> <b># ER visits +</b>  <b># injuries or ingestions +</b>  <u>at 4 years</u> <b># behavioral problems</b>	same outcomes as above, only outcomes with positive effect listed  <u>at 15 years</u> <b>Substantiated reports of child abuse/neglect +</b>	same outcomes as above, only outcomes with positive effect listed  <u>at 46 months</u> <b>Home hazards +</b>	same outcomes as above, only outcomes with positive effect listed  <u>during pregnancy</u> <b>Kidney infections +</b>  <b>Informal support +</b>  <b>Smoking behavior +</b>  <b>Better diet +</b>  <u>at 4 years</u> <b>Employed +</b>

LEGEND: + positive and statistically significant effect (p# .05) " no statistically significant effect ? mixed results	Child Outcomes			Maternal Outcomes	
	Development and Behavior	Health Status	Abuse and Neglect	Home Environment	Life Course
		<b>in medical records +</b> <b># ER visits +</b> <b># days hospitalized +</b>			
Nurse Home Visitation Program - Memphis, TN  <u>Sample size:</u> Visited group: 458 Control group: 671	<u>at 2 years</u> Mental development (BSID) "  Behavior problems "	Birthweight " Gestational age " 5-minute Apgar " % of low birth weight " <u>at 2 years</u> # well-child visits "  <b># health encounters for injuries or ingestions +</b>  <b># outpatient visits +</b> <b># ER visits "</b> <b># hospitalizations "</b> <b># days in hospital +</b>  Current immunizations "		<u>at 2 years</u> <b>Attempted breast-feeding +</b>  <b>Beliefs about child abuse +</b>  <b>Home quality (HOME) +</b>  <i>Parent-child interaction (NCAST):</i> Maternal Teaching " Child responsiveness "	<u>during pregnancy</u> <b>Hypertension +</b>  <b># yeast infections +</b>  gestational weight gain, blood pressure, # prenatal visits, # hospitalizations, # STDs "  <b>Use of other community service +</b>  <u>at 2 years</u> Employed "  <b>Subsequent live births +</b>  # months on food stamps "  <b>Sense of mastery +</b>  Maternal anxiety, depression "  <u>at 5 years</u> <b>Subsequent pregnancies +</b>

<u>LEGEND:</u> + positive and statistically significant effect (p# .05) " no statistically significant effect ? mixed results	Child Outcomes			Maternal Outcomes	
	Development and Behavior	Health Status	Abuse and Neglect	Home Environment	Life Course
					Subsequent live births " Abortions " # months between 1 <sup>st</sup> and 2 <sup>nd</sup> child + # months worked " # months on AFDC + # months on Food Stamps +
(continued) Nurse Home Visitation Program - Memphis, TN					# months on Medicaid " # months on WIC " Highest level education " Current socioeconomic status "
Parents as Teachers -Salinas Valley  <u>Sample size:</u> Visited group: 298 Control group: 199	<u>at 3 years</u> <i>Development (BSID):</i> Mental " Physical "  <i>Development profile (DPII):</i> Cognitive " Communication " Social " <b>Self-help</b> + Physical "  Vocabulary (PPVT-R) "	<u>at 3 years</u> Current immunizations "  Well-child care visit in last 6 months "  Treated for injury in last year "  ER visit in last year "		<u>at 3 years</u> Knowledge of infant care (KIDI) "  <i>Parenting (PSOC):</i> Attitudes " Satisfaction " Efficacy "  Home quality (HOME) "	<u>at 3 years</u> Employed or in job-training "  Received AFDC "  Highest grade level attained "  Subsequent births "

<p><u>LEGEND:</u>  + positive and statistically significant effect (p# .05)  " no statistically significant effect  ? mixed results</p>	Child Outcomes			Maternal Outcomes	
	Development and Behavior	Health Status	Abuse and Neglect	Home Environment	Life Course
<p>Parents as Teachers -Salinas Valley  <i>Latina subgroup</i></p> <p><u>Sample size:</u>  Visited group: 113  Control group: 69</p>	<p><u>at 3 years</u>  <i>Development (BSID):</i>  Mental "  Physical "</p> <p><i>Development profile (DPII):</i>  <b>Cognitive</b> +  Communication "  <b>Social</b> +  <b>Self-help</b> +  Physical "</p> <p><b>Vocabulary (PPVT-R)</b>  +</p>	<p><u>at 3 years</u>  Current immunizations "  Well-child care visit in last 6 months "  Treated for injury in last year "  ER visit in last year "</p>		<p><u>at 3 years</u>  Knowledge of infant care (KIDI) "    <i>Parenting (PSOC):</i>  Attitudes "  Satisfaction "  <b>Efficacy</b> +    Home quality (HOME) "</p>	
<p>Parents as Teachers - Teen PAT</p> <p><u>Sample size:</u>  Visited group: 342  Control group: 178</p>	<p><u>at 2 years</u>  <i>Development profile (DPII):</i>  <b>Cognitive</b> +  Communication "  Social "  Self-help "  Physical "</p> <p>Vocabulary (PPVT-R) "</p>	<p><u>at 2 years</u>  Current immunizations "  Treated for injury in last year "</p>	<p><u>at 2 years</u>  <b>Open case of child abuse/neglect</b> +</p>	<p><u>at 2 years</u>  Knowledge of infant care (KIDI) "    <i>Parenting (PSOC):</i>  Attitudes "  Satisfaction "  Efficacy "    Home quality (HOME) "</p>	<p><u>at 2 years</u>  Employed or in job-training "  Received AFDC "  Enrolled or completed high school "  Subsequent births "</p>
<p>Comprehensive Child Development Program</p> <p><u>Sample size:</u>  Visited group: 2,213</p>	<p><u>at 3-5 years</u>  <i>Cognitive ability (K-ABC):</i>  Mental "  Achievement "</p>	<p>Average # medical visits per year "  Average # dental visits per year "</p>		<p><u>at 2-5 years</u>  <i>Parenting attitudes (AAPI):</i>  Inappropriate expectations for child "</p>	<p><u>at 2-5 years</u>  Household income "  Enrolled in school/job training "</p>

<b>LEGEND:</b> + positive and statistically significant effect (p# .05) " no statistically significant effect ? mixed results	Child Outcomes			Maternal Outcomes	
	Development and Behavior	Health Status	Abuse and Neglect	Home Environment	Life Course
Control group: 2,197	Vocabulary (PPVT-R) " Child behavior (CBCL) " Adaptive social behavior (ASBI) " <u>at 5 years</u> <b>Development checklist</b> +	Mortality "		Lack of empathy for child's needs " <b>Belief in corporal punishment</b> + Role reversal " <u>at 3 years</u> <i>Parent-child interaction (NCAST):</i> Maternal Teaching " Child responsiveness "  <u>at 4 years</u> Home quality (HOME) "	% with degrees " % time mother or husband/partner employed over study " % receiving AFDC " % receiving Food Stamps "  Depression " <i>Pregnancy behavior for subsequent children:</i> % with inadequate prenatal care " % use tobacco " % use alcohol " % use illegal drugs "

*Notes:*

Abbreviations used in table: ER - emergency room; CPS - Child protective services.  
See Table A.2 for assessment instrument descriptions.

## Endnotes

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<sup>1</sup> Gomby, Deanna S. (2000). "Editorial Promise and Limitations of Home Visitation," *JAMA* 284(11): downloaded 4/19/01 from <http://jama.ama-assn.org/issues/v284n11/toc.html#a3>.

<sup>2</sup> Examples of programs that incorporate home visits but do not have them as the central focus include child development programs such as Early Head Start in which the basic model calls for services delivered through center-based programs or Healthy Steps for Young Children in which the key services are delivered in pediatricians' offices.

<sup>3</sup> Other potentially relevant programs include those that begin after a child is one year old or that are targeted at mentally ill or disabled children. Because these programs face very different challenges, they cannot be directly compared to the major home visitation models for the purpose of separating out the role of different program elements. Similarly, involuntary home visitation by child welfare services or Child Protection Services, which are primarily protective rather than preventive in nature, are not included both because of the different nature of their clients and potentially adversarial relationship between clients and visitors. In less serious cases, it is common for child welfare services to refer clients needing supportive or preventative services to home visitation programs such as those described here.

<sup>4</sup> Daro, Deborah A and Kathryn A. Harding (1999). "Healthy Families America: Using Research to Enhance Practice," *The Future of Children*, 9 (1): 152-176.

<sup>5</sup> Duggan AK, McFarlane EC, Windham AM, Rohde CA, Salkever DS, Fuddy L, Rosenberg LA, Buchbinder SB, and Sia C (1999). "Evaluation of Hawaii's Healthy Start Program," *The Future of Children*, 9 (1): 66-90.

<sup>6</sup> Wagner, Mary M. and Serena L Clayton (1999). "The Parents as Teachers Program: Results from Two Demonstrations," *The Future of Children*, 9 (1): 91-115.

<sup>7</sup> Olds DL, Henderson CR, Cole R, Eckenrode J, Kitzman H, Luckey D, Pettitt L, Sidora K, Moris P and Powers J (1998). "Long-term Effects of Nurse Home Visitation on Children's Criminal and Antisocial Behavior: 15-Year Follow-up of a Randomized Controlled Trial," *JAMA*, 280:1238-1244.

<sup>8</sup> Olds DL, Henderson CR, Kitzman HJ, Eckenrode JJ, Cole RE, and Tatelbaum RC (1999). "Prenatal and Infancy Home Visitation by Nurses: Recent Findings," *The Future of Children*, 9(1): 44-65.

<sup>9</sup> Kitzman H, Olds DL, Sidora K, Henderson CR, Hanks C, Cole R, Luckey DW, Bondy J, Cole K, and Glazner J (2000). "Enduring Effects of Nurse Home Visitation on Maternal Life Course: A 3-Year Follow-up of a Randomized Trial," *JAMA*, 283(15): 1983-89.

<sup>10</sup> As described below in section 1.4, home visiting in HFA can begin either prenatally or within 90 days of birth.

<sup>11</sup> St. Pierre Robert G and Jean I Layzer (1999). "Using Home Visits for Multiple Purposes: The Comprehensive Child Development Program," *The Future of Children*, 9(1): 134-151.

<sup>12</sup> Unless otherwise stated, the remaining discussion in this section draws primarily from sources 2-8 and 9.

<sup>13</sup> Examples of this type of home visitation model include the Infant Health and Development Program, the Houston Parent-Child Development Center, and the Syracuse Family Development Research Program. Please refer to Lally RJ, Mangione PL, and Honig AS (1988). "The Syracuse University Family Development Research Program: Long-Range Impact on an Early Intervention with Low-Income Children and Their Families," in Douglas Powell (ed) *Parent Education as Early Childhood Intervention: Emerging Directions in Theory, Research, and Practice*, Vol 3, New Jersey: Ablex Publishing Corporation.

<sup>14</sup> About 90% of HFA programs define this group to be all first-time parents within a community.

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- <sup>15</sup> National Physicians Center for Family Resources (1999). *The Parent Trainers: A Nationwide Study of Home Visitation Programs*, Birmingham, Alabama.
- <sup>16</sup> [http://www.strengtheningfamilies.org/html/programs\\_1999/12\\_PECNHVP.html](http://www.strengtheningfamilies.org/html/programs_1999/12_PECNHVP.html)
- <sup>17</sup> Alliance for Redesigning Government. "Hawaii's Healthy Start Family Support Systems," National Academy of Public Administration. Found at <http://www.alliance.napawash.org>.
- <sup>18</sup> Duggan A, Windham A, McFarlane E, Fuddy L, Rohde C, Buchbinder S and Sia C (1999). "Hawaii's Healthy Start Program of Home Visiting for At-Risk Families: Evaluation of Family Identification, Family Engagement, and Service Delivery," *Pediatrics*, 105(1).
- <sup>19</sup> When average family costs for the entire course of intended services is noted, it is likely (although not directly specified) that they are adjusted for mean rates of attrition.
20. There were no recorded incidents of negative and significant effects.
21. For a program-specific illustration of effects, please refer to Table A.3.
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