An Early Look at Families and Local Programs in the Mother and Infant Home Visiting Program Evaluation-Strong Start

Third Annual Report

OPRE Report 2016-37

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An Early Look at Families and Local Programs in the Mother and Infant Home Visiting Program Evaluation-Strong Start: Third Annual Report

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Authors: Helen Lee, Sarah Crowne, Kristen Faucetta, and Rebecca Hughes

Submitted to:
Nancy Geyelin Margie, Project Officer, and Laura Nerenberg
Office of Planning, Research and Evaluation
Administration for Children and Families
U.S. Department of Health and Human Services

Project Directors: Virginia Knox and Charles Michalopoulos
MDRC
16 East 34th Street
New York, NY 10016

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Overview

The Mother and Infant Home Visiting Program Evaluation-Strong Start (MIHOPE-Strong Start) is the largest random assignment study to date to examine the effectiveness of home visiting services on improving birth outcomes and infant and maternal health care use for expectant mothers. The study includes local home visiting programs that use one of two national evidence-based models that have been effective at improving birth outcomes: Healthy Families America (HFA) and Nurse-Family Partnership (NFP). Sponsors of the study are the Center for Medicare and Medicaid Innovation (CMMI) of the Centers for Medicare and Medicaid Services (CMS); the Office of Planning, Research and Evaluation (OPRE) in the Administration for Children and Families (ACF); and the Maternal and Child Health Bureau (MCHB) of the Health Resources and Services Administration (HRSA). MDRC is conducting the study in partnership with James Bell Associates, Johns Hopkins University, Mathematica Policy Research, and New York University.

This report presents an early examination of the baseline characteristics of families and local home visiting programs in the study. Specifically, the report presents descriptive information on 1,221 families for whom data are available, representing about 40 percent of the final sample, and discusses select characteristics of the local programs participating in the study. To provide context for understanding the types of families and local programs described, the report also details the process by which the study team recruited local programs for participation.

- **A total of 67 local home visiting programs across 17 states are contributing to this analysis and will be included in the final report.** The MIHOPE-Strong Start program recruitment team employed a structured process over two years to recruit 20 programs into the study. An additional 47 HFA and NFP programs in a companion study called the Mother and Infant Home Visiting Program Evaluation (MIHOPE) are also included in the analysis.

- **Families enrolled in the study tend to face a number of challenges, especially as expectant parents.** The average participant, at the time of study entry, was young (half were under age 21), and one in two reported experiencing food insecurity in the past year. About 40 percent reported symptoms of depression or anxiety. Only 8 percent of the sample reported smoking during pregnancy, although 20 percent reported that smoking occurred in the home, which indicates potential fetal exposure to secondhand smoke.

- **The local programs serving these families are putting a high priority on outcomes that are relevant for improving infant and maternal health,** and they have the implementation system supports in place to carry out their service plans. Notable areas where local programs differed include intended caseload sizes; policies on screening for mental health, substance use, and intimate partner violence; and policies for providing education and support when problems are detected. These differences may affect actual services delivered, which is an issue that will be explored in the final report.

This report lays the groundwork for the final report, which will examine how local program implementation processes predict actual service delivery, describe impacts of home visiting on family outcomes, and include results from cost analyses when possible.

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MIHOPE-Strong Start's ability to develop a greater understanding of Healthy Families America (HFA) and Nurse-Family Partnership (NFP) programming comes from the states and local programs that are participating in the study. We are deeply grateful for their participation, as well as for that of the families who are contributing to the study. We also thank the project's program recruitment team, which was led by Sharon Rowser and Dina Israel at MDRC and had team members at MDRC (Marie Cole, Rachel Dash, Katie Egan, Suzanne Finkel, Caroline Mage, and Alexandra Parma), James Bell Associates (Patrice Cachat, Melanie Estarziau, Alexandra Joraanstad, Kerry Ryan, and Lance Till), Johns Hopkins University (Kristen Ojo), and Mathematica Policy Research (Charlotte Cabili, Jacob Hartog, and Jessica Jacobson), as well as contractors Courtney Harrison and Mike Sack. In addition, this effort would not have been possible without the assistance of HFA and NFP model staff members at the national and state levels, as well as project officers from the Health Resources and Service Administration (HRSA) and administrators of the Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) whom the team consulted in various states.

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The Authors

Executive Summary

The health of infants at birth is one of the most salient indicators of population health worldwide. While advances in medical technology have stabilized infant mortality in the United States over the past several decades, preterm birth and low-birth-weight rates have remained stagnant at around 12 percent and 8 percent, respectively, since the early 2000s. These rates of poor birth outcomes are higher than in most other developed countries. A persistent policy concern for the nation is the limited progress in narrowing disproportionate levels of risk among low-income and minority groups.

Home visiting, which offers families individually tailored education, support, and referrals to a range of community resources, has been found to improve prenatal and infant health when provided to pregnant women. Home visiting programs targeting expectant mothers often aim to serve women who may be facing multiple risk factors for adverse health outcomes, and who are likely to have high levels of undetected or unmet health and other social service needs. Questions, however, remain about the effects that these services have on improving birth outcomes and other maternal and infant health outcomes among diverse populations, as earlier evaluations have often been limited to a few locales and small samples.

The Mother and Infant Home Visiting Program Evaluation-Strong Start (MIHOPE-Strong Start) is the largest random assignment study to date to examine the effectiveness of home visiting services on improving birth outcomes, prenatal care, and infant and maternal health care use for expectant mothers. The study includes local home visiting programs that use one of two national models with prior evidence of effectiveness at improving birth outcomes: Healthy Families America (HFA) and Nurse-Family Partnership (NFP). Sponsors of the study are the Center for Medicare and Medicaid Innovation (CMMI) of the Centers for Medicare and Medicaid Services (CMS), the Office of Planning, Research and Evaluation (OPRE) in the Administration for Children and Families (ACF), and the Maternal and Child Health Bureau (MCHB) of the Health Resources and Services Administration (HRSA). MDRC is conducting the study in partnership with James Bell Associates, Johns Hopkins University, Mathematica Policy Research, and New York University.

In order to provide unbiased estimates of these programs' effects, the study uses a random assignment design, which involves a lottery process that randomly places voluntary study participants into either a program group (whose members are referred to the home visiting services) or a control group (whose members are referred to the usual services that are available in the community, but not to the particular home visiting services being studied). Program applicants were considered eligible for MIHOPE-Strong Start if they were no more than 32 weeks pregnant, were age 15 or older, and spoke English or Spanish with enough proficiency to pro-

vide informed consent. The study is using information gathered from surveys of families and from administrative records (vital records and Medicaid use and cost data) to examine birth, health, and health care outcomes within a year of the child's birth. With a cross-state sample of pregnant women on Medicaid or the Children's Health Insurance Program (CHIP), the study also aims to provide information on whether home visiting programs can reduce short-term Medicaid costs. Because of the detailed data being collected on local program implementation and the relatively large number of local programs included in the analysis, MIHOPE-Strong Start will be able to examine not only overall impacts of home visiting on families and subgroups of families but also how features of local programs are associated with program impacts.

This report presents an early examination of the characteristics of families and local home visiting programs when they entered the study, setting the stage for the final report (anticipated publication by mid-2018), which will include results from the implementation, impact, and potential cost analyses. Specifically, the report presents descriptive information on 1,221 families (those for whom data are available), out of an expected final analytic sample of about 2,900 families, and discusses select characteristics of all 67 participating local programs across 17 states. These descriptive portraits lay the foundation for understanding differences in families' strengths and needs when they first engage with home visiting services. Information gathered from local programs provides early indications of the extent to which programs are adequately equipped to support women during pregnancy and to address various risk factors associated with compromised birth, infant, and maternal health outcomes. To provide context for understanding the types of families and local programs described, the report first details the structured — and often challenging — process by which the study team recruited local programs for participation. Implications for future research endeavors whose scope and scale are similar to MIHOPE-Strong Start's ambitious efforts are also highlighted.

Local Program Recruitment Process

Local program recruitment, beginning with identifying priority states and programs and culminating in the start of study implementation in each program, was a two-year process (from early spring 2013 to spring 2015). To be deemed eligible for MIHOPE-Strong Start, local HFA and NFP programs must have been in operation for at least two years, employing at least three full-time home visitors (to ensure adequate sample enrollment at each program), and serving a prenatal client population of which approximately 80 percent or more were covered by Medicaid or CHIP by the time of the infant's birth. Of the estimated 800 local programs (approximately 580 HFA and 220 NFP) operating nationwide at the time program recruitment began, about 435 were eligible to participate in the study based on information provided to the team by the national model developers. Their participation was voluntary, and 20 programs ultimately chose to join the study. In addition to these programs, 47 HFA and NFP programs that are part of a com-

panion study — the Mother and Infant Home Visiting Program Evaluation (MIHOPE) — are included in the analyses, for a total of 67 programs.[1]

This section highlights the program recruitment process, including lessons learned, and presents a summary of the key operational and staff profiles of the local programs ultimately included.

- The MIHOPE-Strong Start program recruitment team employed a structured process to recruit programs into the study. This included (1) identifying priority states (the 12 states in MIHOPE and an additional 16 states with large numbers of potentially eligible programs); (2) gathering approvals from state-level HFA and NFP representatives before reaching out to individual programs; (3) contacting about 230 programs to request the opportunity for an introductory, in-person meeting; (4) successfully conducting initial, exploratory meetings with approximately 160 of the local programs; and (5) obtaining approvals, conducting training, and launching the study process for 20 local programs.

- Though falling short of the initial goal of recruiting approximately 100 programs, MIHOPE-Strong Start is still the largest random assignment study to date examining home visiting's impacts on birth outcomes. The local programs are providing services in geographically diverse areas spanning 17 states: California, Georgia, Illinois, Indiana, Iowa, Kansas, Massachusetts, Michigan, Nevada, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, Tennessee, Washington, and Wisconsin.

- The challenges and successes encountered during the program recruitment process resulted in lessons learned — including the importance of offering financial offsets for perceived costs when participation is voluntary; remaining flexible about adapting or changing design elements based on program participants' concerns; securing the active participation of federal partners in the recruitment process; and building and sustaining relationships with local partner programs — that may benefit researchers conducting similar large-scale, national studies in the future.

[1]The 47 programs are part of an evaluation of the Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) conducted by the same study team. It is possible to include in the study both programs that received MIECHV funding and programs that did not because all operate according to the framework of their national model, and because program eligibility criteria for participation (with the exception of MIECHV funding) was largely the same across MIHOPE and MIHOPE-Strong Start.

- The local programs are well established, provide services primarily in metropolitan areas, and have the staff capacity to serve a large number of families. It is important to note that smaller local programs are not represented because they did not meet the inclusion requirement that programs have at least three full-time employees. In addition, because of the study's inclusion criteria, programs that had been operating as an HFA or NFP program for less than two years by the time of the study's launch are not represented.

- The majority of home visitors working in local programs are college educated; nearly all NFP home visitors had at least a bachelor's degree, and about 60 percent of HFA home visitors had at least a bachelor's degree. In addition, all NFP home visitors held a nursing degree, compared with 10 percent of HFA home visitors. These differences are not surprising given that NFP requires that home visitors have a nursing degree, while HFA services may be delivered by other types of professionals, paraprofessionals, and lay educators who have a minimum of a high school diploma or equivalent degree. While some home visitors in the sample had experience working with high-risk families in other settings, about half did not.

Characteristics of Families

Although sample recruitment ended in September 2015, baseline information was available for only 1,200 women at the time of the report's writing. This subsample represents approximately 40 percent of the women enrolled in the study. While the descriptive information provided could change somewhat with the final sample, the information presented on this subsample sheds some light on the types of pregnant women who engage with home visiting services, including the prevalence of both protective and risk factors for health status, health behaviors, and health care use outcomes of central interest.

In addition to examining characteristics for the subsample of 1,200 women, this report compares characteristics by national model. Differences in baseline characteristics of the HFA and NFP samples may reflect differences in local programs' eligibility criteria, which, in turn, are influenced by the national model developers.[2] Although each of the two national models focuses on serving disadvantaged families, they differ in defining eligible participants and in the flexibility they allow local programs to tailor recruitment to the particular needs of communi-

[2]For more information on the HFA and NFP models, see Jill H. Filene, Emily K. Snell, Helen Lee, Virginia Knox, Charles Michalopoulos, and Anne Duggan, *The Mother and Infant Home Visiting Program Evaluation-Strong Start: First Annual Report,* OPRE Report 2013-54 (Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2013).

ties. All women who enroll in NFP programs must receive their first home visit no later than the end of their twenty-eighth week of pregnancy, whereas women who enroll in HFA programs can enroll during pregnancy or up to three months after giving birth; in this study, eligibility was limited to participants who were up to 32 weeks pregnant.[3] To be eligible for NFP programs, women must also be expecting their first child and be low income. Local HFA programs have flexibility in selecting participant eligibility criteria that represent risk factors for child maltreatment or other negative child outcomes, and in making decisions about giving priority to families facing certain types of challenges (such as single parenthood, low-income status, a history of substance abuse, mental health issues, and intimate partner violence).

- The sample is racially and ethnically diverse, with 40 percent of women identifying as Hispanic, about 20 percent identifying as non-Hispanic white, and almost 30 percent identifying as non-Hispanic black or African American. Among Hispanics, most identify as Mexican. Women in the NFP sample are more likely to identify as Hispanic than in the HFA sample, and the NFP sample has a smaller proportion of non-Hispanic white women.[4] These differences may reflect differences in the social and demographic composition of communities across the local programs.

- Families enrolled in the study face a variety of challenges and risk factors. About half the participants were younger than 21 years old. Almost two-thirds of the women were not living with the father of the child who is the focus of the study, although many were living with an adult relative. More than half the sample reported an experience with food insecurity (worrying about whether their food would run out) in the year before enrollment in the study. More than one-third of the sample reported signs of depressive symptoms, and almost a quarter reported signs of anxiety; about 40 percent of the sample reported one or the other. It is important to note, however, that these measures are not clinical diagnoses of depression or anxiety, but based on self-reported symptoms.

[3]Service initiation in HFA can begin at any time during the prenatal period or at birth. The model standards require that at least 80 percent of families have eligibility screening or assessment done prenatally or within two weeks of birth. After eligibility has been determined and services offered, the model standard requires that at least 80 percent of families receive the first home visit no later than three months after the child's birth (Filene et al. 2013).

[4]For both family characteristics and local program characteristics, differences by national model that are noted throughout the report are based on differences that appear to be meaningful as observed through comparing the summary measures. They are not based on formal statistical tests of significance (that is, t-tests or chi-square tests). However, in the final report (which will include a larger sample), differences across key sample characteristics, such as national model, will be tested for statistical significance.

- Study participants also reported having some protective factors — conditions or attributes that may help them deal more effectively with challenges or stressful events. More than 80 percent of the women had health insurance, either public health coverage or private insurance, when they entered the study; this is not surprising given that the study recruited local programs where the vast majority of mothers were enrolled in Medicaid or the Children's Health Insurance Program. A large majority of women initiated prenatal care in the first trimester, and most had a usual source of prenatal care.

- The few substantial differences between women in the NFP sample and women in the HFA sample are not unexpected, given the criteria each model uses to define its eligible population. For example, the percentage of women in the NFP sample in their first trimester was twice that of women in the HFA sample. This may partly reflect NFP's goal of enrolling 60 percent of women before 16 weeks' gestation.[5] About half the HFA sample reported a previous live birth, whereas the NFP sample only includes, per national model requirements, first-time mothers.[6]

Characteristics of Home Visiting Programs

The socio-demographic and health-related characteristics of families provide information that home visiting programs can use to help target and tailor the services they provide to families throughout pregnancy. These characteristics also indicate issues for which home visitors could connect pregnant women with community resources, particularly in the areas of mental health, food insecurity, and health problems during pregnancy. This report examines some of the features of local programs, including elements of their service plans (the blueprint for service delivery) and implementation systems (infrastructure and support to carry out planned services), that may increase their ability to provide a range of services to families and to address particular risks among expectant mothers. The information examined comes from surveys and interviews with the two national model developers, surveys of 63 program managers, and surveys of 380 home visitors. Findings on how local programs view home visiting are based on the surveys conducted with one local program director or manager in each program.

- Overall, it appears that most local programs (based on program managers' responses) placed a high priority on improving a range of outcomes — including prenatal health, health care, mental health, health behaviors, parent-

[5]Filene et al. (2013).

[6]This information was available only among women in the 20 MIHOPE-Strong Start programs. Information on pregnancy parity, which will come from linked birth certificate data, will be available for the entire family sample by the time of the final report.

ing practices, and birth outcomes. (These outcomes were ranked as high priorities by 80 percent to over 98 percent of program managers.) These responses are generally aligned with the responses of the respective national models. However, for both HFA and NFP, fewer local program managers (about 65 percent) ranked maternal physical health as a high priority compared with other outcomes, although almost 85 percent of individual home visitors reported that they were expected to improve maternal health outside pregnancy.

- Local programs were very closely aligned with their respective national model for the key components of intended "dosage," including when services begin, the duration of enrollment, visit length, and visit frequency. For example, all local program managers reported that their planned visit frequency policy was the same as that of their national model.

- While local programs in the study mainly adhered to national models on outcome priorities and intended dosage, they differed on other aspects of providing services. For example, most of the local programs required screening for risks such as mental health problems, substance use, and intimate personal violence. However, only about half of the local programs had written protocols or policies that require home visitors to consult with their supervisors when working with families on issues of maternal substance use (54 percent) and intimate partner violence (56 percent). In addition, local NFP programs were more likely to require screening for maternal substance use and intimate personal violence than HFA programs were, but higher percentages of HFA programs reported having policies in place for providing education and support to families when they screened positive for maternal mental health problems, maternal substance use, and intimate partner violence. Policies on family caseload per home visitor also varied across programs. Local NFP programs appeared to be closely aligned with the national model, at least in an intended maximum caseload size of 25 families per home visitor. However, local HFA programs differed from the national model; about 74 percent reported that their policies on family caseload maximums were lower than the national model maximum of 25 families per home visitor. This finding suggests that local HFA programs were exercising the flexibility provided them by the national model in how they defined their policies on maximum caseload sizes.

- The local programs operating each of the two models were similar in many aspects of their implementation systems. Most programs appeared to be

equipped to serve families with different risks: Almost all had a management information system to monitor program operations, more than two-thirds reported having access to at least one professional consultant across a range of domains, and most home visitors strongly agreed or agreed that they were adequately trained to help mothers with a variety of health-related behaviors.

Discussion

The study's early findings presented in this report suggest that local programs are serving disadvantaged families with risks for compromised birth outcomes, including poor maternal mental health, young age, and potential need for social services (such as nutritional assistance). The findings from the examination of local program characteristics are encouraging in that programs place a high priority on addressing these and other risks that are related to the health and health care outcomes central to the study, and they have the infrastructure and support in place to carry out their work with families.

The findings in this report also point to several questions that will be addressed in the final report. For example, do home visitors across local programs deliver services in ways that are intended or documented as policy? In what ways do they vary from what is intended? The heart of the implementation analysis, which will be presented in the final report, will explore the extent to which the family and program characteristics explain patterns in the types and level of services that families receive.

Because the impact analysis will include information on a diverse group of families, the final study is well positioned to examine impacts in the key outcome areas of interest, such as low birth weight, preterm birth, receipt of prenatal care, and infant health care use. In addition, the variation in family characteristics documented in this report highlights important opportunities for analyzing whether impacts on birth and other health outcomes vary by particular characteristics, including timing of enrollment in the program during pregnancy, race and ethnicity, level of socioeconomic disadvantage, and maternal mental health. Such analyses will help identify the extent to which services are tailored to address the needs or risks of particular families and will identify the types of families for whom home visiting as currently implemented is more likely to improve maternal and infant health outcomes and potentially reduce health care costs.

Chapter 1

Introduction

The United States has a long-established goal of improving birth outcomes, including low birth weight and preterm birth.[1] However, low birth weight and preterm birth rates have remained stubbornly static over the past 15 years. In 2013, the country had a low birth weight rate of 8.0 percent and a preterm birth rate of 11.4 percent.[2] In 2000, these rates were 7.6 percent and 11.6 percent, respectively.[3] Moreover, the risk for adverse birth outcomes is higher among certain groups, including low-income, African-American, and Puerto Rican women.[4] These patterns in disparities have persisted over time.[5] It has thus been argued that policy and programmatic efforts to improve birth outcomes at the population level must also address the disproportionate risk found among those who are socially and economically disadvantaged.[6]

Common explanations for poor birth outcomes and for socioeconomic disparities in outcomes include poor maternal health status, negative health behaviors (for example, smoking, alcohol consumption, or drug use), limited use of quality health care, socioeconomically disadvantaged living and community conditions, lack of material resources, lack of social support, and stress. While no single intervention can address all these risk factors, evidence-based home visiting for low-income, pregnant women has been identified as one promising strategy. By providing individually tailored in-home services, this approach may be better positioned to address families' multiple risk factors than are single-component or more narrowly focused interventions. To understand the effects of home visiting, the Center for Medicare and Medicaid Innovation (CMMI), which is part of the Centers for Medicare and Medicaid Services (CMS), has partnered with the Office of Planning, Research and Evaluation (OPRE) of the Administration for Children and Families (ACF) and the Maternal and Child Health Bureau (MCHB) of the Health Resources and Services Administration (HRSA) to implement the Mother and Infant Home Visiting Program Evaluation-Strong Start (MIHOPE-Strong Start). With an expected sample of about 2,900 families from 67 local programs across 17 states, MIHOPE-Strong Start is the largest random assignment study to date to examine the effectiveness of home visiting services on improving birth outcomes, prenatal and maternal health, and infant health care use

[1] Healthy People 2020 (2016). Low birth weight is defined as weighing less than 2,500 grams at birth. Preterm birth is a birth that occurs before the thirty-seventh week of gestation.

[2] Martin et al. (2015).

[3] Martin et al. (2002).

[4] Blumenshine et al. (2010); Lu and Halfon (2003); Martin et al. (2015).

[5] Lu and Halfon (2003); Martin et al. (2015).

[6] Koh (2010); Smedley and Syme (2001).

in the first year after birth.[7] The study is being conducted by MDRC in partnership with James Bell Associates, Johns Hopkins University, Mathematica Policy Research, and New York University. MIHOPE-Strong Start is part of a larger CMMI initiative — the Strong Start for Mothers and Newborns Initiative — that is testing and evaluating whether enhanced, nonmedical prenatal interventions, when provided in addition to routine obstetrical medical care, have the potential to improve birth outcomes for women enrolled in Medicaid or the Children's Health Insurance Program (CHIP).[8]

This report provides information on the program recruitment process and presents the first look at the sample of families and the local evidence-based home visiting programs included in the study. In so doing, it lays the foundation for understanding differences in families' strengths and needs when they first engage with home visiting services. The findings here also document the extent to which local programs are focused on and adequately equipped to support mothers during pregnancy and to address various risk factors associated with compromised birth, infant, and maternal health outcomes. In sum, the study's early findings suggest that local programs are serving disadvantaged families with particular risks for compromised health, including young maternal age, limited income, and high prevalence of depression or anxiety. The findings from the examination of local program characteristics are encouraging in that programs place a high priority on addressing these and other risks that are related to the health and health care outcomes central to the study, and they have the infrastructure and support in place to carry out their work with families.

Overview of MIHOPE-Strong Start

MIHOPE-Strong Start will examine the effectiveness of evidence-based home visiting services on improving birth outcomes for women who are enrolled in Medicaid or CHIP, as well as the effectiveness of these services for improving infant and maternal health, health care use, and prenatal care. By including a large sample of pregnant women across many states and linking administrative health and Medicaid records to the study data, the evaluation also aims to provide information on whether home visiting programs can reduce short-term Medicaid costs.

In addition, MIHOPE-Strong Start will investigate the features of local programs that use either of two national home visiting models that have shown previous evidence of improving birth outcomes and health care use: Healthy Families America (HFA) and Nurse-Family

[7]For more background information on the motivation for the study and design details, see Michalopoulos et al. (2015b).

[8]The Strong Start for Mothers and Newborns Initiative is also examining whether such interventions can decrease the anticipated total cost of medical care during pregnancy and delivery and over the first year of a child's life. See Centers for Medicare and Medicaid Services (2015).

Partnership (NFP).[9] Both models are among the most widespread evidence-based home visiting models in the country.[10] Both HFA and NFP provide disadvantaged expectant mothers with one-on-one in-home services, including assessment of risk and protective factors, referrals to needed health care and social services, and education from home visitors on a range of topics.[11]

MIHOPE-Strong Start uses a random assignment design, which involves a lottery-like process that randomly places voluntary study participants into either a home visiting group (program group) that can receive home visiting services from the programs in the study (60 percent) or to a control group that does not receive program services but can receive other services available in the community (40 percent). Random assignment occurs after a home visiting program determines that a woman is eligible and interested in the program, but before she is enrolled in the program. Program applicants were eligible for MIHOPE-Strong Start if they were no more than 32 weeks pregnant, were age 15 or older, and spoke English or Spanish with enough proficiency to provide informed consent. The random assignment design ensures that the program and control groups are similar when they enter the study, so that systematic differences in future outcomes (for example, birth outcomes or infant health care use) that are observed between the two groups can be attributed to the home visiting services rather than to the preexisting characteristics of the women.

Study recruitment has ended, and the final sample will ultimately include about 2,900 families across 67 local programs operating either HFA or NFP in 17 states. This includes families enrolled in 20 HFA or NFP programs that were recruited specifically for MIHOPE-Strong Start as well as families from 47 HFA or NFP programs that are participating in the parallel companion study called the Mother and Infant Home Visiting Program Evaluation (MIHOPE). MIHOPE is the legislatively mandated evaluation of the Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV, or the Federal Home Visiting Program).

MIHOPE is assessing the impacts of four evidence-based home visiting models across a range of parenting and child outcome domains specified in the authorizing legislation.[12] The study involves 88 programs across 12 states and includes both pregnant women and mothers with infants up to 6 months of age. Despite the differing lenses of the MIHOPE and MIHOPE-Strong Start studies, there is significant overlap in the programs and individuals identified as

[9]To determine which national models are evidence-based, the U.S. Department of Health and Human Services (HHS) funded the Home Visiting Evidence of Effectiveness (HomVEE) review, conducted by Mathematica Policy Research (Avellar and Paulsell 2011), which assessed the quality of the research evidence and documented impacts of home visiting programs on a range of domains, including birth outcomes and maternal and infant health.

[10]Michalopoulos et al. (2015a).

[11]Filene et al. (2013).

[12]In addition to HFA and NFP, MIHOPE is evaluating local programs implementing the Early Head Start-Home Based Option (EHS) and Parents as Teachers (PAT) models (Michalopoulos et al. 2015a).

eligible. In fact, all HFA and NFP programs that were eligible for MIHOPE were also eligible for MIHOPE-Strong Start, and they operate according to the framework of the national model regardless of whether they received MIECHV funding. A subset of the individuals enrolled in MIHOPE — specifically, those who were less than 32 weeks pregnant and enrolled in the study through an HFA or NFP program — were also considered eligible for MIHOPE-Strong Start. Thus, the analysis for the current and future reports is informed by pooled data from MIHOPE study participants who were eligible for MIHOPE-Strong Start and for whom the study team received the necessary approvals to include data in both analyses.

Because of the relatively large number of local programs included in the analysis, the evaluation will examine not only the overall impacts of home visiting on families and subgroups of families, but also how services delivered by programs are linked to program impacts. The study's broad research questions include:

- What is the average impact of the home visiting programs on birth outcomes, infant and maternal health, and health care use? Do the effects vary by particular characteristics of women?
- What is the impact of each national model?
- How do home visiting programs achieve their results?
- What is the relationship between the amount of services delivered and program impacts?

The results of the evaluation may further inform the types of qualifications that could allow home visiting programs to be reimbursed for services through Medicaid. Medicaid is one of the largest payers of births nationwide,[13] and the largest payer for low-income women.

To achieve the evaluation's goals of assessing home visiting programs' effects across several health-related domains and identifying features of program implementation that lead to greater impacts, this study relies on multiple data sources. These include primary survey data collected from local programs and families when they enroll in the study, management information systems data from program sites to assess the amount of services delivered (or "dosage") and referrals, information on community characteristics from the U.S. Census, and administrative vital statistics records and Medicaid claims data to measure outcomes at birth and over the first year. The main outcomes of interest include low birth weight, preterm birth, adequacy of prenatal care, maternal health care during pregnancy, and infant health care use in the first year following birth.

[13]For example, in 2003, Medicaid financed over 40 percent of all births nationwide, and in some states, Medicaid was the insurer for the majority of births (National Governors Association 2008).

Objectives of This Report

This is the third of four reports to be produced by the study. The first report described the approaches to service delivery of the two national models, HFA and NFP.[14] The second report described the study's efforts to acquire identifiable birth certificate records and Medicaid data from 20 targeted states and more than 40 state agencies.[15] The study relies on administrative data to measure infant and maternal health, health care use, and Medicaid costs in order to accurately assess the key outcomes of interest. The fourth and final report will present program implementation and impact results for the full sample of study enrollees, and results of cost analyses if adequate data are available.

This report presents the first glimpse of the local programs and families that are informing the MIHOPE-Strong Start analysis. To provide context for understanding the types of programs and families ultimately included in the study, the report first presents an overview of the local program recruitment process and enrollment efforts (Chapter 2). In laying out the process in a transparent way, the report also highlights the obstacles that were encountered and the strategies that were used to navigate them, which can inform the design and approaches of future large-scale research endeavors. Chapter 3 turns to a discussion of the characteristics of the subset of families for whom baseline data was available for analysis at the time of this report's writing, focusing on characteristics that are known indicators of poor maternal health and well-being and risk factors for poor birth outcomes and infant health. Chapter 4 discusses some of the key characteristics of local programs, including elements of their service plans and implementation system supports. The report concludes with a summary of the main findings and discusses implications for the future analyses (Chapter 5).

[14]Filene et al. (2013).
[15]Lee, Warren, and Gill (2015).

Chapter 2

MIHOPE-Strong Start Program Recruitment Efforts

Before baseline data could be collected, programs and families had to be recruited to participate in the Mother and Infant Home Visiting Program Evaluation-Strong Start (MIHOPE-Strong Start). This chapter describes the study team's process of engaging and recruiting local home visiting programs across many different states and communities.

As described in the first report of the study, the team initially aimed to recruit up to 15,000 families.[1] This ambitious goal was based in part on the relative rarity of the birth outcomes of interest and in part on actuarial calculations of the sample size needed to detect reductions in Medicaid costs due to improved birth outcomes overall and for each national model. As detailed in this chapter, the team's initial goal was thus to include families from approximately 100 local programs. However, it soon became clear that recruiting such a large sample of programs and families in the time frame of the study would not be possible. For the study to achieve the initial targeted number of families, almost every eligible program approached by the recruitment team would have had to agree to participate in MIHOPE-Strong Start and complete all phases of the recruitment process. Upon conducting further analyses, the study team projected that a sample size of about 3,400 families from 75 local programs was realistic to obtain and would still allow for examination of the key questions of interest, as noted in the design document for the study.[2] Although the study's goals and planned analyses have not changed, reducing the sample has reduced the confidence with which the study can detect effects on outcomes such as birth outcomes and Medicaid costs.

Ultimately, the team was able to include 67 local programs in the study, 20 of which were newly recruited specifically for MIHOPE-Strong Start. As discussed in Chapter 1, the other 47 are part of the Mother and Infant Home Visiting Program Evaluation (MIHOPE) companion study. The resulting sample size is 2,900 families, which is close to the revised projected target of 3,400 families. Not all targeted programs chose to participate in the study, and those that are participating are smaller than anticipated, leading to a lower number of families enrolled. This has important implications for understanding the types of programs that are ultimately examined and how representative they are of HFA and NFP programs nationally. In detailing the program recruitment process step by step, this chapter not only sheds light on the sample of programs with which the study team had contact at each phase, but also offers lessons from the process to inform future research endeavors of similar scale and scope. The chapter concludes by presenting summary information on important contextual and operational aspects

[1] Filene et al. (2013).
[2] Michalopoulos et al. (2015b).

of the local programs that are contributing to the analysis. A more in-depth discussion of local programs' service plans and implementation system elements is found in Chapter 4.

Recruiting Local Programs

To be considered initially for MIHOPE-Strong Start, local Healthy Families America (HFA) and Nurse-Family Partnership (NFP) programs must have been in operation for at least two years, employing at least three full-time home visitors (to ensure adequate sample enrollment at each program) and serving a prenatal client population of which approximately 80 percent or more were covered by Medicaid or CHIP by the time of the infant's birth. Of the estimated 800 programs (approximately 580 HFA and 220 NFP) operating nationwide at the time program recruitment began, approximately 435 were eligible to participate in the study, based on information on their number of full-time home visitors and operational history provided to the team by the national model developers. This pool of potentially eligible programs represented 44 percent of all HFA programs and 72 percent of all NFP programs.

From this list of potentially eligible programs, the MIHOPE-Strong Start team developed a structured process to further refine the list. To be an appropriate candidate for the study, a program had to be interested in participating and had to serve an area with more demand than its services could meet, in order to conduct random assignment ethically. The team formally began program recruitment efforts in early 2013 and concluded these activities in spring 2015. Figure 2.1 illustrates the key phases of program recruitment discussed below.

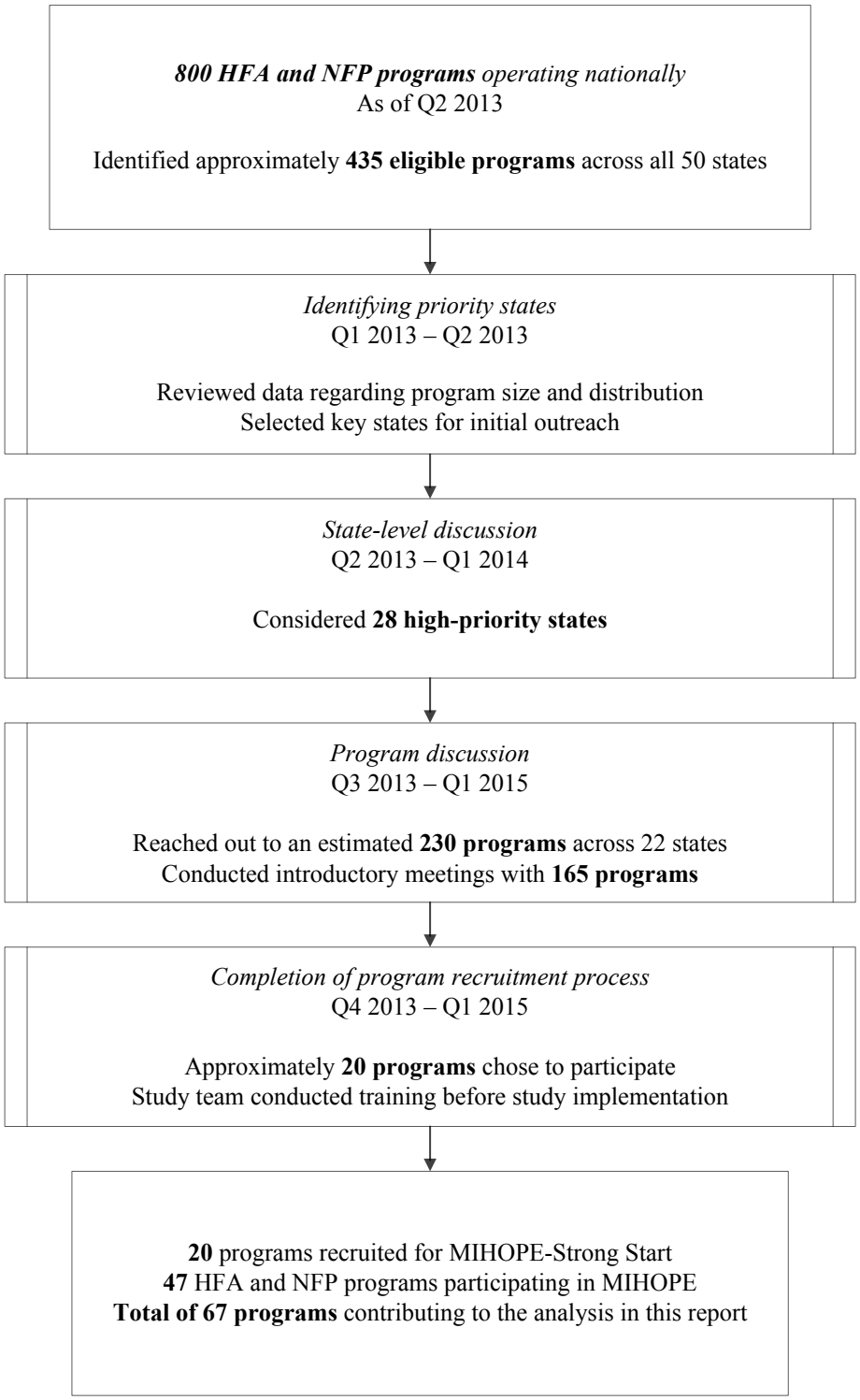
Identifying Priority States and Conducting State-Level Discussions

Because MIHOPE-Strong Start uses administrative data collected at the state level, the first step was to identify priority states for the study. For this purpose, states were divided into two groups. The first group consisted of states that the team was working with in the MIHOPE companion study, which was already under way in 12 states across the country, as noted in Chapter 1. Because the study team had an existing presence as well as relationships with both state administrators and program model representatives in these states, all 12 were immediately deemed high priority for MIHOPE-Strong Start outreach, and the study team proceeded immediately to conversations with state-level representatives. In these 12 states, then, the team sought to recruit new, additional programs for MIHOPE-Strong Start.

The second group included additional states that were not involved in MIHOPE, as a means to increase the pool of potential programs and broaden the geographic diversity of local programs included in the study. The HFA and NFP national offices provided information on the number and size of local programs in the states and recommended certain states as particularly

Figure 2.1

Program Recruitment Process



strong candidates for MIHOPE-Strong Start. This information allowed the study team to identify those states in which there were a large number of HFA or NFP programs and the states in which the largest programs operated.

Based on these data, the study team drafted a list of 16 states that were not in MIHOPE in which to focus additional recruitment efforts: Arizona, Colorado, Florida, Indiana, Louisiana, Maryland, Massachusetts, Minnesota, New York, North Carolina, Ohio, Oklahoma, Oregon, Tennessee, Texas, and Virginia. These 16 states plus the 12 MIHOPE states included over 90 percent of the 435 potentially eligible HFA and NFP programs operating nationwide, according to information provided by the national model developers.

In each of the 28 high-priority states, the study team spoke directly with state-level HFA and NFP representatives to seek approval before reaching out to individual programs. In some cases, these conversations led the team to determine that there were, in fact, no programs that were suitable for study participation. In addition, in several instances, state representatives did not allow the study team to speak with local programs about the study, citing concerns about competing priorities or a need for the program staff to focus on increasing program enrollment. When this occurred, the study team attempted to identify solutions — such as delaying conversations until a more convenient time — but in six states, the program recruitment process halted.

Program Discussions

The team's identification of priority states, initial program eligibility screens, and approvals from state-level representatives shrunk the pool of potential study programs from 435 to roughly 230 programs in 22 states. The study team contacted each of these 230 programs to request the opportunity for an introductory, in-person meeting. This preliminary outreach met with mixed success. While some programs were eager for the opportunity to meet and learn more, others declined the offer either actively (for example, because of a lack of interest or time to engage in the study, or even in discussion) or passively (by not responding at all). Thus the team conducted initial, exploratory meetings with approximately 165 of the 230 local programs they approached.

Following the initial meeting, the study team held additional conversations via telephone to continue to explore each program's viability and interest in participation and, as appropriate, to determine how study procedures would be implemented in the local community. Through these efforts, the team eventually established partnerships with 20 programs that elected to participate in MIHOPE-Strong Start. These 20 local programs are located in California, Illinois, Indiana, Massachusetts, Nevada, New Jersey, New York, North Carolina, Pennsylvania, Tennessee, and Washington. The remaining programs (88 percent of those that participated in initial meetings) declined to participate for reasons discussed later in this chapter.

During the program recruitment process, HFA and NFP programs participating in MIHOPE were asked to consider participating in MIHOPE-Strong Start (and enrolling more families just for MIHOPE-Strong Start) once they reached their MIHOPE enrollment targets. Two programs chose to do so and are included in the MIHOPE-Strong Start count.

Figure 2.2 provides a graphic distribution of the states participating in MIHOPE only and in MIHOPE-Strong Start only, as well as those that are contributing to both studies, representing all the major regions of the country (Midwest and Plains, Mountain and West, Northeast, and South). More populous states, including California, Illinois, New Jersey, and New York, tend to be the ones with more local home visiting programs in the analysis. One exception is Iowa, which includes seven local programs (all HFA). A handful of states have only one local program.

Program Recruitment Challenges and Successes

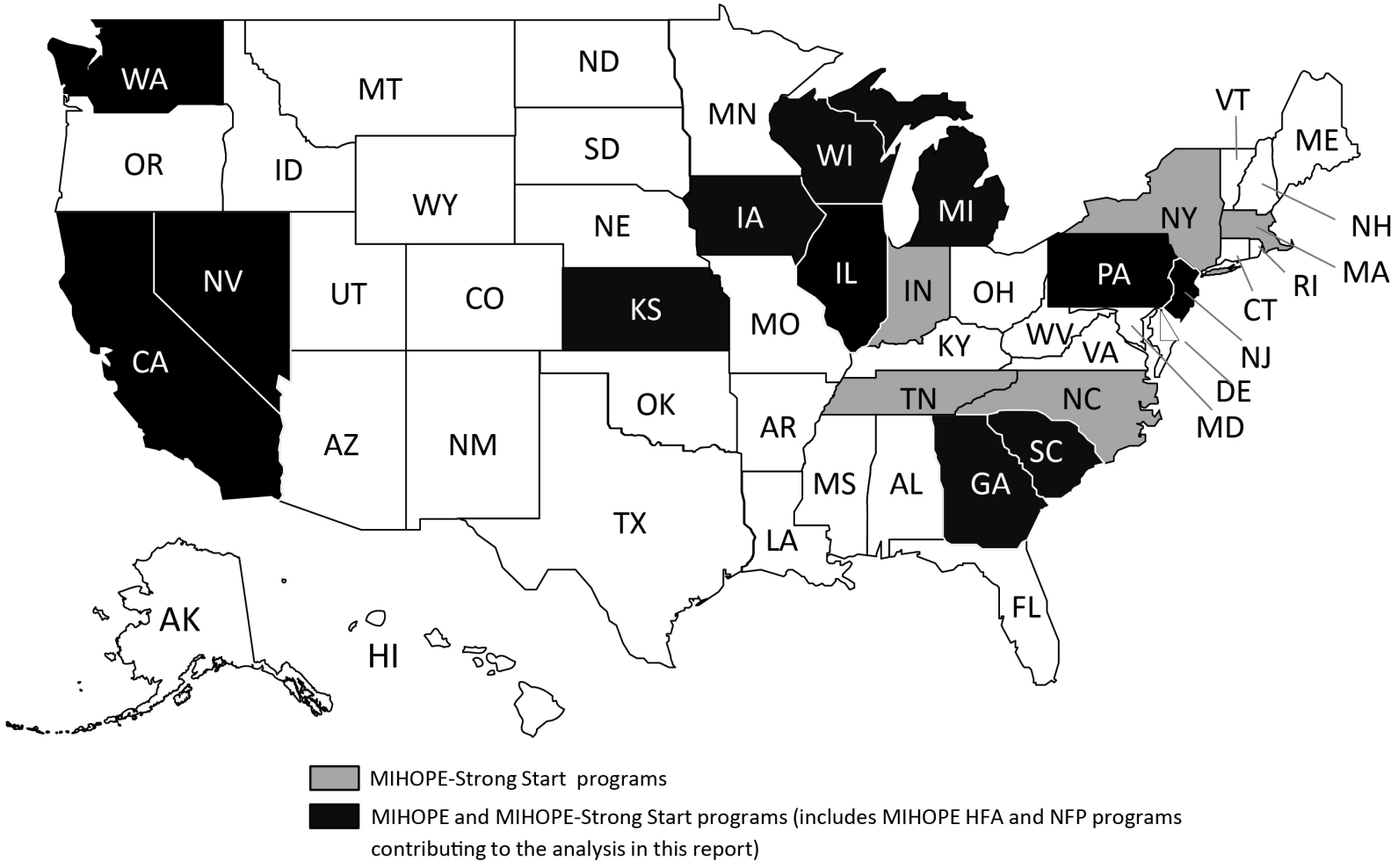
The MIHOPE-Strong Start program recruitment process was challenging; as described earlier, many local programs that the team approached and met with were not ultimately recruited into the study. Despite not reaching the initial recruitment target of 100 local programs, the team was able to enroll enough programs to conduct a large, cross-site and cross-state examination of home visiting program impacts on birth outcomes. Some of the successes and the strategies employed by the team to enroll local programs may be useful to consider in future project planning and evaluations. These are described below, following a brief discussion of the key challenges encountered during the recruitment process.

Challenges

- **Voluntary participation with few immediate benefits.** The benefits of participating in MIHOPE-Strong Start center on rather abstract and long-term gains, such as the opportunity to contribute to a national dialogue and provide policymakers with information about the impact of home visiting services. While participating programs received a payment for their time and efforts, it was only enough to cover study-related costs and did not lead to an increase in the number of families they would serve or any other financial gain. But the potential benefits of study results will be shared by every home visiting program in the nation, including those not participating in MIHOPE-Strong Start, presenting a situation in which local programs can choose not to participate while knowing they will share in any positive outcomes. Given that program employees already work diligently and sometimes long hours, the perceived burden of participating often seemed to outweigh the immediate benefits.

Figure 2.2

States Contributing to the Analysis



- **Competing activities.** MIHOPE-Strong Start launched during a period of a significant expansion in home visiting programs, both in terms of funding available and the number of families they were able to serve. This ramp-up period required substantial staff time and effort, as did new reporting requirements and other research opportunities. With these changes taken together, many programs were absorbed in expansion and growth, with new internal procedures, new measurements, and often new staff members, which made it difficult to commit to participating in MIHOPE-Strong Start.

- **Random assignment to a control group.** At the time of initial contact with the study team — especially during this period of rapid expansion of funding — many programs had fewer clients enrolled than their total capacity would allow. This raised concerns about the ethics of including a control group who would be excluded from the program while slots remained unfilled, rendering these programs unsuitable for study participation. Even in programs that were at capacity and could not serve all interested families — thus making random assignment a fair and equitable way to determine who would receive access to the program's services — staff members expressed hesitation to cede control over program admissions to the study's randomization process. In several instances, programs declined study participation after voicing concerns about turning people away from their services, even programs that could not serve all families interested and eligible.

Successes

- **Linking study participation to long-term goals.** The programs that chose to participate in MIHOPE-Strong Start understood that their contribution to the research would also be a contribution to the home visiting field as a whole. Several programs, state model representatives, and state agency employees noted that study participation was a vital step in continuing to build on the reflective practices that the home visiting community has historically embraced. This indicated recognition of the greater, long-term benefits to study participation, including the potential for introducing new program funding sources and access to services for additional clients in the long term. Additionally, both HFA and NFP national leaders and local programs noted the importance of engaging in research that asks new questions and allows for continued learning, particularly as programs expand and services evolve.

- **Maintaining flexibility in the study design.** The study team's responsiveness, on both small and large issues, was well received by state and local

representatives. For example, early conversations with local programs led the study team to alter the random assignment ratio so that 60 percent (instead of the originally intended 50 percent) of women going through random assignment would be assigned to the home visiting group. Response to this change was overwhelmingly positive, from state administrators and program managers alike.

- **Building strong relationships with all partner programs.** Two MIHOPE programs reacted positively enough to their participation in that study that they volunteered to participate in MIHOPE-Strong Start by enrolling families specifically in this study once their enrollment of families into MIHOPE ended. This reinforces the importance of nurturing and sustaining relationships with a network of programs, whether conducting a mandatory or a voluntary study, as a way to develop future research partnerships.

Drawing on the successes and challenges described above, Box 2.1 highlights several insights that may have relevance and be useful to consider when mounting large-scale evaluative studies of other programs.

Local Program and Staff Characteristics

Following the recruitment process described above, 67 local programs (38 HFA and 29 NFP), including 20 MIHOPE-Strong Start programs and 47 local programs that participated in MIHOPE, are contributing to the analyses in this report.[3] These programs might not be representative of all HFA and NFP programs nationwide, because of the recruitment challenges and because both MIHOPE and MIHOPE-Strong Start emphasized recruiting larger programs with operational histories of at least two years. It is impossible to know all the ways in which the programs in the study may or may not be different from other HFA or NFP programs. Based on the limited information available at the national level, the team could analyze differences in program characteristics only in terms of the number of full-time employees. Specifically, comparisons of the study sample with all HFA and NFP programs operating across the country (at the time of study recruitment) reveal that the programs in the study sample appeared, on average,

[3] All HFA and NFP programs that were eligible for MIHOPE were also eligible for MIHOPE-Strong Start, since they operated according to the framework of the national model regardless of whether they received MIECHV funding. A subset of the individuals enrolled in MIHOPE — that is, those who were less than 32 weeks pregnant and enrolled in the study through an HFA or NFP program — also meet the eligibility criteria for MIHOPE-Strong Start. Thus the analysis combines results for women recruited into MIHOPE-Strong Start with those for MIHOPE study participants who were eligible for MIHOPE-Strong Start.

Box 2.1

Lessons for Future Studies

The MIHOPE-Strong Start study team's program recruitment efforts illustrate the difficulties of launching a large, cross-state, multiprogram study and offer some important lessons.

Allow some flexibility in study design. It is vital to remain flexible about aspects of the study design and responsive to feedback from the field, in order to maintain supportive and positive relationships with all program staff members contributing to the implementation of an evaluation, from start to finish. An emphasis on valuing different perspectives, even if they diverge from the original study design considerations, may both encourage participation in the study at hand and allow for the development of enduring relationships that may lead to future partnerships.

Identify unbiased champions. Early in the project, the team identified and developed collaborative working relationships with external partners, such as national model developers, local program leaders, valued peers, and state and federal policymakers. Particularly during the program recruitment phase, targeted programs may regard outside voices as providing more objectivity about the potential benefits of participation than the study team itself. These relationships may be especially valuable if research teams are able to identify individuals who believe in the importance of evaluation for a program's long-run sustainability and growth.

Ensure that program staff members feel that the financial payments fully offset the costs to them for participating. Most commonly, programs are offered financial support for participating in research studies. Although such payments are not the sole reason that programs participate, if they are not commensurate with the program's perceived costs, recruitment of programs is likely to be challenging.

Look for opportunities to involve the state or program being recruited in the planning and study process. While it may not be feasible in very large studies, it is worth exploring ways of involving representatives of states or programs that are recruited so that they find the study as directly relevant as possible. Some examples are to get their feedback on specific research questions or to run analyses so that they can see outcomes and findings specific to their state or program.

Plan for the considerable effort and time needed to recruit when participation is voluntary. In the statute authorizing MIHOPE, grantees were required to participate in the evaluation, if asked, which allowed the MIHOPE program recruitment process to meet its target more easily. In MIHOPE-Strong Start, however, participation was voluntary. Without the statutory requirement, recruitment of sites takes a greater level of effort and time.

to have more full-time staff members who provided home visiting services than other programs.[4] When comparisons are limited to programs that were potentially eligible (based on hav-

[4]The average number of full-time employees for the HFA programs in the study was six, compared with about five for all other HFA programs in the country. The NFP programs in the study employed about nine full-time workers on average, whereas all other NFP programs had an average of six full-time workers.

ing at least three full-time home visitors and operating for at least two years) and were in high-priority states, the HFA programs in the sample were slightly smaller and the NFP programs were larger, on average, than the other potentially eligible programs.[5] Given that home visitor staff size is a proxy for program capacity, it appears that, for the most part, the study programs were larger than other programs affiliated with the national models at the time of study entry.

There are other important characteristics that describe the local context and operations of the local programs in the study, including the type of implementing agency in which programs are housed, the density of the community, years of operation, enrollment capacity, and funding from MIECHV.[6] Table 2.1 provides additional information on some of these characteristics of local programs at study entry, including 63 of the 67 programs that contributed to the study.[7] This information is based on surveys of program managers and discussions between program staff members and the study team.

Participating programs across both models primarily serve families in large metropolitan areas.[8] The programs operating in these areas are implemented by several different types of agencies, however, which may play a role in shaping the way programs operate, the resources they have access to, and their ability to connect families to other service providers. About three-quarters of agencies implementing HFA are community-based organizations, whereas about half of NFP programs are housed within public health departments.[9]

Not surprisingly, study programs are experienced in providing services and mature in organizational structure. While study eligibility criteria required local programs to have been in operation for a minimum of two years, most programs had been running for substantially longer; more than 93 percent of programs had been operating for six or more years.

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[5]The average number of full-time employees in all other HFA and all other NFP programs that were potentially eligible for the study and in high-priority states was seven (for both models).

[6]The results shown here are similar to those shown in the report to Congress on early findings from MIHOPE programs (Michalopoulos et al. 2015a). Notable differences are that MIHOPE-Strong Start programs tend to have slightly more experience than the MIHOPE sample; perhaps leaders of mature programs willing to participate in a voluntary study are more likely to feel comfortable about the stability of their operations and ability to implement study procedures. MIHOPE-Strong Start also includes some programs that did not receive any MIECHV funding.

[7]Program-level information for four local programs is not included in this report. In three of the four programs, baseline survey information has not been completed by program managers or is missing. One program was not surveyed because it is an extension of a MIHOPE program.

[8]To designate counties as metropolitan or nonmetropolitan, this report follows the U.S. Department of Agriculture's Rural-Urban Continuum Codes classification scheme (U.S. Department of Agriculture, Economic Research Service 2013).

[9]For both family characteristics and local program characteristics, differences by national model that are noted throughout the report are based on differences that appear to be meaningful as observed in comparing the summary measures. They are not based on statistical tests of significance (that is, t-tests or chi-square tests). However, in the final report with a larger sample, differences across key sample characteristics, such as national model, will be tested for statistical significance.

Table 2.1

Basic Characteristics of Local Programs at Entry into Study

Characteristic (%)	Overall	HFA	NFP
Type of local implementing agency			
Community-based nonprofit	54.0	77.1	25.0
Local health department	28.6	8.6	53.6
Health care organization	12.7	8.6	17.9
Other[a]	4.8	5.7	3.6
County served[b]			
Metropolitan	81.0	77.1	85.7
Nonmetropolitan	11.1	14.3	7.1
Both	7.9	8.6	7.1
Years program has been in operation[c]			
4 to 5	6.3	5.7	7.1
6 or more	93.7	94.3	92.9
Enrollment capacity[d]			
≤ 50 families	3.2	5.7	0.0
51 - 100 families	27.0	40.0	10.7
> 100 families	69.8	54.3	89.3
Proportion of funding from MIECHV			
None	13.3	15.2	11.1
Less than 20%	31.7	27.3	37.0
20% - 49%	31.7	42.4	18.5
50% - 74%	8.3	6.1	11.1
75% or more	15.0	9.1	22.2
Sample size	63	35	28

SOURCES: Calculations based on data from the MIHOPE program manager baseline survey, the MIHOPE-Strong Start survey, and the MIHOPE site-selection team.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.

Percentages may not sum to 100 because of rounding.

[a]Other types of organizations include various types of social-service nonprofits, such as Goodwill Industries and Healthy Families.

[b]To designate counties as metropolitan or nonmetropolitan, this report follows the U.S. Department of Agriculture Economic Research Service's Rural-Urban Continuum Codes classification scheme (U.S. Department of Agriculture 2013).

[c]Years using the specific national model that was in use at study entry.

[d]The number of families who can be served at any one time.

With the study eligibility criteria that programs employ a minimum of three full-time equivalent home visitors and with maximum caseloads ranging from 18 to 25 families per home visitor (depending on national model), programs were generally required to serve a minimum of 54 to 75 families to be considered eligible for MIHOPE-Strong Start. Nearly 70 percent of programs reported capacity to serve more than 100 families; a higher proportion of NFP than HFA programs in MIHOPE-Strong Start serve more than 100 families.

Finally, most programs were receiving some funding from MIECHV at the time of study entry. Three-quarters of all study programs, however, reported that MIECHV represented less than half (including none) of their overall funding.

In addition to the operational characteristics of local programs described above, background information was collected on the social and demographic characteristics of the home visitors working in these programs. Table 2.2 describes some of these home visitor characteristics, overall and by national model, based on survey information from 385 home visitors, or 76 percent of home visitors eligible for the survey. Some of these characteristics, such as education level, field of study, or work experience, may reflect different skills and orientations in working with families, which could influence how effectively services are delivered.[10]

The home visitors in the study vary in age and in their racial and ethnic background. The age distribution of home visitors is wide, though consistent with earlier findings that most home visitors are less than 40 years old.[11] One-quarter of MIHOPE-Strong Start home visitors were under the age of 30 at study entry and another one-fifth were 50 years of age or older. HFA employees tend to be slightly younger than NFP home visitors; nearly 32 percent of HFA home visitors were 29 or younger compared with 19 percent of NFP home visitors. The majority of home visitors (55 percent) self-identify as non-Hispanic white, while many others identify as Hispanic (approximately 20 percent) or non-Hispanic black (16 percent). Only a small minority identify as Asian, other race, or multiracial.

The age differences noted above may be at least partly attributed to the models' differing requirements for home visitor education. Approximately 75 percent of all home visitors have a bachelor's degree or higher. Whereas nearly all NFP home visitors had at least a bachelor's degree (93 percent), reflecting model requirements, this percentage was about 60 percent for HFA home visitors. All NFP home visitors held a nursing degree, compared with 10 percent of HFA home visitors. This difference is not surprising given that NFP requires that home visitors have a nursing degree, while HFA services may be delivered by other types of professionals or paraprofessionals who have a minimum of a high school diploma or

[10]Wasik (1993).
[11]Burrell et al. (2009); LeCroy and Whitaker (2005); Whitaker (2014).

Table 2.2

Characteristics of Home Visitors

Characteristic (%)	Overall	HFA	NFP
Age			
29 or under	24.9	31.4	17.7
30-39	30.4	32.8	27.6
40-49	23.1	18.6	28.2
50 or over	21.6	17.2	26.5
Race/ethnicity			
Hispanic	20.6	20.6	20.6
Non-Hispanic, white	55.2	51.5	59.4
Non-Hispanic, black	17.2	21.6	12.2
Asian	3.4	2.9	3.9
Other/multiracial	3.6	3.4	3.9
Highest educational level			
High school diploma or equivalency credential	2.9	5.4	0.0
Vocational/technical training or some college	10.6	20.1	0.0
Associate's degree or training program degree	12.5	18.1	6.1
Bachelor's degree	61.8	49.0	76.2
Master's degree or higher	12.2	7.4	17.7
Field of study[a]			
Child development	18.7	28.5	8.3
Early childhood education	13.6	23.3	3.3
Education	10.4	16.1	4.4
Psychology	20.1	33.7	5.5
Social work/social welfare	19.8	34.7	3.9
Nursing	53.2	9.3	100.0
Other	23.8	32.1	14.9
Experience providing home visiting services			
None	50.9	55.9	45.3
Less than 1 year	4.4	4.4	4.4
1-2 years	9.1	9.3	8.8
3-5 years	8.6	7.8	9.4
More than 5 years	27.0	22.5	32.0
Sample size	385	204	181

SOURCES: Calculations based on data from the MIHOPE home visitor baseline survey and the MIHOPE-Strong Start home visitor survey.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.
Percentages may not total 100 due to rounding.
[a]Percentages will not total 100. Respondents could select multiple categories.

equivalent. The most common field of study for HFA home visitors was social work or social welfare (40 percent). Other fields of study for HFA home visitors include psychology (32 percent), child development (25 percent), and early childhood education (25 percent).

A bifurcated pattern emerges when examining work experience with high-risk families: About half the home visitors had no previous experience, whereas almost one-quarter had over five years of experience. Differences between the two models were small. Lack of experience working with high-risk or high-need families may result in home visitors feeling unprepared for dealing with challenging circumstances or families in crisis.[12] At the same time, home visitors who have worked in the field for years may be more likely to experience stress from their close work with families in challenging situations and thus feel burned out.[13]

Conclusion

MIHOPE-Strong Start used a structured, rolling, and time-intensive process to identify and recruit the programs that contributed to the analysis in this report. Program recruitment was an ambitious aspect of the project. Several lessons learned from the process include the importance of either mandating study participation or providing substantial financial offsets for costs of participation, remaining flexible about aspects of the study design, identifying program leaders who champion research and evaluation for long-run sustainability, and developing collaborative working relationships with all stakeholders.

Despite recruitment difficulties, a large number of local programs are contributing to the analysis, spanning diverse regions of the country and different states. Most programs are serving families in metropolitan areas, are well established, and have the capacity to serve more than 100 families. The following chapter presents the first descriptive information on the characteristics of an early sample of families who enrolled in services across most of the programs in the study.

[12]Daro, McCurdy, Falconnier, and Stojanovic (2003).
[13]Wasik (1993).

Chapter 3

Characteristics of Families

The health of infants begins with the health and well-being of their mothers. This chapter presents a portrait of the initial group of women in the Mother and Infant Home Visiting Program Evaluation-Strong Start (MIHOPE-Strong Start) at the time of their enrollment into the study. The sample examined in this chapter comprises 1,221 women, which is approximately 40 percent of the women who will be included in the study's final analysis.[1] While the information may change somewhat with the final sample, the description presented here sheds some light on the characteristics of pregnant women who engage with home visiting services, including the prevalence of both protective and risk factors. This information, which is important for the impact evaluation, offers a sense of the constellation of family risks and strengths that local home visiting programs and staff members encounter among their participants.

Sample and Data Sources

As already discussed, the study enrolled only pregnant women. This early sample includes expectant mothers who enrolled in either Healthy Families America (HFA) or Nurse-Family Partnership (NFP) home visiting programs in 16 out of the 17 states in the study.[2] Almost one-third of the sample is composed of women who enrolled in the study through HFA programs; 69 percent enrolled through NFP programs. This distribution is not unexpected, as all women eligible for NFP met the eligibility requirements for the study, whereas only a subset of all women eligible for HFA met the study eligibility requirements (because HFA enrolls women at any stage of pregnancy and up to three months after they give birth).[3] In addition, the NFP programs tend to have larger enrollment capacity than HFA programs, as noted in Chapter 2.

The remainder of the chapter describes families at the time of their enrollment in the study in terms of socio-demographic and income characteristics, household composition and incidence of intimate partner violence, health care access and use, and maternal health status, birth history, and health behaviors. This chapter presents data from either the MIHOPE family

[1]The information presented in this chapter combines characteristics of families randomly assigned for MIHOPE-Strong Start between June 11, 2014, and April 29, 2015, with characteristics of MIHOPE families who met the study eligibility criteria and who were randomly assigned from October 26, 2012, to January 16, 2014.

[2]The states represented in this report are California, Illinois, Indiana, New Jersey, Nevada, Pennsylvania, Michigan, New York, Washington, Georgia, Iowa, Kansas, Massachusetts, North Carolina, Tennessee, and Wisconsin. The final MIHOPE-Strong Start report will also include women who enrolled in home visiting programs in South Carolina.

[3]Filene et al. (2013).

baseline survey or the MIHOPE-Strong Start family baseline survey, depending on the local program with which a family is affiliated. These two surveys collected slightly different sets of information from respondents, although the majority of relevant items overlap. When the information presented is from one survey source (a subsample of the total sample), this is indicated in the tables and text.

As noted earlier, these characteristics are relevant to understanding the types of families served by local programs in the study; they are also highlighted because several — including younger maternal age, race and ethnicity, single motherhood, depressive symptoms, smoking, and involvement in abusive intimate relationships — have been associated with poor birth and infant health outcomes.[4]

In addition to showing the overall distribution of characteristics, the tables in this chapter compare the women who enrolled in the study through NFP programs with the women who enrolled in the study through HFA programs. The national models define their eligible populations somewhat differently and have different guidelines about prioritizing families and screening and assessment, which may affect the distribution of family characteristics across the two models. For example, all women who enroll in NFP programs must be early enough in their pregnancy that they can receive their first home visit no later than the end of their twenty-eighth week — and the national model strongly encourages local programs to recruit women earlier, with the aim of enrolling 60 percent of participants before 16 weeks' gestation.[5] Women who enroll in HFA programs, in this study, can be up to 32 weeks pregnant. NFP participants also must be expecting their first child and qualify as low income. NFP does not recommend giving certain families precedence over others, although some local funders do place a higher priority on serving specific subgroups of women. Local HFA programs, in contrast, have the flexibility to consider risk factors for child maltreatment or other negative child outcomes in determining their own eligibility criteria and service priorities.

Differences also exist in the flexibility the models allow in family assessment tools.[6] HFA requires use of the Parent Survey, formerly called the Kempe Family Stress Checklist, for the full assessment of families, and local HFA programs commonly use it, but local programs have flexibility in selecting additional tools to complete the required initial screens for parental stress, substance use, and intimate partner violence. NFP uses a variety of instruments (for example, the NFP Health Habits Form, the NFP Relationship Assessment Form, and the Pregnancy Intake Assessment) as part of the initial assessments of a family's physical, emotional, social, and environmental strengths.

[4]Boy and Salihu (2004); Institute of Medicine (U.S.) (2007).
[5]Filene et al. (2013).
[6]Filene et al. (2013).

Socio-Demographic and Income Characteristics

Risks for adverse birth outcomes show patterns by maternal age, race and ethnicity, and other demographic and socioeconomic characteristics. In particular, women in their teens, African-American and Puerto Rican women, and women with lower levels of education and income tend to exhibit higher risks, on average, of preterm birth and low birth weight than white women and women with higher levels of education and higher incomes.[7] Table 3.1 shows some key socio-demographic and income characteristics of the sample at enrollment.

Participants in the study are young, with an average age of 22 years at enrollment; almost half the women were between 15 and 20 years old. Although pregnancies among women under age 20 are associated with a greater risk of poor birth outcomes,[8] socioeconomic factors correlated with age, such as income, marital status, and education, play a role in explaining differential birth outcomes among younger mothers.[9]

Participants' enrollment into the study at earlier gestational ages may mean that home visitors have more time to affect prenatal care and prenatal health. About three-quarters of women were in the first or second trimester of pregnancy at enrollment; their average gestational age was 17.5 weeks. Women in the NFP sample tended to be earlier in their pregnancies. The percentage of women in the NFP sample in their first trimester was twice that of women in the HFA sample. This may partly reflect NFP's goal of enrolling 60 percent of women before 16 weeks' gestation.[10] It may also suggest that more women in NFP are being referred directly from prenatal clinics or other service providers very soon after learning of their pregnancy. Yet women in the HFA sample were, on average, only a month later in their pregnancies than women in the NFP sample.

The sample is racially and ethnically diverse. About 40 percent of women identify as Hispanic, about 20 percent identify as non-Hispanic white, and almost 30 percent identify as non-Hispanic black or African-American. As noted by earlier research, there is considerable heterogeneity in health risks among different Hispanic subgroups, with Mexican-American women experiencing outcomes similar to those of non-Hispanic whites while Puerto Rican women experience birth outcomes that are much poorer and similar to those of non-Hispanic blacks.[11] About 25 percent of the total sample are Mexican, while only about 6 percent are Puerto Rican. Women in the NFP sample are more likely to identify as Hispanic than women in the HFA sample, and the NFP sample has a smaller proportion of non-Hispanic white women.

[7]Blumenshine et al. (2010); Lu and Halfon (2003); Chen et al. (2007).
[8]Chandra et al. (2002); DuPlessis, Bell, and Richards (1997).
[9]Chittleborough, Lawlor, and Lynch (2011); Reichman and Pagnini (1997).
[10]Filene et al. (2013).
[11]Acevedo-Garcia, Soobader, and Berkman (2007).

Table 3.1

Maternal Socio-Demographic and Income Characteristics at Enrollment

Characteristic	Overall	HFA	NFP
Socio-demographic			
Age of mother			
Average age (years)	22.0	23.3	21.4
Age 15-20 (%)	48.8	40.8	52.4
Gestational age (average weeks)	17.5	20.8	16.0
Pregnancy stage (%)			
First trimester	26.5	15.5	31.4
Second trimester	52.3	43.2	56.5
Third trimester	21.2	41.3	12.1
Race/ethnicity (%)			
Hispanic	42.2	31.7	47.0
Mexican	25.6	19.0	28.5
Puerto Rican	5.7	5.8	5.6
Other Latino	11.0	6.9	12.8
Non-Hispanic, white	19.6	28.2	15.6
Non-Hispanic, black	28.1	30.1	27.2
Asian	1.4	0.3	1.9
Other/multiracial	8.6	9.8	8.1
Language other than English spoken in the home (%)	42.6	31.1	47.8
Ability to speak English self-rated as "not very well" or "not at all" (%)	9.8	9.8	9.9
Income and hardship indicators			
Maternal monthly earnings (%)			
$0	56.3	61.5	54.0
$1 - $999	27.0	25.4	27.7
$1,000 - $1,999	13.6	10.9	14.8
$2,000 or more	3.1	2.2	3.5
Food insecure[a] (%)	45.1	38.5	48.0
Sample size	1,221	380	841

SOURCES: Calculations based on data from the MIHOPE and MIHOPE-Strong Start family baseline surveys.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.
Percentages may not sum to 100 because of rounding.
[a]Respondents were asked two screening items from the United States Department of Agriculture's U.S. Household Food Security Survey Module and are classified as food insecure if they indicated any experience with food not lasting or worry about food running out in the past year.

Roughly 40 percent of the sample reported speaking a language other than English in the home, but only about 10 percent of the sample reported poor English-speaking ability.

More than half the sample reported no individual earnings in the month before enrollment, and another quarter of the sample earned less than $1,000. The low earnings may reflect the youth of the sample (women ages 15 to 22 are overrepresented among those with no earnings) or some level of withdrawal from the labor market due to pregnancy.[12] Sample members may be receiving financial support from their parents, partners, or other relatives; only maternal earnings are shown in Table 3.1. Women who have low educational attainment and who live in neighborhoods with lower median household incomes are at greater risk of delivering a preterm or low-birth-weight-for-gestational-age infant.[13] In addition, low income is associated with poorer maternal health status.[14]

Almost half the sample indicated being food insecure in the year before enrollment.[15] This means that one in two women report an experience of food not lasting or of worrying about whether their food would run out at some point in the past year.[16] Although it may seem counterintuitive, food insecurity has been found to lead to greater weight gain during pregnancy (perhaps due to a reliance on less expensive, calorie-rich foods or a binge-and-deprivation cycle), which can lead to pregnancy complications.[17]

Household Composition and Incidence of Intimate Partner Violence

Prior research has documented that adverse pregnancy and birth outcomes are associated with a woman's relationship status and her experiences with intimate partner violence. Unmarried single and cohabiting mothers exhibit greater odds of low-birth-weight infants and preterm birth than married mothers.[18] Pregnant women who experience abuse are more likely to suffer adverse pregnancy outcomes and complications, including low birth weight, preterm delivery,

[12]Questions about attending school or other educational or training programs were not included on the baseline surveys.

[13]Farley et al. (2006).

[14]Nagahawatte and Goldenberg (2008).

[15]Questions on food insecurity are from the U.S. Household Food Security Survey Module (U.S. Department of Agriculture, Economic Research Service 2015).

[16]Questions about public benefit receipt for programs that assist with food insecurity, including the Supplemental Nutrition Assistance Program (SNAP) and the Women, Infants, and Children (WIC) program, were not included on the MIHOPE-Strong Start baseline surveys.

[17]Laraia, Siega-Riz, and Gundersen (2010).

[18]Shah, Zao, and Ali (2011).

infant mortality, small size for gestational age, and kidney infections.[19] Table 3.2 describes the household composition of women in the sample, as well as their experiences with intimate partner violence. About 35 percent of women reported living with the biological father of the focal child (the child with whom the woman is pregnant). Most women (almost two-thirds) reported living with other adult relatives, which might reflect their youth. There is little overlap between these groups; the vast majority of women were living with either the child's biological father or another adult relative.

Because NFP enrolls only first-time mothers, the percentages of the HFA sample and the NFP sample who reported living with a sibling of the focal child differ substantially: 33 percent of the HFA sample, compared with about 1 percent of the NFP sample. Although no women in the NFP sample should have other children (according to NFP eligibility requirements that women be first-time mothers), the percentage may be nonzero for this sample because stepsiblings and half-siblings of the focal child can be included in this count.

About 9 percent of women reported having experienced physical intimate partner violence (IPV), measured using items from the Conflict Tactics Scale,[20] while about 8 percent reported experience with battering, measured using items from the Women's Experience with Battering scale.[21] Physical IPV involves discrete acts of physical violence such as hitting, shoving, kicking, and beating perpetrated by a spouse or partner, whereas battering has been defined as a syndrome of control and entrapment that may or may not be accompanied by physical attacks.[22] Only 2 percent of women indicated experiences of both physical IPV and battering (not shown). The 15 percent of women who indicated either experience is comparable to the range of prevalence rates found in a review of the literature.[23]

Health Care Access and Use

Improving health care access and use are outcomes of interest in the evaluation and are among the goals of HFA and NFP programs, as discussed in Chapter 4. Table 3.3 presents some information about women's health care access and prenatal health care use at the time of enrollment.

[19]Boy and Salihu (2004).

[20]The Conflict Tactics Scale has been widely used as a measure of physical abuse. Evidence of its reliability and validity can be found in Lucente, Fals-Stewart, Richards, and Goscha (2001); Newton, Connelly, and Landsverk (2001); Tuomi Jones, Ji, Beck, and Beck (2002).

[21]Smith, Earp, and DeVellis (1995); further discussion of reliability and validity can be found in Smith, Smith, and Earp (1999).

[22]Smith, Earp, and DeVellis (1995).

[23]Bailey (2010).

Table 3.2

Household Composition and Incidence of Intimate Partner Violence at Enrollment

Characteristic (%)	Overall	HFA	NFP
Household			
Biological father is present in the home	36.6	38.4	35.8
Other adult relative lives in the home[a]	63.1	56.1	66.2
A nonadult sibling of the focal child lives in the home[b]	11.3	33.5	1.2
Intimate partner violence			
Physical violence toward mother[c]			
Any violence toward mother[d]	8.6	11.1	7.5
Severe violence toward mother[e]	2.3	2.0	2.4
Mothers' experience with battering[f]	8.1	8.6	7.9
Mother has experience with physical violence or battering	15.2	17.8	14.0
Sample size	1,221	380	841

SOURCES: Calculations based on data from the MIHOPE and MIHOPE-Strong Start family baseline surveys.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.

[a]Includes any relative who is age 18 or older, other than the child's biological father.

[b]Includes step-siblings.

[c]The subset of women who answered the MIHOPE-Strong Start family baseline survey were asked about experiences of physical intimate partner violence if they had a spouse or partner in the past three months or had one at the time of enrollment, while the subset of women who answered the MIHOPE family baseline survey were asked about these experiences only if they had a spouse or partner at the time of enrollment. The time period referenced also differed between the MIHOPE-Strong Start and MIHOPE surveys: Women were asked how often they had experienced these acts in the past three months and past year, respectively.

[d]Acts included in this measure are the mother's spouse or partner throwing something at her; pushing, shoving, hitting, slapping, or grabbing her; using a knife, gun, or weapon on her; choking, slamming, kicking, burning, or beating her; and using threats or force to make her have sex.

[e]Acts included in this measure are the mother's spouse or partner using a knife, gun, or weapon on her; choking, slamming, kicking, burning, or beating her; and using threats or force to make her have sex.

[f]This was measured using a six-item version of the Women's Experience with Battering scale (Smith, Earp, and DeVellis 1995), modified with permission of Paige Smith. Respondents were asked these items if they indicated they had a spouse or partner at the time of enrollment. Items include, "He makes me feel unsafe even in my own home," "I feel ashamed of the things he does to me," and "I feel like he keeps me prisoner."

Table 3.3

Maternal Health Care Access and Use at Enrollment

Characteristic (%)	Overall	HFA	NFP
Prenatal health care			
Initiated prenatal care in the first trimester	79.6	81.1	78.9
Maternal health insurance and access to care			
Has usual source of prenatal care[a]	84.0	89.5	81.9
Insurance type[b]			
Uninsured	21.1	13.7	24.4
Public health coverage	71.9	81.4	67.7
Private insurance	8.5	7.8	8.8
Sample size	1,221	380	841

SOURCES: Calculations based on data from the MIHOPE and MIHOPE-Strong Start family baseline surveys.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.
[a]Measure available only for the 539 respondents to the MIHOPE-Strong Start family baseline survey.
[b]Insurance type percentages may not add up to 100 percent, as some MIHOPE baseline survey respondents indicated having more than one type of insurance.

The vast majority of women initiated prenatal care in their first trimester,[24] and almost 85 percent had a usual source of prenatal care; two of the benefits of early and ongoing prenatal care are improved birth weight and decreased risk of preterm delivery.[25] It should be noted that adequacy of prenatal care (a proposed outcome of the evaluation) is defined not only by early initiation of care but by regular visits to a prenatal care provider up until delivery. Home visiting programs that aim to improve healthy pregnancies should not only encourage early initiation of prenatal care (note that the women in this sample generally had initiated prenatal care before receiving home visiting services) but also promote receipt of ongoing, regular care.

At the time of enrollment, more than 70 percent of the women reported receiving public health insurance coverage.[26] This rate of coverage is not surprising, since the study aimed to include local home visiting programs that serve primarily women who would be enrolled in Medicaid or the Children's Health Insurance Program (CHIP) by the time they gave birth. Another 8 percent of women were insured through private plans. This still leaves about one in

[24]Thirty-one women who enrolled in the study in their first trimester but had not initiated prenatal care at the time of enrollment presumably still had an opportunity to initiate prenatal care in their first trimester.

[25]U.S. Department of Health and Human Services, Health Resources and Services Administration (2011).

[26]Public insurance coverage includes Medicaid, Medicare, Medigap, CHIP, military, Indian Health Service, and state-sponsored insurances.

five women who were uninsured. It is likely that some of these uninsured women will have gained access to Medicaid at least to cover the infant's delivery, and some women in the program group may, of course, gain coverage earlier if eligible and encouraged to do so by home visitors.

Maternal Health Status, Birth History, and Health Behaviors

A mother's health status and health behaviors are among the most salient determinants of compromised birth outcomes, with robust effects across earlier research studies.[27] For example, smoking cigarettes during pregnancy has been linked to low birth weight and fetal growth retardation across numerous studies.[28] Maternal stress and depression both play a role in birth outcomes, partly through their influence on health behaviors (such as smoking, poor nutritional habits, and lack of sleep),[29] although other research has noted that depression appears to have an independent effect on birth outcomes.[30] Maternal anxiety during pregnancy also may adversely affect fetal development by altering the uterine hormonal environment.[31] Table 3.4 describes the health and well-being of women at the time of their enrollment in the study. Current pregnancy-related health challenges and women's birth histories are also included in this table.

Nine in 10 women in the sample reported that they were in good physical health. Longitudinal research studies have found that self-rated health status is a surprisingly strong predictor of future health deterioration and mortality, even after adjusting for objective measures of health.[32] The indicators of maternal mental health presented in Table 3.4 are less positive. Symptoms of depression or anxiety were experienced by about 40 percent of the sample. Over one-third of the sample had major depressive symptoms, according to a 10-item version of the Center for Epidemiological Studies Depression (CES-D) scale, and nearly one-quarter of women expressed moderate or severe levels of anxiety, according to the Generalized Anxiety Disorder seven-item scale (GAD-7). The rate of depressive symptoms seen in this sample is higher than the national rate of 13 percent of women who have depressive symptoms while pregnant or soon after pregnancy, although the rate is comparable to those found in smaller studies of low-income pregnant mothers.[33] The measures of depressive and anxiety symptoms are not clinical assessments, but validation studies have found that these symptoms are moderately to highly correlated with clinical diagnoses.[34]

[27]Institute of Medicine (U.S.) (2007); Lobel et al. (2008).
[28]Wang et al. (1997).
[29]Lobel et al. (2008).
[30]Orr, James, and Blackmore Prince (2002).
[31]Glover (2011); Mulder et al. (2002); Sandman et al. (1999).
[32]Idler and Benyamini (1997); Miilunpalo et al. (1997).
[33]U.S. Department of Health and Human Services, Office on Women's Health (2009).
[34]Spitzer, Kroenke, Williams, and Löwe (2006); Eaton, Neufeld, Chen, and Cai (2000).

Table 3.4

Maternal Health Status, Birth History, and Smoking Behavior at Enrollment

Characteristic (%)	Overall	HFA	NFP
General health status and mental health			
Health self-rated "poor" or "fair"	9.5	12.1	8.3
Depression (10-item CES-D) score at or above cutoff[a]	36.9	39.2	35.8
Anxiety (GAD-7) score at or above cutoff[b]	22.4	24.5	21.5
Symptoms of depression or anxiety[a,b]	41.8	44.5	40.5
Health during pregnancy and birth history			
Any health problems during pregnancy[c,d]	50.4	55.3	48.4
Told that pregnancy was "high risk"[d]	14.7	21.7	11.9
Previous live birth[d]	14.1	47.1	1.0
Miscarriage, fetal death, stillbirth, or infant death[d,e]	9.3	11.1	8.5
Smoking behavior			
Any current smoking	7.8	13.0	5.5
Smoking is permitted in the home	20.6	25.5	18.4
Sample size	1,221	380	841

SOURCES: Calculations based on data from the MIHOPE and MIHOPE-Strong Start family baseline surveys.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.

[a]This was measured using a 10-item Center for Epidemiologic Studies Depression Scale (CES-D). A score of 8 or higher indicates clinically significant depressive symptoms. See Kohout, Berkman, Evans, and Cornoni-Huntley (1993).

[b]A score of 10 or higher on the Generalized Anxiety Disorder seven-item scale (GAD-7) indicates moderate or severe anxiety symptoms. See Spitzer, Kroenke, Williams, and Löwe (2006).

[c]Based on presence of any of the following conditions: vaginal bleeding; kidney or bladder infection; severe nausea; vomiting or dehydration; cervix had to be sewn shut; high blood pressure; problems with placenta; car accidents.

[d]Measure available only for the 539 respondents to the MIHOPE-Strong Start family baseline survey.

[e]Respondents are included in this measure if at any time in the 12 months prior to their current pregnancy they had a miscarriage, fetal death, or stillbirth or had a child who died in his or her first 30 days.

Respondents to the MIHOPE-Strong Start family baseline survey, a subset of the sample discussed in this chapter (539 respondents), were asked about their health during their current pregnancy. They were also asked to report on their previous pregnancy experiences; this information is primarily relevant to the HFA sample. Among this subset, half reported a health problem in their current pregnancy such as vaginal bleeding, a kidney or bladder infection, severe nausea, vomiting or dehydration, problems with the placenta, or high blood pressure. The problems reported most often were severe nausea, vomiting or dehydration, a kidney or bladder infection, and vaginal bleeding. About 15 percent had been told that their pregnancy was high risk. High-risk pregnancies include pregnancies where the mother has a preexisting health condition such as high blood pressure (6 percent to 8 percent of pregnant women in the United States); has a condition of pregnancy such as multiple gestation (33 per 1,000 births), preeclampsia (3 percent to 5 percent of pregnancies), or gestational diabetes (2 percent to 10 percent of pregnancies); or is under age 20 or having her first pregnancy after age 35.[35] Among those for whom this information was collected, most women under the age of 20 did not report having been told that their pregnancy was high risk. Notably, the high-risk pregnancy rates are about twice as high for the HFA subsample as for the NFP subsample, which may reflect that the women in HFA programs tend to be further along in their pregnancies (and thus have had more time to develop a pregnancy-related health condition), or they may have had health issues in their prior pregnancies.

Among the MIHOPE-Strong Start survey subsample, almost half the women in the HFA sample reported a previous live birth,[36] and about 10 percent of the subsample overall reported experiencing a miscarriage, fetal death, stillbirth, or infant death in the 12 months before their current pregnancy. Of these experiences, over 85 percent were miscarriages before 20 weeks, and an additional 10 percent were miscarriages that occurred between 20 and 28 weeks. Nationally, the risk of miscarriage for women ages 15 to 29 is 10 percent.[37]

Current smoking was reported by about 8 percent of the sample, which is slightly lower than the national rate of smoking among pregnant women (roughly 12 percent) and lower than the smoking rate of pregnant female Medicaid enrollees during their last three months of pregnancy (roughly 18 percent).[38] However, 20 percent of women reported that smoking was permitted in their homes, which indicates possible fetal exposure to secondhand smoke. In addition, validation studies assessing self-reported smoking behavior against biomarker data (co-

[35]National Institute of Child Health and Human Development (2013).

[36]One percent of women in the NFP sample indicate that they had a previous live birth, even though one of NFP's enrollment criteria is that women must be expecting their first child. This percentage may be reporting error, or these four women may have had previous live births but not have a child who is currently living. These self-reports will be checked against birth certificate records.

[37]American Congress of Obstetricians and Gynecologists (2011).

[38]Centers for Disease Control and Prevention (2014); Tong et al. (2013).

tinine levels) have found that people tend to understate smoking in self-reports, although the degree of misclassification varies across studies and contexts.[39] It is quite likely that the current smoking rates shown in Table 3.4 are underestimates, particularly because pregnant women are apt to feel heightened "surveillance" or pressure to report that they are not smoking (even if they are), given established medical advice and knowledge.[40] Women in the HFA sample were more than twice as likely to report current smoking as women in the NFP sample. This difference may reflect the higher percentage of Hispanic mothers who are in the NFP sample, as Hispanic women (particularly foreign-born) are less likely to smoke than other racial or ethnic groups.[41]

Conclusion

The sample of expectant women described in this chapter, while only a subset of the larger sample to be included in the final analyses, is clearly disadvantaged and at risk for adverse birth outcomes. Risk factors highlighted include young age, food insecurity, mental health concerns, health problems during pregnancy, fetal smoke exposure in the home, and, to a lesser degree, maternal smoking and intimate partner violence. These profiles suggest critical areas for home visiting programs to address, by providing education and support throughout pregnancy and by connecting expectant women with needed resources in the community. The following chapter examines the features of local programs, including elements of their infrastructure, that may enhance their ability to provide a range of services to these and other families.

[39]Rebagliato (2002).
[40]Shipton et al. (2009).
[41]Centers for Disease Control and Prevention (2014).

Chapter 4

Characteristics of Local Home Visiting Programs

This chapter builds on the findings from the first Mother and Infant Home Visiting Program Evaluation-Strong Start (MIHOPE-Strong Start) report by reviewing the key implementation characteristics of Healthy Families America (HFA) and Nurse-Family Partnership (NFP), and by presenting findings from the local HFA and NFP programs participating in the study.[1] The two national models included in MIHOPE-Strong Start target and support disadvantaged women who are expecting a child by providing screening for and assessment of prenatal and postnatal risks, education and support on various topics, and referrals to health care or needed social services. They have demonstrated impacts on improving birth outcomes in earlier evaluations.[2] The national models are likely to be an important source of influence for local programs. The chapter provides a brief overview of the key aspects of the service plans as defined by the national models and examines to what degree the local programs align with their respective national models. It then describes the implementation systems of local programs, including connections with community resources and the types of support home visitors have in place to conduct their work.

The information presented in this chapter is the first look at local programs' goals and priorities, local policies and procedures, and the presence of various forms of implementation support to help programs deliver services as planned. The data used in this chapter come from several sources: semi-structured interviews with and surveys of the two national model developers, and web-based surveys of program managers and home visitors conducted around the time their programs entered the study. The study team is still gathering and compiling data on the actual services families receive, as well as other factors that are hypothesized to influence service delivery — all of which will be examined in the final implementation analyses.

Local Service Plans

The service plan lays out the blueprint of a local program and guides how the program provides services. The service plan is shaped by the policies and procedures of the national model and the influence of other key stakeholders (for example, funders, state agencies, and other community-based organizations). This section describes selected aspects of the service plan and their

[1] For more information on the history and program elements of the two national models, see Filene et al. (2013).

[2] Lee et al. (2009); Olds, Henderson, Chamberlin, and Tatelbaum (1986).

alignment with national model parameters in the areas of intended recipients, intended outcomes, intended services, and intended staffing.[3]

Intended Recipients

Home visiting programs differ in the characteristics of families they target. At the national level, HFA has two main eligibility criteria for enrollment: being a family with a pregnant woman or a child up to 3 months of age, and voluntary enrollment.[4] As noted earlier in Chapter 3, local programs have flexibility in choosing specific eligibility criteria. At the national level, NFP has four main eligibility criteria: being a pregnant woman expecting her first child, low-income status, voluntary enrollment, and receipt of the first home visit no later than the end of the twenty-eighth week of pregnancy.[5] Local programs may determine how to screen women for eligibility, including defining the specific criteria for "low income."

Local programs differ in the responsibility they assume for improving outcomes for various family members. Some assume responsibility for only the mother and child, others for the child's father or other family members. Assuming responsibility for improving outcomes among different individuals may relate to both the comprehensiveness and complexity of the service plan. That is, programs that assume responsibility for more individuals may be more comprehensive in their services (for example, addressing concerns of multiple family members) but may also be more complex and diffuse in their focus.

As described in the first MIHOPE-Strong Start report, both HFA and NFP expect local programs to assume "major" responsibility for the unborn or newborn child and for the mother. Table 4.1 in the present report again presents these findings from the national models and also includes the perspectives of the local programs. Consistent with the national models, when asked for whom they assume major responsibility, nearly all local programs indicated the child and the mother.

At the national level, HFA also expects their local programs to assume major responsibility for improving the outcomes of the biological father. However, reflecting some divergence from the national model, only about a third of local HFA programs reported assuming major

[3]The results shown here are similar to those shown in the report to Congress on early findings from MIHOPE programs (Michalopoulos et al. 2015a). Key additions presented in this report include particular items focused on prenatal health and behavior. For example, Table 4.2 includes ratings of one intended outcome (prenatal tobacco use) that was not included in the report to Congress.

[4]The model standard requires that at least 80 percent of families have eligibility screening or assessment done prenatally or within two weeks of the birth. After eligibility has been determined and services offered, the model standard requires that at least 80 percent of families receive the first home visit no later than three months after the child's birth (Healthy Families America 2013).

[5]Nurse-Family Partnership (2011a).

Table 4.1

Intended Recipients of Home Visiting Services

Major Responsibility Assumed for Individual	National Model Developer		Percentage of Local Programs That Assume Major Responsibility		
	HFA	NFP	Overall	HFA	NFP
Child	Yes	Yes	93.7	94.3	92.9
Mother	Yes	Yes	95.2	91.4	100.0
Biological father	Yes	No	24.2	34.3	11.1
Other father figure	No	No	19.4	28.6	7.4
Child's other familial caregivers	No	No	6.5	5.7	7.4
Mother's children older than the focal child	No	No	4.9	5.7	3.8
Children born subsequent to the focal child	No	No	24.2	25.7	22.2
Sample size			63	35	28

SOURCES: Calculations based on data from the MIHOPE national model developer survey, the MIHOPE program manager baseline survey, and the MIHOPE-Strong Start program manager survey.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.
This table includes data previously described in the MIHOPE-Strong Start first report (Filene et al. 2013) and the MIHOPE report to Congress (Michalopoulos et al. 2015a).

responsibility for the biological father. At the national level, HFA also indicated that they expected their local programs to assume "some" responsibility for other family members, including other father figures, other familial caregivers, older children, and children born subsequent to the focal child. Likewise, several local HFA programs reported assuming some responsibility for these other family members; more than half reported assuming some responsibility for each of the other family members (results not shown).

While the NFP national model developers do not expect programs to assume any responsibility for other individuals beyond the focal child and mother, about 22 percent of local NFP programs reported that they also assumed major responsibility for improving outcomes for children born subsequent to the focal child. And 1 in 10 local NFP programs assumed major responsibility for the biological father.

Intended Outcomes

Each local program assigns priorities to the outcomes they hope to improve. These priorities may be influenced by the national model, federal funders, state funders, local funders,

community partners, and others. The extent to which the national model developers and local program managers agree (report similarly) on the priority of outcomes not only reflects a clear line of communication from model developers to local program managers, but may also indicate how clearly local programs will be able to communicate expectations to their staffs and how they can support staff members to work with families to achieve these outcomes.

Table 4.2 highlights the national model priority ratings for a range of outcomes. The table shows that both national model developers assign a high priority (a ranking between 8 and 10 on a scale of 0 to 10) to improving the majority of outcomes examined in this study, such as smoking during pregnancy, mental health, intimate partner violence, and birth outcomes. However, while NFP assigns all outcomes a high priority, HFA assigns four outcomes a medium priority: prenatal health, maternal physical health, family planning and birth spacing, and postnatal tobacco use. This type of rating seems consistent with HFA's mission, which is to promote child well-being, and its mix of prenatal and postnatal enrollment. For example, prenatal health is by definition not a relevant outcome for the families who enroll postnatally in HFA.

Table 4.2 also shows the percentages of local program managers who rated each outcome area as a high priority. Most local program managers ranked all the outcomes as high priorities. In both HFA and NFP programs, fewer local program managers ranked maternal physical health as a high priority compared with other areas, although about two-thirds still considered maternal health to be a high priority. For the most part, there were few model differences at the local level in outcome priorities, suggesting general consistency in the intended goals of the programs whether they implement HFA or NFP. Areas where small differences exist include family planning and birth spacing, mental health and substance use, breastfeeding, and birth outcomes, which were ranked as high priorities by a larger share of NFP than HFA local program managers.

Table 4.2 relies on reports at both national model and local program levels. Table 4.3 displays similar information on intended outcomes, but from the perspective of home visitors. Specifically, the table shows the percentages of home visitors who agreed or strongly agreed that they were expected to help mothers achieve outcomes across the relevant MIHOPE-Strong Start areas. Most home visitors, regardless of national model, recognized that they were expected to address many of the behaviors that affect maternal health and well-being and, ultimately, birth outcomes, responses that correspond with the reports of program managers. For example, about 90 percent of all home visitors felt their role was to help mothers establish a healthy lifestyle during pregnancy, recognize prenatal risk factors, reduce tobacco use, recognize and address intimate partner violence, and recognize and address mental health issues.

Table 4.2

Priority Ratings for Intended Outcomes of the National Models and Local Programs

Outcome to Address	National Model Developer Rating[a]		Percentage of Local Programs That Rated Outcome as a High Priority[b]		
	HFA	NFP	Overall	HFA	NFP
Maternal health and well-being					
Prenatal health[c]	Medium	High	81.0	77.1	85.7
Maternal physical health[c]	Medium	High	65.1	62.9	67.9
Family planning and birth spacing	Medium	High	88.7	82.4	96.4
Tobacco use					
Prenatal[d]	High	High	88.2	100.0	71.4
Postnatal[e]	Medium	High	77.4	76.5	78.6
Mental health and substance use	High	High	90.3	85.3	96.4
Intimate partner violence	High	High	96.8	94.3	100.0
Parenting					
Breast-feeding	High	High	88.5	82.4	96.3
Positive parenting behavior	High	High	96.8	94.3	100.0
Child abuse and neglect	High	High	100.0	100.0	100.0
Family economic self-sufficiency	High	High	90.5	91.4	89.3
Child health and development					
Birth outcomes	High	High	93.7	88.6	100.0
Child preventive care	High	High	96.8	97.1	96.4
Child development	High	High	98.4	97.1	100.0
Sample size			63	35	28

SOURCES: Calculations based on data from the MIHOPE national model developer survey, the MIHOPE program manager baseline survey, and the MIHOPE-Strong Start program manager survey.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.

This table includes data previously described in the MIHOPE-Strong Start first report (Filene et al. 2013) and the MIHOPE report to Congress (Michalopoulos et al. 2015a).

[a]Low = ratings from 0 to 3, medium = ratings from 4 to 7, high = ratings from 8 to 10.

[b]High priority includes ratings of 8, 9, and 10.

[c]The MIHOPE-Strong Start program manager survey asks about three outcomes surrounding both prenatal health and maternal physical health. If any of those outcomes was ranked "high," it was considered a high priority for the local programs.

[d]MIHOPE-Strong Start only.

[e]MIHOPE and MIHOPE-Strong Start.

Table 4.3

Home Visitors' Perceptions of Their Roles in Improving Intended Outcomes

Home Visitors Are Expected to Help Mothers… (%)[a]	Overall	HFA	NFP
Prenatal care			
Have a healthy lifestyle prenatally	88.7	84.1	93.8
Recognize medical risk factors for preterm delivery, such as gestational bleeding and preeclampsia[b]	88.7	82.9	96.5
Make sure they have adequate prenatal care[b]	94.8	92.2	98.2
Understand their prenatal care provider's recommendations[b]	92.6	89.6	96.6
Follow through on their prenatal care provider's recommendations[b]	88.7	84.2	94.7
Overcome barriers to prenatal care[b]	92.5	92.0	93.1
Understand the benefits of prenatal care[b]	94.8	94.7	94.8
Make sure they attend postpartum care appointments[b]	88.8	89.5	87.9
Maternal health and well-being			
Develop a healthy lifestyle outside of pregnancy	84.7	82.6	87.1
Space their births	85.2	82.5	88.2
Reduce their tobacco use	85.6	82.9	88.6
Recognize and address problem alcohol/other drug use	88.1	88.6	87.6
Recognize and address mental health issues	91.0	90.5	91.5
Recognize and address intimate partner violence	89.4	87.4	91.5
Parenting			
Start and continue breast-feeding	86.8	81.6	92.7
Babyproof their homes	92.6	94.0	91.0
Make sure children are up to date on immunizations and well-child care	95.2	96.0	94.4
Access to community resources			
Have health care coverage or access to a free or low-cost clinic for themselves	79.1	79.0	79.2
Have health care coverage or access to a free or low-cost clinic for their children	89.2	90.0	88.2
Sample size	385	204	181

SOURCES: Calculations based on data from the MIHOPE home visitor baseline survey and the MIHOPE-Strong Start home visitor survey.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.
[a]Percentages reflect respondents who reported that they "agreed" or "strongly agreed."
[b]Question not asked in MIHOPE home visitor survey. Sample based on MIHOPE Strong Start home visitor survey data only. Sample size = 135 (HFA = 77; NFP = 58).

Intended Services

The national models specify the services that local programs are expected to deliver to families in order to achieve the above outcomes. Intended service delivery influences actual service delivery and is the standard for measuring fidelity of service delivery. Intended services described in this report include how national models and local programs define the content of services they provide, the amount of services provided (or "dosage"), and the approach taken in providing services.

Content

Home visitors generally conduct three types of tasks during visits: information gathering, education and support, and referral to other services. Some local programs have specific policies and procedures for how home visitors are expected to perform these tasks. For example, local programs might have formal screening tools for detecting maternal mental health problems, and policies regarding how to support a mother when screening indicates a problem and how to make a referral to an appropriate provider. For each model, Table 4.4 highlights the percentages of local programs that had specific policies in place for information gathering, education and support, and referrals in the areas of maternal mental health, maternal substance use, and intimate partner violence — areas that are relevant to MIHOPE-Strong Start as risks for poor birth outcomes and indicators of compromised well-being of mothers.[6]

Screening and assessments. Across both HFA and NFP, 95 percent of local programs required formal screening for mental health as reported by program managers. However, a higher percentage of local NFP program managers reported formal screening requirements for maternal substance use (92 percent) and intimate partner violence (85 percent) than did local HFA program managers (65 percent and 68 percent, respectively). This is not surprising given that nationally, NFP agencies routinely screen clients in areas such as maternal mental health, substance use, and intimate partner violence. Nearly all local programs that required screening in these areas also reported having policies for screening at a specified time.

Education and support. Despite the high proportion of programs that required screening in these areas, there is some variation in whether local program managers reported having a policy for education and support if a mental health, substance use, or intimate partner violence issue was detected. In general, local programs were less likely to have written protocols or policies for supervisor consultation for working with families on issues of maternal substance use (54 percent) and intimate partner violence (56 percent) than on issues of mental health (78 percent). Across the three areas in Table 4.4, more HFA programs than NFP programs reported

[6]There are other areas for which home visiting programs typically screen. For example, both HFA and NFP require that local programs routinely screen for child developmental delay.

Table 4.4

Local Programs' Policies for Information Gathering, Education and Support, and Referrals

	Maternal Mental Health			Maternal Substance Use			Intimate Partner Violence		
Program Policy (%)	Overall	HFA	NFP	Overall	HFA	NFP	Overall	HFA	NFP
Information gathering									
Formal screening is required[a]	95.2	94.6	96.2	76.2	64.9	92.3	74.6	67.6	84.6
At a specified time before or after a child's birth or enrollment[b]	95.2	94.6	96.2	74.6	62.2	92.3	74.6	67.6	84.6
When home visitor or parent has a concern[b]	42.9	32.4	57.7	20.6	5.4	42.3	20.6	13.5	30.8
Education and support									
Family education and support when screening detects problem									
Specified in written protocol or determined in consultation with supervisor[b]	77.8	91.9	57.7	54.0	62.2	42.3	55.6	64.9	42.3
Home visitors can decide on their own how to act[b]	14.3	2.7	30.8	12.7	0.0	30.8	14.3	2.7	30.8
No policy[b]	11.1	5.4	19.2	9.5	2.7	19.2	9.5	2.7	19.2
Referral[c]									
Role of home visitor in making referral									
Provide information to families	47.5	45.7	50.0	61.7	62.5	60.9	63.8	72.0	54.6
Help family gain access to resource	42.4	48.6	33.3	29.8	37.5	21.7	29.8	28.0	31.8
No policy	10.2	5.7	16.7	8.5	0.0	17.4	6.4	0.0	13.6
Role of home visitor in following through on referral									
Home visitor expected to monitor	91.5	97.1	83.3	91.3	95.8	86.4	91.5	100.0	81.8
Home visitor not expected to monitor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No policy	8.5	2.9	16.7	8.7	4.2	13.6	8.5	0.0	18.2
Sample size	63	37	26	63	37	26	63	37	26

(continued)

Table 4.4 (continued)

SOURCES: Calculations based on data from the MIHOPE program manager baseline survey and the MIHOPE-Strong Start program manager survey.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.

[a]Possible screening tools included options for many commonly used tools, state- or model-specific tools, and respondent write-in options.

[b]Response categories are not mutually exclusive, so percentages may total more than 100. Within each domain, some sites might use more than one tool and might have different policies for each tool.

[c]Only for local programs where formal screening is required.

that they had policies in place for providing education and support to families when screening detected a problem. For example, 92 percent of local HFA programs reported that they had a written protocol or policy for supervisor consultation for working with families who had screened positive for maternal mental health problems, compared with 58 percent of local NFP programs.

Referrals. The vast majority of local program managers reported having specific policies on how referrals should be handled. A program's protocols on referral procedures may be tapping into differing philosophies about whether families benefit more from home visitors who actively help them gain access to other community-based services or from learning how to navigate the appointment process themselves. As shown in Table 4.4, local program managers were more likely to report that the home visitor's role is to provide information to the parent about the referral than to actively help her access the resources she needs. However, these responses varied somewhat across the topics. For mental health, 42 percent of all local programs reported that there was a policy for home visitors to help families gain access to a needed resource, compared with 30 percent for both substance use and intimate partner violence. There were also slight differences across the two models on whether the home visitor was expected to help the family gain access to resources; for example, half the HFA programs reported this expectation in the area of maternal mental health compared with one-third of the NFP programs. However, across all three areas, nearly all HFA home visitors and more than 80 percent of NFP home visitors were expected to monitor whether the clients followed through on referrals.

Local programs also reported on their policies and procedures around another key MIHOPE-Strong Start domain: the use of prenatal care and the expectations for home visitors to work with families regarding prenatal care (results not shown). Nearly all programs expected home visitors to monitor whether pregnant women receive prenatal care and to help pregnant women follow through on prenatal care providers' recommendations. There were slight differences by model in two areas. Notably, 100 percent of NFP programs had formal documentation to help remind home visitors to monitor mothers' use of prenatal care services, compared with 73 percent of HFA programs. However, perhaps as a way to compensate for the lack of formal documentation, all local HFA programs reported that supervisors made it part of program op-

erations to monitor home visitors' activities around prenatal care, compared with 71 percent of NFP programs (results not shown).

Dosage

The amount of services, or "dosage," that families are meant to receive is another aspect of service delivery for which the national models provide guidance to their local programs. As presented in the first MIHOPE-Strong Start report, the first half of Table 4.5 displays HFA and NFP dosage requirements, including the timing of initiation of service, duration of enrollment, visit length, and visit frequency.[7]

HFA's visit frequency reflects the model's philosophy that the six-month period after birth is critical for parent-child bonding, newborn safety and care, and the adjustment to parenthood.[8] After the first six months, the frequency of visits is based on a system of progressive levels determined by family well-being, stability, and self-sufficiency. The level system is based on family progress, not the child's age.[9] In addition, if a family is not participating in regular visits as prescribed by its level, the family may be placed in the category of "creative outreach," during which the local program tries to reengage the family for a minimum of three months before discontinuing services.[10] Local programs define the circumstances under which a family is placed on creative outreach and the activities carried out while the family is in this category.[11]

National NFP visit guidelines provide recommendations for the frequency and timing of home visits. The visit frequency reflects a focus on early relationship building between the family and the home visitor and providing increased support to the family after the birth.[12] The visit schedule may be adjusted by the home visitor to meet client needs, based on an individual client's strengths and risks.

Local program managers were asked to report how closely they match their respective national models regarding planned dosage. As shown in Table 4.5, local programs aligned closely with their respective national models on the key components of intended dosage. For

[7]Filene et al. (2013); Healthy Families America (2010, 2001); Nurse-Family Partnership (2013).

[8]Healthy Families America (2010).

[9]Local programs define the criteria for progression to less frequent visits as risk status decreases — from weekly to bimonthly, monthly, and finally quarterly. The intensity of visits may also increase over time as a result of changes in family risk characteristics (Healthy Families America 2010).

[10]This is a minimum of three months unless the family reengages in services, refuses services, or has moved out of the service area (Healthy Families America 2010).

[11]Healthy Families America (2010).

[12]Visits are expected to occur weekly upon enrollment and to fall off gradually to monthly visits as the child ages.

Table 4.5

Service Initiation, Duration, and Visit Length Intended by National Models and Local Programs

	National Model		Percentage of Local Programs Following National Model		
	HFA	NFP	Overall	HFA	NFP
Service initiation	Pregnancy or within the first 3 months after a child's birth	Before the end of the 28th week of pregnancy[a]	95.1	100.0	88.5
Duration of intended enrollment	Through the child's 3rd birthday but can extend to child's 5th birthday	Through the child's 2nd birthday	92.1	88.6	96.4
Preference for visit length	60 minutes	60 to 90 minutes	92.1	91.4	92.9
Visit frequency	Minimum of weekly during pregnancy and first 6 months after child's birth. Subsequent visit schedule depends on risk level, ranging from weekly to quarterly: Level 1: weekly Level 2: every other week Level 3: monthly Level 4: quarterly	Schedule depends on developmental period, ranging from weekly to monthly: First month after enrollment: weekly Between first month and delivery of baby: every other week First 6 weeks after delivery of baby: weekly Until child is 20 months old: every other week 21 to 24 months old: monthly	100.0	100.0	100.0
Sample size			63	35	28

SOURCES: Calculations based on data from Healthy Families America's (HFA) 12 Critical Elements, July 15, 2011; The Home Visit Experience, Nurse-Family Partnership Model Elements; the MIHOPE program manager baseline survey; and the MIHOPE-Strong Start program manager survey.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.

This table includes data previously described in the MIHOPE-Strong Start first report (Filene et al. 2013) and the MIHOPE report to Congress (Michalopoulos et al. 2015a). Percentages reflect the share of local programs whose program manager's report is aligned or in agreement with the parameters of their respective national model developer.

[a]This excludes two local programs that specified that they are required to start services prenatally but that did not indicate that this should be done before the end of the 28th week of pregnancy.

Table 4.6

Supportive Strategies Encouraged by National Models and Local Programs

Supportive Strategy	National Model Developer		Percentage of Local Programs That Encourage Strategy		
	HFA	NFP	Overall	HFA	NFP
Caregiver goal setting	E	E	100.0	100.0	100.0
Caregiver problem solving	E	E	100.0	100.0	100.0
Crisis intervention	E	E	81.8	82.6	81.0
Emotional support	E	E	97.8	100.0	95.2
Sample size			45	24	21

SOURCES: Calculations based on data from the MIHOPE national model developer survey and the MIHOPE program manager baseline survey.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership, E = encouraged.
This table includes data previously described in the MIHOPE Strong-Start first report (Filene et al. 2013) and the MIHOPE report to Congress (Michalopoulos et al. 2015a).

example, all local program managers reported that their policy for the frequency of planned visits was the same as that of their national model.

Approach

Home visitors use different approaches to work with families, which may affect their ability to improve outcomes. Table 4.6 summarizes national model and local approaches to specific supportive strategies for working with families. The table shows that both national models encourage their home visitors to use all the supportive strategies listed. For the most part, local program managers for both models also reported that they encouraged their home visitors to use the majority of supportive strategies. All program managers encouraged home visitors to work with mothers on goal setting and problem solving, both considered important pathways to achieving outcomes. Interestingly, fewer program managers reported encouraging crisis intervention than any other supportive strategy. This indicates some reluctance on the part of program managers to encourage this type of support, perhaps in part because providing crisis intervention might distract from providing other required services.

Intended Staffing

Another aspect of the service plan is intended staffing — the staffing required to provide what the national model considers high-quality services to families. The two national models have very different requirements for their staffs, as noted in Chapter 2. HFA specifies that home visitors must have a minimum of a high school diploma or equivalent and recommends hiring staff based on a combination of personal characteristics.[13] NFP requires that home visitors be professional registered nurses (RNs) with a minimum of a baccalaureate degree in nursing and an RN license in good standing.[14] NFP also prefers that home visitors have a combination of other related skills and experience.[15]

Two components of intended staffing measured in MIHOPE-Strong Start include the sizes of a home visitor's caseload of families (family caseload) and a supervisor's caseload of home visitors (supervision caseload). Family caseload decisions represent a balancing act between different objectives, since higher caseloads mean that more families are served, but lower caseloads may enable home visitors to work with troubled families more intensively. High caseloads have been shown to be associated with staff burnout and lower service quality,[16] but lower caseloads could lead to higher program costs per family.

Table 4.7 presents the two national models' limits for family and supervision caseload sizes. For family caseloads, NFP specifies 25 families per home visitor. HFA takes the frequency of visits into consideration and specifies that caseload size should be a maximum of 15 families when visits are occurring weekly and no more than 25 families when visits are occurring less frequently. For supervision caseloads, HFA specifies no more than six home visitors per supervisor, while NFP specifies eight home visitors per supervisor.

As shown in Table 4.7, local NFP programs appeared to be closely aligned with the national model in intended caseload sizes. However, local HFA programs differed from the national model. Nearly 60 percent of local HFA program managers reported that their supervision caseload policies had a lower maximum than what is suggested by the national model, and 74 percent reported a lower maximum in their family caseload policies. This finding suggests that

[13]For example, characteristics include being nonjudgmental, compassionate, and able to establish a trusting relationship, and having a willingness to work in, or experience working with, culturally diverse communities; experience working with families who have multiple needs; an ability to maintain boundaries between personal and professional life; knowledge of infant and child development; and educational qualifications (Healthy Families America 2013).

[14]Nurse-Family Partnership (2011a).

[15]Other skills and experience include strong written and verbal communication skills, home visiting experience, and two years of recent experience in maternal and child health, public health, or mental/behavioral nursing (Nurse-Family Partnership 2011b).

[16]Gillespie and Cohen (1984).

Table 4.7

Family and Supervision Caseload-Size Policies of National Models and Local Programs

	National Model Developer		Percentage of Local Programs with Same Policy as National Model			Percentage of Local Programs with Lower Maximum Caseload Size[a]		
	HFA	NFP	Overall	HFA	NFP	Overall	HFA	NFP
Policy on maximum caseload size for home visitors[b]	25[c]	25	52.4	25.7	85.7	47.6	74.3	14.3
Policy on the maximum number of home visitors per supervisor[d]	6	8	62.3	39.3	88.0	34.0	57.1	8.0

SOURCES: Calculations based on data from the MIHOPE national model developer survey, the MIHOPE program manager baseline survey, the MIHOPE-Strong Start program manager survey, and the MIHOPE site-selection team.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.

This table includes data previously described in the MIHOPE report to Congress (Michalopoulos et al. 2015a).

[a]No local programs reported having caseload limits higher than the national model maximum.

[b]Sample size of local programs: HFA: 35, NFP: 28.

[c]Maximum of 15 when visits are weekly; no more than 25 on any schedule.

[d]Sample size of local programs: HFA: 28, NFP: 25.

HFA local programs are exercising the flexibility given to them by the national developer in how they define their supervision and family caseload sizes, and serving fewer families per home visitor than envisioned as the maximum by the national model developer.

Implementation System

The implementation system is the infrastructure that each local program has in place to support staff members in their work. It is the link between what has been defined in the service model and the actual services provided to families. This section describes key aspects of the implementation system — including connections with community resources, administrative support, clinical support, and staff development[17] — as reported by program managers at local HFA and NFP programs.

Connections with Community Resources

Home visiting programs rely on close relationships with community partners both to enroll interested families and to make referrals to other providers. For example, a home visiting program receives referrals for eligible families from prenatal clinics and local Women, Infants, and Children (WIC) agencies, and the program makes referrals as needed to service providers such as mental health treatment agencies and pediatric primary care. Therefore, it is important that local home visiting programs build and maintain relationships with community partners.

One way to facilitate relationships with community partners is through formal arrangements. Table 4.8 shows the percentages of local programs that had formal arrangements (for example, a memorandum of understanding) with specified types of referral partners for recruiting families *into* home visiting. Slightly more than a third of local programs had a formal arrangement with a central intake system, in which referrals flow through one agency and are then distributed to the most appropriate service provider within the community. Considerably more local HFA programs than NFP programs reported having formal referral agreements with a central intake system. In fact, six local HFA programs had a formal agreement with a central intake system and no other referral partners (results not shown).

Overall, nearly 60 percent of local programs had formal referral arrangements with at least one other type of organization (not including a central intake system), ranging from 15 percent reporting arrangements with pediatric clinics to 36 percent with arrangements with hospitals. For all types of referral partners listed, more local HFA programs than NFP programs reported having formal referral agreements. The reasons for this are not clear — it may be that

[17]Fixsen et al. (2005).

Table 4.8

Formal Agreements with Referral Partners and Reported Sources for the Recruitment of Families

	Local Programs with Formal Referral Agreements			Local Programs That Report Referrals from These Sources		
Referral Partner (%)	Overall	HFA	NFP	Overall	HFA	NFP
Central intake system	35.5	50.0	17.9	41.9	47.1	35.7
Any organization[a]	58.7	65.7	50.0	--	--	--
Maternal health and well-being						
Hospitals	35.5	50.0	17.9	64.5	73.5	53.6
Health departments	16.1	20.6	10.7	53.2	52.9	53.6
Prenatal clinics	29.0	32.4	25.0	83.9	70.6	100.0
Parenting						
Child welfare agencies	19.4	23.5	14.3	53.2	55.9	50.0
Family economic self-sufficiency						
WIC programs	32.3	41.2	21.4	72.6	70.6	75.0
Schools	17.7	23.5	10.7	62.9	47.1	82.1
Child health and development						
Pediatric clinics	14.5	20.6	7.1	29.0	35.3	21.4
Other[b]	11.3	2.9	21.4	29.0	17.6	42.9
Sample size	63	35	28	63	35	28

SOURCES: Calculations based on data from the MIHOPE program manager baseline survey and the MIHOPE-Strong Start program manager survey.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership, WIC = Women, Infants, and Children.

Response categories are not mutually exclusive, so percentages may total more than 100.

[a]Excluding central intake system.

[b]Other referral partners with formal agreements include federally qualified health centers, residential drug treatment programs, juvenile detention centers, family success centers, and community agencies. Other reported recruitment sources include Medicaid, maternal child health outreach programs, pregnancy testing centers, domestic violence shelters, residential drug treatment programs, juvenile detention centers, family resource centers, social service agencies, community agencies, and current or previous clients.

NFP programs had different types of arrangements with their referral partners, such as close relationships with direct staff. As described in Chapter 2, most local NFP programs are housed in health care settings. It may be that internal referrals do not require formal agreements.

Table 4.8 also displays the percentage of local program managers who reported *receiving* referrals from each type of referral partner. There is considerable variation across referral partner type — ranging from 29 percent of local programs reporting referrals from a pediatric clinic to 84 percent reporting referrals from a prenatal clinic. While all NFP programs had received referrals from prenatal clinics, about 71 percent of HFA programs reported such referrals. Local NFP programs were also more likely to receive referrals from schools. However, HFA programs were more likely to report receiving referrals from hospitals and pediatric clinics.

A key function of home visiting programs is to link families with services they may need above and beyond those provided by the home visiting program. To assess the availability of these services in each of the MIHOPE-Strong Start communities, local program managers were asked to identify at least one provider to which they referred families for each of six services relevant to MIHOPE-Strong Start outcomes. Table 4.9 suggests that the majority of local

Table 4.9

Availability of Community Resources to Which Local Programs Can Refer Families for Needed Services

Type of Community Resource (%)	Overall	HFA	NFP
Prenatal care	95.5	94.7	96.4
Family planning and reproductive health care	90.9	86.8	96.4
Substance use (alcohol and other drugs) and mental health treatment services	93.9	92.1	96.4
Shelter for intimate partner violence	92.4	89.5	96.4
Intimate partner violence counseling	83.3	86.8	78.6
Pediatric primary care	89.4	94.7	82.1
Sample size	66	38	28

SOURCES: Calculations based on data from the MIHOPE program manager baseline survey and the MIHOPE-Strong Start program manager survey.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.

programs had a community resource available to which they could refer families for prenatal care, family planning and reproductive health care, substance use and mental health treatment, shelter from intimate partner violence, intimate partner violence counseling, and pediatric primary care. Slightly more local HFA than NFP programs had access to a referral source for pediatric primary care.

Types of Administrative Support

Administrative support is expected to promote fidelity to the program model by assisting programs in delivering high-quality services.[18] Types of administrative support include program monitoring, continuous quality improvement (CQI),[19] and data management. Table 4.10 indicates whether local programs have these types of support in place.

All local programs reported monitoring the frequency of visits and nearly all local programs reported monitoring other aspects of program operations, such as number of referrals (98 percent) and family retention and reasons for dropout (both 94 percent). Nearly all local programs reported monitoring screening for maternal depression and child development. Fewer local programs reported monitoring screening for maternal substance use and intimate partner violence.[20] Although the two national models are similar in their monitoring of program operations, there were a few differences among local programs. For example, more local HFA programs reported monitoring family retention at specific points and more local NFP programs reported monitoring how often mothers are not home for scheduled home visits.

A large majority of local programs reported conducting one or more CQI activities in the past year, but local HFA programs were somewhat more likely to have staff members with dedicated time for CQI than were local NFP programs. Most local programs reported having a management information system (MIS) in place (results not shown) and using their MIS for program monitoring and quality improvement. Considerably fewer local HFA programs (54 percent) had staff members to assist with data entry than did local NFP programs (100 percent).

Clinical Support

Clinical support includes access to expert consultants in key content areas as well as tools and strategies to help home visitors provide services efficiently. These forms of support

[18]Fixsen et al. (2005).

[19]CQI is the practice of collecting information and using it to monitor and provide feedback on current program performance.

[20]Local programs might monitor screening for other areas that were not measured in the MIHOPE and MIHOPE-Strong Start surveys. For example, local programs could monitor whether home visitors are screening for timely completion of well-child care visits.

Table 4.10

Administrative Support: Program Monitoring, Continuous Quality Improvement, and Data Management

Activity (%)	Percentage of Local Programs		
	Overall	HFA	NFP
Program monitoring			
Annual or biannual reporting on local program performance	81.0	85.7	75.0
Monitoring of selected aspects of operations[a]			
Referrals into program			
Number of referrals	98.4	100.0	96.4
Appropriateness of referrals	85.7	85.7	85.7
Family enrollment			
Family retention rates at specific points	93.7	97.1	89.3
Reasons for family dropout	93.7	91.4	96.4
Visits			
Visit frequency	100.0	100.0	100.0
Visit length	81.0	80.0	82.1
Mother no-show rates	71.4	65.7	78.6
Screening			
Maternal depression	93.7	91.4	96.4
Maternal substance use	66.7	65.7	67.9
Intimate partner violence	76.2	71.4	82.1
Child development	96.8	100.0	92.9
Continuous Quality Improvement (CQI)			
One or more CQI activities in the past 12 months	87.3	85.7	89.3
Staff members with dedicated time for CQI	68.3	74.3	60.7
Data management			
Use of management information system for program monitoring and quality improvement	88.9	91.4	85.7
Staff to assist with service-delivery data entry	74.6	54.3	100.0
Sample size	63	35	28

SOURCES: Calculations based on data from the MIHOPE program manager baseline survey and the MIHOPE-Strong Start program manager survey.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.
[a]Response categories are not mutually exclusive, so percentages may total more than 100.

are hypothesized to improve program implementation and service delivery. Program managers were asked to report whether their staff had access to expert consultants in eight areas, including areas most relevant to MIHOPE-Strong Start outcomes (prenatal health, stress and mental health, substance use, and healthy adult relationships). Overall, more than two-thirds of local program managers reported having access to at least one professional consultant, and these percentages were fairly consistent across the consultant areas (results not shown). Access to consultants was also very similar in local programs across the two models.

Home visitors should perceive value and usefulness in the tools provided to their day-to-day work, and as shown in the first set of columns in Table 4.11, most home visitors agreed or strongly agreed that their program provides them with useful strategies and tools to help mothers across a range of areas.

Staff Development

The national models require a substantial amount of training for home visitors. Specifically, HFA home visitors are required to receive orientation training before providing home visits; role-specific core training within 6 months of being hired; continuing training within 3, 6, and 12 months of being hired; and annual training thereafter. NFP home visitors are required to attend a self-directed training session and receive four days of in-person training before providing home visits and to receive three online lessons within 6 months of the in-person training.

Home visitors' perceptions of their training are important because they must use what is learned in training sessions as they provide services to address family risks and participant behaviors. Table 4.11 shows the percentages of home visitors who reported that they are adequately trained to help mothers in key outcome areas. The vast majority of home visitors strongly agreed or agreed that they were adequately trained to help mothers with most activities. For example, 97 percent felt they were adequately trained to help mothers make sure their children are up to date on immunizations and well-child care. Fewer home visitors, but still a majority at around 75 percent, felt adequately trained in helping mothers secure health care coverage or access to health care for themselves or for their children, and in helping mothers recognize and deal with mental health issues and problem substance use.

There were a few differences between HFA and NFP home visitors; slightly more NFP home visitors than HFA home visitors felt they were adequately trained in helping mothers around two, but not all, prenatal care issues. Notably, the difference appears largest for training in recognizing medical risk factors; 93 percent of NFP home visitors reported feeling adequately trained in this area compared with 83 percent of HFA home visitors. These differences are not surprising given the clinical background of NFP home visitors.

Table 4.11

Home Visitors' Perceptions of the Usefulness of Strategies and Tools and the Adequacy of Their Training

Home Visitor Perception (%)	"Home visitors have useful strategies and tools to help mothers"			"Home visitors are adequately trained to help mothers"		
	Overall	HFA	NFP	Overall	HFA	NFP
Prenatal care						
Have a healthy lifestyle prenatally	94.0	92.9	95.2	92.6	89.9	95.2
Recognize medical risk factors for preterm delivery, such as gestational bleeding and preeclampsia[a]	93.2	92.1	94.5	87.2	82.5	92.6
Follow through on their prenatal care provider's recommendations[a]	92.4	95.3	88.9	94.1	95.3	92.6
Make sure they attend postpartum care appointments[a]	94.1	97.1	90.0	95.8	97.0	94.1
Maternal health and well-being						
Develop a healthy lifestyle outside of pregnancy	93.4	90.9	96.1	93.7	90.9	96.7
Space their births	90.9	88.4	93.6	90.6	87.0	94.2
Reduce their tobacco use	86.1	87.1	85.1	81.6	81.1	82.1
Recognize and address problem alcohol/other drug use	78.7	79.5	77.8	74.7	75.7	73.5
Recognize and address mental health issues	82.8	86.2	79.0	76.5	77.1	75.9
Recognize and address intimate partner violence	86.5	86.0	87.0	81.7	82.0	81.4
Parenting						
Start and continue breast-feeding	95.7	96.9	94.5	94.1	93.2	95.1
Babyproof their homes	93.1	96.2	89.4	95.1	94.6	95.6
Make sure children are up to date on immunizations and well-child care	94.4	95.3	93.3	96.6	95.2	98.2
Access to community resources						
Have health care coverage or access to a free or low-cost clinic for themselves	92.3	92.4	92.2	73.6	75.3	71.6
Have health care coverage or access to a free or low-cost clinic for their children	91.0	92.2	89.7	72.5	75.8	68.8

SOURCES: Calculations based on data from the MIHOPE home visitor baseline survey and the MIHOPE-Strong Start home visitor survey.

NOTES: HFA = Healthy Families America, NFP = Nurse-Family Partnership.

Respondent sample includes only those who agreed or strongly agreed when asked whether home visitors in their program are expected to help mothers with a given outcome, as indicated in Table 4.3. Therefore, sample size varies for each item. Overall sample size = 385 (HFA = 204, NFP =181).

[a]Question not asked in MIHOPE home visitor survey. Sample based on MIHOPE-Strong Start home visitor survey data only. Overall sample size = 135.

Conclusion

The findings presented in this chapter suggest that local programs are putting a high priority on areas that are relevant for improving infant and maternal health outcomes, including addressing prenatal care, maternal mental health, and tobacco use. In addition, the vast majority of home visitors reported that they were adequately trained and provided with useful strategies and tools to address parents' behaviors in these areas.

As described throughout this report and discussed in detail in the first report,[21] there are fundamental differences between the HFA and NFP national program models. These include differences in their origins, the professional backgrounds of the staff they recommend that their local affiliates employ, and the level of discretion they leave to local programs on programmatic issues, such as which curricula they should use in their day-to-day work with families. Nevertheless, there are a number of similar elements across the local programs' service plans and implementation system characteristics as measured in this report. These include the high priority placed on improving health and determinants of health, home visitors' reports of the adequacy of their training and usefulness of supportive strategies and tools, perceived availability of community resources by program management, and the use of administrative support. Notable areas where local programs differ include particular policies on information gathering and the subsequent provision of education and support for families whose screenings detect a problem. Local NFP programs were more likely to require formal screening for maternal substance use and intimate partner violence, and more HFA programs had policies in place for providing education and support to families when a screening detected a problem with mental health, substance use, or intimate partner violence. In addition, while NFP programs had caseload sizes that were aligned with the guidance of the national model developer, local HFA programs appeared to choose caseloads that were lower than the national model maximum and were potentially more variable across local programs.

The findings in this chapter suggest that there are meaningful similarities and differences in the service plans and implementation systems of the two models and across the local programs participating in MIHOPE-Strong Start. The final report will explore how these similarities and differences affect actual service delivery to families and variation in family outcomes.

[21] Filene et al. (2013).

Chapter 5

Conclusion

Given that poor birth outcomes are disproportionately concentrated among disadvantaged women, the use of proven community-based interventions has been highlighted as a promising path to address the social and economic determinants of maternal and infant health — factors that are often challenging to tackle in traditional medical settings alone. Home visiting programs that serve pregnant women at risk of poor birth outcomes represent one such strategy. The Mother and Infant Home Visiting Program Evaluation-Strong Start (MIHOPE-Strong Start) will answer questions about the impacts of evidence-based home visiting programs on birth, infant, and maternal health outcomes among Medicaid and CHIP beneficiaries. Where possible, the study will also examine whether home visiting programs can reduce short-term costs for Medicaid.

This third report from MIHOPE-Strong Start has presented an early look at the baseline characteristics of sample families and local home visiting programs and staff participating in the study. The local programs highlighted in this report span the major regions of the country and cut across 17 states, representing different policy and demographic contexts. These programs are well established, operate primarily in metropolitan areas, and have the capacity to serve large numbers of families. Although there were many potential programs that the study team sought to recruit, the evaluation ultimately relies on information from 67 local Healthy Families America (HFA) and Nurse-Family Partnership (NFP) programs, fewer than originally intended. Smaller local programs are not represented because of the inclusion criterion that programs have at least three full-time employees, which was intended to facilitate the study's enrollment of a large sample of families. Neither does the sample include newer programs, those that were expected to have been affiliated with or operating as an HFA or NFP program, respectively, for less than two years at the time of the study's launch.

This report has documented some recruitment challenges in mounting a large-scale study of this kind. Despite recruiting fewer families than intended, the process of random assignment of families should ensure that findings of program impacts on the study's health and health care outcomes are unbiased. Of key importance for the evaluation's focus on birth outcomes, the programs are serving a racially and ethnically diverse group of low-income pregnant women who are exposed to a range of health-related risk factors. The average study participant, at the time of the baseline survey, was young (half were under age 21) and one in two reported experiencing food insecurity in the past year. About 40 percent reported symptoms of depression or anxiety. A small minority of the sample (about 8 percent) reported smoking during pregnancy, although this is most likely an underestimate of the true prevalence; 20 percent of the sample reported that

smoking occurred in the home, which indicates in utero exposure to secondhand smoke. About 8 percent of the sample reported being the victim of intimate partner violence.

With screening, assessment, education, and support as core home visiting activities, along with connecting families to necessary additional resources and services in the community, home visiting programs have the potential to address or mitigate many of these and other modifiable risks among expectant mothers and their households. And, for the most part, it appears that local programs are well positioned to do so. Nearly all local programs reported placing a high priority on improving birth outcomes, in addition to a range of prenatal, maternal, and infant health outcomes. These priorities are aligned with those of the national models and encompass many of the risks that are present in some of the sample families at baseline. The vast majority of home visitors reported that they were adequately trained and had useful strategies and tools to address health-related behaviors and high-risk conditions. Most programs appeared to have the infrastructure in place to monitor and assist them in tracking the progress of families and connecting families with consultants or other service providers in the community. This emphasis on infrastructure is also in line with guidance from national model developers, and may reflect support from local agencies and the state for monitoring and systematically tracking implementation processes.

Taken together, these findings have some implications for the analysis that is to come in the final report of the evaluation. First, while it is notable that local HFA and NFP programs were similar in many of the service plan elements and implementation system characteristics described in this report, the report covers only a subset of the features that influence service delivery in local programs. Other important program implementation elements, including supervision and training, will be examined in the final report. In addition, there are key areas where there were potentially meaningful differences, as documented in the current report. For example, more local NFP programs than HFA programs reported formal screening requirements for maternal substance use and intimate partner violence, although more HFA programs reported having policies in place for providing education and support to families when screenings for mental health, substance use, and intimate partner violence detected problems. Regardless of national model affiliation, local programs were less likely to have written protocols or policies for supervisor consultation for working with families on issues of maternal substance use and intimate partner violence (about half) than on mental health (over three-quarters). And while NFP programs had intended caseload sizes that followed the guidance of the national model developer, local HFA programs reported caseload maximums that are lower than what the national model suggests. Differences such as these, both between and across national models, foreshadow important questions for the final report, including questions of whether local programs deliver services in ways that are intended or documented as policy and the relative importance of these elements in explaining differences in actual services delivered and, ultimately, in impacts.

If earlier research is any guide, there will undoubtedly be variation in the dosage and content of services delivered. These patterns will be described in the final report based on service delivery information from the management information systems of local programs. The implementation analysis will draw on the large number of local communities, local programs, individual staff members, and individual families in the study to explore whether, and how, their characteristics explain patterns in the types and level of services that families receive.

The relationships between specific parental characteristics, services delivered, and impacts may be particularly important to investigate. For example, one pattern to explore is whether women who enroll earlier in pregnancy are more likely to benefit from home visiting services. As noted, a key distinction between the national models in the study is that NFP strives for early enrollment during pregnancy, but HFA allows for prenatal enrollment at any time. It may thus be important to examine the stage of pregnancy at enrollment in relation to services received (such as dosage) and to impacts on prenatal and birth outcomes in particular. Another pattern that is valuable to examine is whether pregnant women with depression or anxiety receive different services (for example, more referrals for mental health consultation) than other women. Furthermore, do program impacts on birth and infant health outcomes vary for women who exhibit depressive or anxiety symptoms compared with those in better mental health? Such analyses would help identify the extent to which services are tailored to address the needs or risks of particular families, and would identify the types of families for whom home visiting is more likely to improve maternal and infant health outcomes and reduce medical costs. Finally, although earlier research on disparities in birth outcomes suggests that racial differences are partly explained by differences in socioeconomic status, disparities are often still present even after adjusting for socioeconomic indicators.[1] Given the overarching focus of local home visiting programs on serving low-income families, the study has the potential to offer additional insights into whether home visiting is a potential policy lever to reduce racial disparities that may be prevalent, even among similarly disadvantaged families.

The final report will be able to answer many of the central questions that have been raised by this early examination of local programs, home visitors, and families. These questions relate to identifying the factors that explain differences in the services that are delivered to families by local programs; examining whether family outcomes are improved by home visiting program participation; and the extent to which variation in local program implementation explains variation in impacts across families.

[1] Lu and Halfon (2003).

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