EXECUTIVE SUMMARY

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Third Annual Report

OPRE Report 2016-37

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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
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New York, NY 10016

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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.

Earlier Publications on MIHOPE-Strong Start and MIHOPE

The Mother and Infant Home Visiting Program Evaluation-Strong Start First Annual Report
2013. Jill H. Filene, Emily K. Snell, Helen Lee, Virginia Knox, Charles Michalopoulos, and Anne Duggan.

Cheaper, Faster, Better: Are State Administrative Data the Answer? The Mother and Infant Home Visiting Program Evaluation-Strong Start Second Annual Report
2015. Helen Lee, Anne Warren, and Lakhpreet Gill.

The Mother and Infant Home Visiting Program Evaluation: Early Findings on the Maternal, Infant, and Early Childhood Home Visiting Program
2015. Charles Michalopoulos, Helen Lee, Anne Duggan, Erika Lundquist, Ada Tso, Sarah Crowne, Lori Burrell, Jennifer Somers, Jill H. Filene, and Virginia Knox.

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