

Promoting Prenatal Health and Positive Birth Outcomes A Snapshot of State Efforts

OPRE Report 2017-65
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Overview

To address poor birth outcomes in the United States, the Centers for Medicare and Medicaid Services (CMS) developed the Strong Start for Mothers and Newborns (Strong Start) initiative. The Strong Start initiative is studying enhanced prenatal care approaches aimed at reducing preterm births among Medicaid and Children’s Health Insurance Program (CHIP) beneficiaries who are at high risk for poor birth outcomes. As part of the Strong Start initiative, CMS, in partnership with the Administration for Children and Families and the Health Resources and Services Administration, established the Mother and Infant Home Visiting Program Evaluation — Strong Start (MIHOPE-Strong Start). MIHOPE-Strong Start is evaluating the effectiveness of evidence-based home visiting for improving birth outcomes, maternal and infant health, health care use, and prenatal care use among women enrolled in Medicaid or CHIP. This report presents findings from a qualitative substudy of MIHOPE-Strong Start designed to provide a snapshot of state efforts to promote prenatal health and improve birth outcomes, including but not limited to home visiting. Specifically, the report summarizes findings for three primary research questions:

1. What initiatives and efforts are states implementing to promote prenatal health and positive birth outcomes?
2. Who are the major stakeholders involved in efforts to promote prenatal health, improve birth outcomes, and implement home visiting?
3. How are states funding initiatives and efforts to promote prenatal health, improve birth outcomes, and implement home visiting?

A total of 40 interviews with representatives from 17 states contributed to the qualitative analysis and study findings. Interviews were conducted with program administrators from state agencies that administer Maternal, Infant, and Early Childhood Home Visiting (MIECHV) programs, state Medicaid agencies, and other entities involved in home visiting.

- **States included in the report have launched multipronged efforts to promote prenatal health and improve birth outcomes.** These efforts are intended to make advances toward several goals, including increasing access to prenatal care, reducing infant mortality, addressing neonatal substance exposure, and reducing disparities in preterm birth rates.
- **Interview respondents identified a broad cross-section of stakeholders and partners.** Common stakeholders and partners involved in efforts to promote prenatal health, improve birth outcomes, and implement home visiting include public agencies, national organizations, and collaborative groups. Some examples include departments of health, human services, and education; child welfare agencies; advisory groups; committees; task forces; and working groups.
- **Respondents from all 17 states mentioned using a variety of funding mechanisms.** The most common funding sources mentioned were MIECHV, the Title V Maternal and Child Health Block Grant Program, Temporary Assistance for Needy Families, and general-purpose state tax funds. In 9 of the 17 states, Medicaid funds are used in some way for home visiting.

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The Authors

Executive Summary

To promote prenatal health and improve birth outcomes, the Centers for Medicare and Medicaid Services (CMS) developed the Strong Start for Mothers and Newborns initiative. The Strong Start initiative is assessing several enhanced prenatal care approaches, including home visiting. Home visiting provides direct services to pregnant women and primary caregivers of young children facing various socioeconomic, health, and psychological and social risks. As part of the Strong Start initiative, CMS, in partnership with the Administration for Children and Families and the Health Resources and Services Administration, established the Mother and Infant Home Visiting Program Evaluation — Strong Start (MIHOPE-Strong Start). MIHOPE-Strong Start is evaluating the effectiveness of evidence-based home visiting for improving prenatal care and birth outcomes among women enrolled in Medicaid or the Children’s Health Insurance Program.

This report presents findings from a qualitative substudy of MIHOPE-Strong Start designed to summarize state efforts to promote prenatal health and improve birth outcomes, including but not limited to home visiting.

Program administrators from state agencies that administer Maternal, Infant, and Early Childhood Home Visiting (MIECHV) programs, state Medicaid agencies, and other state entities from 17 states participated in semistructured interviews to answer questions about:¹

1. State initiatives and efforts to promote prenatal health and positive birth outcomes
2. Major stakeholders in the state promoting prenatal health, improving birth outcomes, and implementing home visiting
3. Funding mechanisms to support state efforts to promote prenatal health, improve birth outcomes, and implement home visiting

State Initiatives and Efforts

States included in this report are carrying out many efforts to promote prenatal health and improve birth outcomes. This work covers a range of topic areas, is varied in scope, and

¹The states involved were California, Georgia, Illinois, Indiana, Iowa, Kansas, Massachusetts, Michigan, Nevada, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, Tennessee, Washington, and Wisconsin.

engages diverse partners. Interview respondents identified a variety of innovative efforts. Examples include:

- Promoting early access to prenatal care
- Implementing initiatives to address disparities in preterm birth rates
- Identifying and engaging women at high risk for poor birth outcomes
- Researching prenatal and infant treatment of neonatal substance exposure
- Providing Medicaid reimbursement for smoking-cessation services
- Promoting the use of long-acting, reversible contraceptives (such as implants or intrauterine devices)

States carry out these efforts in a variety of ways, including the implementation of quality improvement activities, collaboration with stakeholders, targeted outreach and education campaigns, and Medicaid incentives and reimbursements. These efforts provide essential services, support, and infrastructure to improve prenatal health and birth outcomes across the country.

Important Stakeholders and Partners

Program administrators identified multiple types of stakeholders and partners, including public agencies, national organizations, and collaborative groups (for example, departments of health, human services, and education; child welfare agencies; advisory groups; committees; task forces; and workgroups). These stakeholders and partners support state efforts in several ways, including administering and funding programs, providing training and professional development, and building networks and support systems. Respondents reported that collaboration with stakeholders is central in meeting the unique and multifaceted needs of the families they serve and engaging in systems-building efforts.

Funding for State Efforts and Initiatives

Respondents from all states included in this report mentioned using a variety of funding sources to promote prenatal health and positive birth outcomes and to support home visiting. The most common funding sources reported were the Maternal, Infant, and Early Childhood Home Visiting Program; the Title V Maternal and Child Health Block Grant Program; Temporary Assistance for Needy Families; and general-purpose state tax dollars.

Concerning home visiting specifically, respondents from 9 of the 17 states noted that Medicaid funds are used in some way. States have Medicaid-funded home visiting programs,

Medicaid reimbursement for care coordination, and Medicaid reimbursement for specific components of home visiting services or specific home visiting models.

Report

Introduction

The two most commonly measured poor birth outcomes are preterm birth and low birth weight. Rates of preterm birth and low birth weight have been trending downward in the United States since 2007.¹ However, racial, economic, and ethnic disparities in rates of preterm and low-birth-weight infants have persisted for years.²

In 2015, 9.6 percent of U.S. infants were born preterm (before 37 weeks gestation),³ and 8.1 percent were born with low birth weights (less than 1,500 grams).⁴ Furthermore, the overall rates of poor birth outcomes in the United States are higher than they are in other countries.⁵ In 2010, among 184 developed and developing countries, the United States had the 54th highest preterm birth rate.⁶

Poor birth outcomes have adverse consequences for children and families, and for society. The annual societal cost of preterm birth in the United States is over \$26.2 billion.⁷ Children born too early or too small have a greater risk of death and disability than full-term and heavier infants.⁸ Preterm and low-birth-weight infants have significantly more hospitalizations than full-term and normal-birth-weight infants, particularly for respiratory illness and infection.⁹ While preterm and low-birth-weight infants account for a small percentage of all infant hospitalizations (8 percent), they constitute almost half of all infant hospitalization costs.¹⁰

¹Martin et al. (2017).

²Martin et al. (2017); Lu and Halfon (2003); Blumenshine et al. (2010).

³In 2014, the National Center for Health Statistics began using a new standard to estimate the gestational age of a newborn. Previously, the standard was based on the date of the last menstrual period (LMP). The new standard is the obstetric estimate of gestation at delivery (OE). The change in the standard caused a downward shift in the reported rate of preterm birth. For example, the preterm birth rate in 2015 using the LMP measurement is 11.3 percent, compared with the 2015 preterm birth rate using the OE measurement, 9.6 percent. See Martin et al. (2017).

⁴Martin et al. (2017).

⁵MacDorman, Matthews, Mohangoo, and Zeitlin (2014).

⁶March of Dimes (2017).

⁷Institute of Medicine (U.S.) Committee on Understanding Premature Birth and Assuring Healthy Outcomes (2007).

⁸Martin et al. (2017); Matthews, MacDorman, and Thoma (2015); Institute of Medicine (U.S.) Committee on Understanding Premature Birth and Assuring Healthy Outcomes (2007).

⁹Yüksel and Greenough (1994); Cunningham, McMillan, and Gross (1991); Lamarche-Vadel et al. (2004); Doyle, Ford, and Davis (2003).

¹⁰Russell et al. (2007).

Additionally, the health risks and uncertainty surrounding preterm births and low-birth-weight infants create an emotional strain on caregivers. Research has shown that mothers of infants with very low birth weights have higher levels of psychological distress during the neonatal period than mothers of full-term infants.¹¹

The Strong Start for Mothers and Newborns Initiative

The Centers for Medicare and Medicaid Services (CMS) developed the Strong Start for Mothers and Newborns initiative (Strong Start) to:¹²

- Reduce preterm births
- Improve the health outcomes of pregnant women and newborns
- Decrease medical costs from pregnancy through the first year of life

The Strong Start initiative is studying enhanced prenatal care approaches aimed at reducing preterm births among Medicaid and Children’s Health Insurance Program (CHIP) beneficiaries who are at high risk for poor birth outcomes. One of the enhanced prenatal care approaches assessed over the four-year initiative is home visiting, which provides direct services to pregnant women and caregivers facing various socioeconomic, health, and psychological and social risks.¹³

The Mother and Infant Home Visiting Program Evaluation — Strong Start

To evaluate home visiting as an approach to enhancing prenatal care, CMS established the Mother and Infant Home Visiting Program Evaluation — Strong Start (MIHOPE-Strong Start), in partnership with the Administration for Children and Families and the Health Resources and Services Administration (HRSA). The goal of MIHOPE-Strong Start is to study the effectiveness of evidence-based home visiting for improving prenatal care and birth outcomes among women enrolled in Medicaid or CHIP compared with mothers who may receive other services available in the community.

The MIHOPE-Strong Start study includes local programs implementing one of two evidence-based home visiting models: Healthy Families America (HFA) or Nurse-Family Partnership (NFP).¹⁴

¹¹Singer et al. (1999).

¹²Centers for Medicare and Medicaid Services (2017b).

¹³Centers for Medicare and Medicaid Services (2017a).

¹⁴Michalopoulos et al. (2015).

Programs implementing these models provide pregnant women with individually tailored in-home services that include assessments of risks and protective factors (such as supportive family relationships, social connections, access to concrete support, or knowledge of child development), education on a range of topics, and referrals to services in the community if needed.¹⁵ Both models have shown favorable effects on birth outcomes in previous research.¹⁶

MIHOPE-Strong Start randomly assigned participants to either a home visiting group that received evidence-based home visiting services (60 percent) or a control group that could receive other services available in the community (40 percent). A woman was randomly assigned to the home visiting group or the control group after a home visiting program determined that she was eligible and interested but before she was enrolled.

The MIHOPE-Strong Start analysis is being conducted on a sample of approximately 2,900 families across 66 programs implementing HFA or NFP in 17 states.¹⁷ The sample includes local programs and families recruited specifically for MIHOPE-Strong Start as well as families participating in a companion study called the Mother and Infant Home Visiting Program Evaluation (MIHOPE) who met the MIHOPE-Strong Start eligibility requirements before MIHOPE-Strong Start study enrollment began in 2014.¹⁸ Study enrollment and data collection for MIHOPE began in 2012. Study enrollment for MIHOPE-Strong Start began in 2014. For both MIHOPE-Strong Start and MIHOPE, study enrollment ended in 2015 and data collection ended in 2017.

The MIHOPE-Strong Start and MIHOPE studies collected data from a wide range of sources, including participant interviews, home visiting program staff surveys, state administrator surveys, home visiting model developer interviews, and administrative databases. The MIHOPE-Strong Start and MIHOPE final reports, including impact and implementation results, are scheduled to be published in 2018.

¹⁵Filene et al. (2013).

¹⁶Lee, Crowne, Faucetta, and Hughes (2016).

¹⁷Earlier reports from MIHOPE-Strong Start have referred to a total of 67 local programs. Two of the local programs, run by the same parent organization but serving different geographic areas within the region, have been combined because there was a large overlap in the home visiting staff that provided services to families in both areas.

¹⁸In 2010, the federal government expanded its investment in evidence-based home visiting by amending the Social Security Act to create the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program. The program was appropriated \$2.7 billion from 2010 to 2017. MIECHV is jointly administered by HRSA and the Administration for Children and Families within the U.S. Department of Health and Human Services. For more information, see U.S. Department of Health and Human Services, Health Resources and Services Administration (2017b). MIHOPE is the legislatively mandated evaluation of MIECHV. For more information about MIHOPE, see www.acf.hhs.gov/opre/research/project/maternal-infant-and-early-childhood-home-visiting-evaluation-mihope.

About This Report

This report provides a snapshot of state efforts to promote prenatal health and improve birth outcomes. In 17 states, program administrators from state agencies that administer MIECHV programs, state Medicaid agencies, and other partner state entities participated in semistructured interviews addressing the following overarching questions:¹⁹

1. What initiatives and efforts are states implementing to promote prenatal health and positive birth outcomes?
2. Who are the important stakeholders involved in efforts to promote prenatal health, improve birth outcomes, and implement home visiting?
3. How are states funding initiatives and efforts to promote prenatal health, improve birth outcomes, and implement home visiting?

Interview Respondents

From the summer of 2016 through early 2017, interviews were conducted with administrators at 16 state agencies that administer MIECHV programs,²⁰ 11 state Medicaid administrators,²¹ and 13 administrators of other important entities in the state, such as advocacy organizations, public agencies, and philanthropic organizations (see Table 1 for a list of other entities interviewed). Interviews were first arranged with state agencies that administer MIECHV programs and with state Medicaid administrators. The other important entities were identified by administrators of state MIECHV programs. Specifically, the study team asked respondents to identify major stakeholders involved in home visiting or other efforts to promote prenatal health and positive birth outcomes. The study team reviewed the stakeholders reported by each MIECHV respondent to identify those that implemented, funded, or provided training or technical assistance to home visiting programs. The study team then invited these stakeholders to participate in the MIHOPE-Strong Start substudy.

¹⁹Administrators of agencies administering MIECHV funds and Medicaid agency representatives were selected to participate in interviews because they had broad-based knowledge of state efforts to promote prenatal health and positive birth outcomes, including but not limited to home visiting.

²⁰These administrators were from the following states: Georgia, Illinois, Indiana, Iowa, Kansas, Massachusetts, Michigan, Nevada, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, Tennessee, Washington, and Wisconsin.

²¹The MIHOPE-Strong Start study team invited Medicaid administrators to participate in the study. The Medicaid administrators identified the individuals who were available and most appropriate to participate in the interviews. In some cases, these individuals were not the Medicaid administrators themselves. Representatives participated from the following states: California, Illinois, Indiana, Massachusetts, Nevada, New Jersey, New York, North Carolina, Pennsylvania, Tennessee, and Washington.

Table 1. MIHOPE-Strong Start “Other Entity” Interview Respondents

State	Entity’s Administrator Interviewed
Georgia	Voices for Georgia’s Children
Illinois	Ounce of Prevention Fund
Iowa	Early Childhood Iowa
Kansas	Kansas Children’s Service League
Massachusetts	Children’s Trust
Michigan	Early Childhood Investment Corporation
New Jersey	Prevent Child Abuse New Jersey
New York	Prevent Child Abuse New York
South Carolina	Pay for Success with the Department of Health and Human Services South Carolina Birth Outcomes Initiative
Tennessee	Tennessee Commission on Children and Youth
Washington	Thrive Washington
Wisconsin	Wisconsin Perinatal Association

The findings provided in this report represent the perspectives and knowledge of interview respondents. They are not an exhaustive list of state efforts and initiatives to promote prenatal health and improve birth outcomes. The sections that follow summarize themes that emerged from the responses to each of the overarching study questions.²²

What Initiatives and Efforts Are States Implementing to Promote Prenatal Health and Positive Birth Outcomes?

Interviews with program administrators made clear that most agencies are involved in a wide range of efforts and initiatives to support the well-being of families and young children. To clarify these efforts and initiatives, MIECHV and Medicaid respondents identified their agencies’ high-priority goals and outcomes. Respondents were asked to rate their agencies’ priorities among 23 program goals and outcomes related to maternal, child, and family health and well-

²²Interview transcripts were coded using a staged model of content analysis. In the first stage a set of pre-determined categories were identified per primary interview questions and data were coded using a directed approach, as described by Hsieh and Shannon (2005). All data were first reviewed to identify any content relevant to the primary study questions. Identified content was then coded in a second stage using conventional content analysis to identify themes through repetition and patterns in the data.

being. Respondents rated an average of 14 of the 23 program goals and outcomes as being high priorities for their agencies. The goals that received high priority ratings from most respondents included promoting children's preventive health care, child development, adequate prenatal care, positive birth outcomes, and breastfeeding.

With respect to efforts to promote prenatal health and positive birth outcomes, respondents discussed initiatives and efforts focused on a wide range of topics, from prenatal care and smoking cessation to family planning and postpartum care. Initiatives and efforts also varied in scope, with some implemented in one county and others implemented across the state. Finally, efforts and initiatives are carried out with a wide range of partners, from Medicaid managed-care plans to local universities.

States support efforts in a variety of ways, including:

- Quality-improvement and data-monitoring projects
- Collaborations with stakeholders
- Targeted outreach and education campaigns
- Medicaid incentives and reimbursements

These efforts provide essential services, support, and infrastructure to improve prenatal health and birth outcomes across the country.

Table 2 summarizes these state efforts to promote prenatal health and positive birth outcomes, as identified by interview respondents. Examples of these efforts are further described below.

First, a few Medicaid programs implement specialized efforts to provide prenatal care to patients, such as telephonic prenatal care and enhanced prenatal care (for example, home visits or specialized care for high-risk pregnancies). As one Medicaid administrator explained:

One of our health plans that works in many of our rural counties ... they've developed a Telephonic Case Management Program, promoting early and regular prenatal care and encouraging moms to receive timely postpartum care. They have prenatal enrollment specialists that are assigned to a member, to establish rapport with a member and reinforce healthy behaviors during pregnancy.

Another Medicaid agency provides enhanced prenatal care services through a program called First Steps. First Steps provides Medicaid beneficiaries enhanced services that include maternity support, childbirth education, and infant case management. First Steps aims to serve

Table 2. Efforts and Initiatives to Promote Prenatal Health and Positive Birth Outcomes

Area of Focus	Efforts and Initiatives
Prenatal care	<ul style="list-style-type: none"> • Promotion of early access to prenatal care • Data collection on prenatal care access • Prenatal care program monitoring and performance improvement • Medicaid incentives to promote prenatal care attendance • Specialized Medicaid programs • Identification of pregnant women and enrollment in prenatal care • Prenatal enrollment in home visiting
Perinatal care	<ul style="list-style-type: none"> • Quality improvement collaborative groups
Infant mortality	<ul style="list-style-type: none"> • Collaborative Improvement and Innovation Network to Reduce Infant Mortality (IM CoIIN) • Fetal Infant Mortality Review • Infant Mortality Reduction Plans
Preterm birth	<ul style="list-style-type: none"> • Initiatives to reduce racial disparities in rates of preterm birth • Provider incentives to reduce elective deliveries before 39 weeks and medically unnecessary C-sections
High-risk pregnancies and deliveries	<ul style="list-style-type: none"> • Identification and engagement of women at high risk for poor birth outcomes • Perinatal Regionalization System (see Box 2, below)
Neonatal substance exposure	<ul style="list-style-type: none"> • Prenatal and infant treatment research • Monitoring of physician and hospital reports of neonatal substance exposure • Web-based education and information on community resources • Support to families to prevent neonatal substance exposure, referrals and educational information
Smoking cessation	<ul style="list-style-type: none"> • Medicaid incentives to promote the use of smoking-cessation services • Medicaid reimbursements for smoking-cessation services • State tobacco quitline • Prenatal smoking-cessation campaigns
Maternal depression	<ul style="list-style-type: none"> • Medicaid reimbursements for prenatal and postnatal depression screening • Mental health consultation services for providers • Online resource for physicians prescribing medications to treat depression during the prenatal period

(continued)

Table 2 (continued)

Area of Focus	Efforts and Initiatives
Family planning	<ul style="list-style-type: none">• Promotion of long-acting reversible contraceptive (LARC) use (for example, implants or intrauterine devices)• Medicaid reimbursements for LARC• Promotion of healthy birth spacing
Postpartum care	<ul style="list-style-type: none">• Monitoring and encouragement of visit attendance• Patient education on postpartum care

all eligible pregnant women and mothers in the state using an interdisciplinary team consisting of nurses, behavioral health specialists, and nutritionists.

Efforts related to perinatal care primarily involved quality-improvement consortiums.²³ For example, one state’s department of health coordinates a Perinatal Quality Improvement Collaborative consisting of multidisciplinary leaders and experts from across the state, including hospital administrators, physicians, and nurses. The Perinatal Quality Improvement Collaborative promotes best practices related to pregnancy, birth outcomes, preconception care, and infant mortality. The state’s MIECHV administrator reported:

[The Collaborative has] been hugely successful. We’ve changed administrative laws in [the state].... We’ve collaborated with the 90 birthing hospitals across the state to help define what best practice models should be. We’ve ... worked with Medicaid to change some funding streams and gain the ability to charge for certain things in the hospital that would drive best practice.

To address infant mortality, states included in this study discussed participating in HRSA’s national Collaborative Improvement and Innovation Network to Reduce Infant Mortality (IM CoIIN). Project teams in every state participating in the IM CoIIN work to reduce infant mortality and improve birth outcomes in six focus areas (as described in Box 1). The teams develop aims and measurable objectives, use evidence-based strategies to carry out the objectives, and use real-time data to track progress and demonstrate improvement.²⁴

Respondents from a few states reported efforts to reduce preterm birth rates among specific populations at increased risk for that outcome. One state’s Medicaid agency partners with

²³MacDorman et al. (2007). The perinatal period refers to the period immediately before and after birth. An inclusive definition of the perinatal period spans from 20 weeks gestation to 28 days after birth.

²⁴U.S. Department of Health and Human Services, Health Resources and Services Administration (2017a).

the March of Dimes, its department of public health, and other statewide stakeholders to address disparities in preterm birth rates between African Americans and others. From 2012 to 2014, the average preterm birth rate among African Americans in the state was 11.9 percent.²⁵ The goal of the partnership is to decrease African American preterm birth rates to 8.1 percent by 2020. See Box 2 for additional examples from efforts in South Carolina.

Respondents in a few states noted developing data-tracking systems to identify and appropriately serve women with high-risk pregnancies and deliveries. In one state, the Medicaid agency and the department of human services work together to identify and engage women who are at high risk for poor birth outcomes. As the Medicaid administrator described:

We analyze our data to identify women who are potentially pregnant so that we can capture them early in the prenatal period and ... based on our claims data, we can identify whether they have any conditions that would be predictive of a poor birth outcome.

The Medicaid agency for this state sends the data to the state department of human services. That department then reaches out to the women identified to engage them in services such as early and intensive prenatal care.

Respondents in a few states discussed efforts to address the rising opioid crisis in their communities, with a few describing efforts to reduce the effect of opioid abuse on prenatal health and birth outcomes. For example, the Medicaid administrator in one state described several of the agency's initiatives to address the increasing number of infants born addicted to opioids. These initiatives include working with the managed-care organizations and the state department of health to reduce inappropriate access to opioids and provide addiction services, medication-assisted therapy, and access to contraceptives for women of childbearing age.

The same Medicaid agency also supported research initiatives with providers in the state to study treatment options for pregnant women who are addicted to opioids and infants born with neonatal abstinence syndrome (the name for problems that occur in newborns exposed to addictive drugs in the womb). Additionally, physicians and hospitals across the state report the number of infants with neonatal abstinence syndrome, which is tracked and reported annually by the state's department of health.

²⁵March of Dimes (2016).

Box 1

The Collaborative Improvement and Innovation Network to Reduce Infant Mortality (IM CoIIN)

IM CoIIN was initiated as a continuation of a successful Infant Mortality Summit in 2012, where 13 states developed plans and shared best practices to reduce infant mortality. IM CoIIN, a state-led initiative, is supported by the National Institute of Children’s Health Quality in partnership with HRSA, the Association of Maternal and Child Health Programs, the Association of State and Territorial Health Officials, CityMatCH, the March of Dimes, Abt Associates, the Centers for Disease Control and Prevention, and CMS.

IM CoIIN’s goal is to facilitate collaborative learning and the adoption of proven quality-improvement principles and practices to reduce infant mortality, improve birth outcomes, and reduce disparities in birth outcomes. State teams receive training and technical assistance, a shared online workspace, and assistance in using data to track their progress.

State IM CoIIN teams are designed to coordinate among many entities. They often include state health officials, maternal and child health staff members, Medicaid staff members, and private partners. These state teams partner with topical experts, data and method experts, and state representatives to achieve their shared aims.

The work of the IM CoIIN focuses on six areas:

- Improving safe sleep practices
- Reducing maternal smoking before, during, and after pregnancy
- Promoting excellent health for women before, after, and between pregnancies
- Using evidence-based policies and programs to improve and achieve equity in birth outcomes
- Preventing preterm and early-term births (“early-term” births are those at 37 and 38 weeks)
- Increasing the rate at which higher-risk infants and the infants of higher-risk mothers are delivered at hospitals that are best able to care for them

Originally, the IM CoIIN included 13 southern states. It has since expanded to include teams from all states and territories.

Box 2

South Carolina: Multiple Approaches to Promoting Prenatal Health and Positive Birth Outcomes

In response to high rates of infant mortality and child poverty, South Carolina is engaged in several initiatives to promote prenatal health and positive birth outcomes.

Perinatal Regionalization System

Goal: Ensure mothers and infants have access to high-quality and necessary care.

Services provided: Delivery at a highly experienced hospital with a neonatal intensive care unit and subspecialist staffing.

Service population: Women with high-risk pregnancies, regardless of their social or demographic characteristics or ability to pay.

Funding mechanisms: A system based on a network of contracts between the South Carolina Department of Health and regional hospitals, with additional support from South Carolina March of Dimes.

Nurse-Family Partnership Pay for Success Project

Goal: Improve health outcomes for pregnant women and children living in poverty by expanding NFP services to an additional 3,200 mothers across the state.

Services provided: Nurse home visitors offer a variety of services:

- Education for pregnant women on preventive health practices, including prenatal care and reducing the use of tobacco and alcohol
- Standard health and developmental assessment of the infant
- Connections with and referrals to community resources
- Education and information to support positive parenting practices

Service population: Pregnant women who will be first-time, low-income mothers.

Funding mechanisms: \$17 million from philanthropic funders and \$13 million from Medicaid via a waiver awarded to the South Carolina Department of Health and Human Services.

Birth Outcomes Initiative

Goals: Improve birth outcomes and newborn health across the state. Specifically:

- Reduce medically unnecessary elective deliveries before 39 weeks
- Reduce C-sections for first-time, low-risk pregnant women

(continued)

Box 2 (continued)

- Increase access to long-acting reversible contraceptives
- Promote Baby-Friendly hospital certification*
- Implement a CenteringPregnancy program[†]
- Implement a universal screening and referral tool (called Screening, Brief Intervention, and Referral to Treatment, or SBIRT) in physicians' offices to screen pregnant women for tobacco use, substance abuse, depression, and domestic violence

A collaboration of: the South Carolina Department of Health and Human Services, South Carolina Hospital Association, South Carolina Department of Health and Environmental Control, March of Dimes, BlueCross/BlueShield of South Carolina, and over 100 other stakeholders.

*Baby-Friendly hospitals and birthing centers are those certified as offering care intended to achieve “optimal infant feeding outcomes and mother/baby bonding.” See Baby-Friendly USA (2012).

[†]CenteringPregnancy is a group prenatal care program that brings together 8 to 10 women with similar due dates for health assessments, discussions, and interactive activities.

Administrators of MIECHV programs discussed collecting annual performance measurements to promote better prenatal health. Specifically, MIECHV administrators reported collecting program-performance data in areas including improving prenatal care, linking pregnant women to health insurance, improving maternal health care, promoting postpartum checkups, promoting preventive well-women check-ups, and conducting substance-abuse screening. Administrators indicated that collecting these performance measures helps local programs monitor whether necessary services are being provided to promote prenatal health and positive birth outcomes.

MIECHV administrators also reported providing support to local home visiting programs to help them effectively promote prenatal health, birth outcomes, and infant health. This support included topical training, peer learning forums and working groups, and technical assistance. For example, one MIECHV administrator discussed hosting an annual conference for local programs focused on tobacco as part of the First Breath initiative, where home visiting staff members received training to support prenatal smoking cessation. Other MIECHV administrators reported providing training on screening mothers for prenatal depression and perinatal addiction.

Summary

The 17 states represented in this report are carrying out numerous efforts to improve prenatal health and birth outcomes. This work covers a range of topic areas, is varied in scope, and engages diverse partners. The respondents depicted a landscape of concerted and dedicated efforts to promote prenatal health and positive birth outcomes.

Who Are the Major Stakeholders Involved in Efforts to Promote Prenatal Health, Improve Birth Outcomes, and Implement Home Visiting?

All respondents — MIECHV administrators, Medicaid administrators, and administrators of other state agencies and organizations — were asked about major stakeholders in their states involved in efforts to promote prenatal health and positive birth outcomes or home visiting initiatives. The most commonly identified stakeholder types were public agencies, national organizations, and collaborative groups, as summarized in Table 3.

The same stakeholders often play roles both in supporting prenatal health and positive birth outcomes and in home visiting. However, some stakeholders focus specifically on prenatal health and the promotion of positive birth outcomes. For example, respondents in one state identified as an important stakeholder that state's department of human services, which administers an intensive prenatal case management program for high-risk pregnant women. In another state, the March of Dimes was identified as a major stakeholder due to its efforts leading prenatal-health and birth-outcomes committees and developing educational and training resources for service providers. Finally, a respondent in Illinois described the Illinois Perinatal Quality Collaborative as a major stakeholder because of its work to improve birth outcomes by supporting women to have healthy pregnancies and engage in maternal care between pregnancies.

Some respondents distinguished between “stakeholders” and “partners.” Partners are entities that play an integral role in service provision and that often have contractual relationships with the respondent's agency, whereas stakeholders provide more general advocacy and support. Often the same entity was identified as both a “stakeholder” and a “partner.”

Stakeholders and partners support state efforts in a variety of ways, including administering and funding programs, providing training and professional development, and building networks and support systems.

Several respondents discussed the multiple roles that national organizations play in supporting home visiting and other efforts to increase positive birth outcomes. For example, one state's Prevent Child Abuse chapter is a subcontractor of its child welfare agency, provides

Table 3. Examples of Major Stakeholders Identified by Respondents

Stakeholder Type	Examples	Primary Roles
State public agencies	<ul style="list-style-type: none"> • Department of health • Department of human services • Child welfare agency • Department of education (Early Childhood Division, Head Start) 	<ul style="list-style-type: none"> • Provide funding • Administer programs and services • Provide training • Share data
National organizations and foundations	<ul style="list-style-type: none"> • Prevent Child Abuse America • March of Dimes • Nurse-Family Partnership • Private foundations • BlueCross/BlueShield foundations • National Governors Association 	<ul style="list-style-type: none"> • Provide funding • Administer home visiting programs • Organize conferences and summits • Provide professional development, training, and technical assistance • Participate in advisory groups and working groups
Nonprofit organizations	<ul style="list-style-type: none"> • Infant Mental Health Association • Children’s Cabinet • State children’s trust funds • State health commissions 	<ul style="list-style-type: none"> • Provide training and technical assistance • Help organizations develop their capabilities • Support outreach and recruitment • Link families to services • Publish reports • Provide advocacy and support
Health institutions	<ul style="list-style-type: none"> • Children’s hospital systems • Managed care programs • Hospital associations and alliances • American Academy of Pediatrics 	<ul style="list-style-type: none"> • Provide home visiting services • Participate in advisory boards • Provide advocacy and support
Educational institutions	<ul style="list-style-type: none"> • Colleges and universities 	<ul style="list-style-type: none"> • Conduct research and evaluation • Administer data systems • Provide technical assistance and training
Collaborative groups	<ul style="list-style-type: none"> • Wisconsin Partnership Program (Lifecourse Initiative for Healthy Families) • New Jersey Maternal and Child Health Consortia • South Carolina Birth Outcomes Initiative • South Carolina Early Childhood Comprehensive Systems • Illinois Perinatal Quality Collaborative • New York Early Childhood Advisory Council 	<ul style="list-style-type: none"> • Implement community-based projects • Build local networks and partnerships • Develop working groups and committees • Provide advocacy and support

(continued)

Table 3 (continued)

Stakeholder Type	Examples	Primary Roles
Individuals	<ul style="list-style-type: none">• Governors• Division directors• Health commissioners• Nurses and physicians	<ul style="list-style-type: none">• Lead• Build partnerships• Provide advocacy and support

training and technical assistance to HFA programs, and participates in home visiting working groups. One respondent said:

Prevent Child Abuse is a key organization with HFA. And so much of the material, much of the work, and all those kinds of things that are done around HFA go through Prevent Child Abuse both nationally and at the state level. They are very much interested in promoting the outcomes that home visiting has, and they have chaired committees for us in the past. They've been very deeply involved in that infrastructure kind of support system. They are involved with and participate actively in several work groups.

Colleges and universities were also highlighted as important stakeholders and partners in supporting home visiting and positive birth outcomes in a variety of ways, including carrying out evaluations, administering data systems and performance measurement, and providing technical assistance on continuous quality improvement.

Finally, state and local councils and quality-improvement and learning collaborative groups are involved in efforts such as developing projects, expanding networks, and advocating for funding and sustainability. For example, the New Jersey Maternal Child Health Consortia, consisting of families and service providers, is a community-based organization that actively pursues funding opportunities. As the New Jersey MIECHV administrator explained:

The Maternal Child Health Consortia is a consumer-driven organization that has the goal of improving maternal and child health in their communities. They have several funding sources. They're able to go after federal funds as well as state and private funds. They are supposed to be consumer-driven in that they're required to have at least 50 percent of their board members from the community. They also are supposed to have family involvement and provider involvement.

Respondents reported that working with multiple stakeholders helps them meet the unique and multifaceted needs of families and build coordinated systems of care. Respondents acknowledged the value of coordinating with agencies that serve similar populations and the importance of working together to address common challenges in service populations. Partnerships among stakeholders can result in more streamlined, coordinated systems of care that reduce the duplication of services and address multiple family needs.

Collaborative partnerships also play a central role in supporting system-building initiatives. See Box 3 for a description of Wisconsin’s efforts.

For example, respondents in one state mentioned that the Early Childhood Comprehensive System (ECCS) was an essential partner in their work to promote positive birth outcomes.²⁶ ECCS, a HRSA grant program, promotes partnerships among agencies addressing physical and mental health, social services, families and caregivers, and early childhood education to develop seamless systems of care for children ages 0 to 5.²⁷ One MIECHV administrator said:

The ECCS initiative has given us an opportunity to look at various aspects of early childhood systems, such as looking at toxic stress or bringing partners together in a variety of ways to address early childhood systems of care.

Although collaboration has many benefits, respondents also reported that it can be challenging at times. In some cases, stakeholders have different perspectives that can lead to conflict and misunderstandings. In other cases, stakeholders accustomed to working independently, focused on their own goals, may find collaboration challenging.

Another challenge to collaboration is that agency priorities are often guided by funding requirements. Agencies that must adhere to specific funding guidelines may use strategies to address community needs that conflict with other agencies and hinder collaboration.

Summary

Respondents identified a variety of major stakeholders and partners including state agencies, community organizations, and collaborative groups. The roles of the stakeholders and partners included providing funding, administering and expanding programs, supporting system-building efforts, linking services to families, and conducting training and professional development.

The relationships identified between the respondents’ agencies and these stakeholders and partners reflect the value respondents placed on developing coordinated, seamless, and comprehensive service-delivery systems to address the complex needs of children and families. While many of the initiatives and efforts discussed by respondents include prenatal care in the continuum of services provided to families, prenatal services are often more limited than the services provided during infancy and early childhood. There may be a continued need across the nation for efforts and initiatives that specifically focus on providing prenatal services.

²⁶Although this state no longer administers an ECCS grant, this collaboration forms the basis of a Child Health and Well-Being Coalition scheduled to begin meeting in the summer of 2017.

²⁷U.S. Department of Health and Human Services, Health Resources and Services Administration (2016); U.S. Department of Health and Human Services, Health Resources and Services Administration (2017a).

Box 3

Wisconsin: Collaborating to Promote Prenatal Health and Positive Birth Outcomes

In Wisconsin, many stakeholders are working together to promote prenatal health and positive birth outcomes.

The Lifecourse Initiative for Healthy Families

The Lifecourse Initiative for Healthy Families (LIHF) is a community-academic collaborative group promoting healthier birth outcomes for African American infants in the cities of Kenosha, Milwaukee, and Racine. The University of Wisconsin School of Medicine and Public Health partners with community residents, leaders, organizations, agencies, and other professionals to carry out LIHF efforts.

LIHF has developed a community action plan to guide local efforts for improving birth outcomes. LIHF projects use a variety of strategies to address infant mortality and reduce disparities in birth outcomes, including:

- Improving health care access for African American women
- Supporting fathers' involvement in their families
- Increasing job access for families
- Addressing stress and mental health
- Improving the quality of health care
- Increasing family and community support

For example, one community's LIHF project trains volunteers to mentor and support African American women from pregnancy through their children's infancy. Another project provides prenatal and social support services for new mothers and families, incorporating culturally relevant services and offering referrals to community providers.

LIHF uses the Wisconsin Pregnancy Risk Assessment Monitoring System (PRAMS) to monitor and evaluate initiative efforts. Data from PRAMS are used to reveal factors that relate to disparities in birth outcomes and to identify strategies to address these factors.

The Wisconsin Perinatal Quality Collaborative

The Wisconsin Perinatal Quality Collaborative (WisPQC) was formed in 2014 with the mission of improving perinatal health outcomes and equity for all women and infants in the state. It comprises the Wisconsin Association for Perinatal Care and 27 other stakeholders, including regional hospitals, state foundations, and state nonprofit organizations. WisPQC is funded by a grant from the Wisconsin Department of Health Services and receives support from the Perinatal Foundation.

(continued)

Box 3 (continued)

WisPQC engages stakeholders to identify priority areas for initiatives. To date, the group has focused on:

- Increasing the number of providers who use evidence-based protocols to screen and manage women with hypertension during pregnancy and after birth
- Increasing the number of babies who receive human milk

WisPQC helps participants by providing informational resources, statements of goals, data-collection forms, and definitions of outcome measures they can use.

How Are States Funding Efforts to Promote Prenatal Health, Improve Birth Outcomes, and Implement Home Visiting?

The legislation that created the MIECHV program significantly expanded funding for home visiting services nationwide. Many state administrators and major stakeholders, however, continue to identify additional funding options to sustain and further expand home visiting services and to support other efforts to promote prenatal health and improve birth outcomes.

Interview respondents discussed using multiple funding sources to support home visiting. The most commonly identified funding sources included MIECHV, the Title V Maternal and Child Health Block Grant Program, Temporary Assistance for Needy Families, and general-purpose state tax dollars.

MIECHV and Medicaid administrators also discussed funding for additional efforts to promote prenatal health and positive birth outcomes outside of home visiting. These efforts include:

- Patient and provider incentives to promote access to prenatal care and healthy births
- Enhanced reimbursements for long-acting, reversible contraceptives to improve birth spacing
- Perinatal addiction services
- Smoking-cessation programs
- Lactation counseling
- Perinatal mental health consultation

- Newborn screenings
- High-risk infant follow-up programs
- Maternal depression screening

Respondents reported that these efforts are largely supported through Title V of the Maternal and Child Health Block Grant Program, Medicaid, and general-purpose state funds. A few states also mentioned local county funding and federal grants from the U.S. Department of Health and Human Services' Office of Adolescent Health to support efforts to promote prenatal health and positive birth outcomes.

Respondents in 9 of the 17 states indicated that Medicaid funds support home visiting services in some way (see Table 4). Many of these state efforts are detailed in other reports, as are the specifics surrounding the state use of Medicaid funds for home visiting services. For example, a Pew Center on the States report showed that 15 states list Medicaid as a funding source for at least one home visiting program.²⁸ The report also contains case studies for six states illustrating the various ways Medicaid funding supports home visiting. Likewise, a 2017 report from the Center for American Progress highlights strategies used in selected states to support home visiting using Medicaid funding.²⁹ The discussion that follows builds on these reports by providing updates on the strategies states in the study use to support home visiting with Medicaid funds.

Some states use Medicaid funding to support specific components of home visiting or the implementation of specific models. For example, a few respondents discussed using Medicaid funding to reimburse home visiting providers for prenatal care coordination and case management. States also reported using Medicaid funding to support the implementation of specific models, most often NFP. Medicaid funding is probably most often used for NFP because that model's home visiting services are provided by registered nurses and include components such as prenatal services that are eligible for Medicaid reimbursement.

In the states using Medicaid funding to support home visiting, most respondents discussed some limitations on or parameters for using the funds. In one state, reimbursement through Medicaid is allowed for only one model and is limited to three counties. Respondents also discussed limitations with respect to service recipients and the kinds of services that are eligible for Medicaid funds. For example, one state can only bill Medicaid for services provided

²⁸Pew Center on the States (2012).

²⁹Herzfeldt-Kamprath, Calsyn, and Huelskoetter (2017).

Table 4. Medicaid Funds to Support Home Visiting

State	Medicaid for Home Visiting	Program Name
California	Yes	Medi-Cal Managed Care Plans ^a
Georgia	No	
Illinois	No	
Indiana	No	
Iowa	No	
Kansas	No	
Massachusetts	Yes	Early Intervention Partnership Program ^b
Michigan	Yes	Maternal and Infant Health Program
Nevada	No	
New Jersey	No	
New York	Yes	NFP, Community Health Worker
North Carolina	No	
Pennsylvania	Yes	NFP ^c
South Carolina	Yes	NFP, Postpartum Newborn Home Visit ^b
Tennessee	Yes	Help Us Grow Successfully ^b
Washington	Yes	First Steps ^b
Wisconsin	Yes	HFA, NFP

NOTES: ^aSome Medi-Cal (California’s Medicaid program) managed care plans use Medicaid funds to reimburse providers for home visiting services. Commonly implemented models include HFA and NFP.

^bDepending on demonstrated family need, these programs may be limited to a certain number of home visits.

^cOnly state-funded NFP programs in Pennsylvania bill Medicaid; MIECHV-funded programs cannot bill Medicaid.

The wording of note b in Table 4 has been amended from an earlier version of this report.

to infants or young children, not for services provided to parents or caregivers. Another respondent said that Medicaid reimbursement in that state is limited to prenatal care coordination and case management. Finally, respondents in several states indicated that services must be delivered by a qualified or registered provider such as a registered nurse to be eligible for Medicaid reimbursement.

When the interviews for this report were conducted, a few states were studying the feasibility of using Medicaid funding for home visiting. Washington, for example, hired a staff member to explore Medicaid regulations and options for funding home visiting through Medicaid. Tennessee received a grant from the Institute for Child Success to complete a feasibility study for Pay for Success, an approach to contracting that ties payment for services to the achievement of measurable outcomes.³⁰

It can be challenging to obtain Medicaid funding for home visiting. A South Carolina respondent said that it took a long time to get approval to bill Medicaid. The state had to submit a Medicaid waiver application to CMS and coordinate with the National Service Office, all South Carolina NFP administering agencies, the South Carolina Children’s Trust, and other entities to ensure all levels of program operations were ready to adopt Medicaid billing. The process of getting approval was led by the South Carolina Department of Health and Human Services and included the NFP National Service Office, the South Carolina Hospital Association, and major funders.

A few respondents discussed how the privatization of Medicaid in their states has made it more challenging to use Medicaid funds for home visiting, because now they need to establish new relationships with private care organizations. For example, one respondent said:

That’s been another politically challenging issue in our state: our Medicaid system was privatized a few years ago. And so a lot of Medicaid financing and reimbursement is contracted through private managed-care organizations. Our director has been trying to build that relationship and a new agreement — memorandum of agreement — between us. So there have been a lot of political and implementation challenges over the years that have just not permitted me to kind of jump into it.

Some states use Medicaid funds to support home-based care coordination programs, though respondents did not view such programs as equivalent to home visiting due to the frequency of services provided. For example, one state offers one or two Medicaid-funded home visits to help families gain access to health care and other services they may need to have healthy pregnancies and promote their children’s healthy development.

Summary

States use multiple funding sources to support home visiting and other efforts to promote prenatal health and positive birth outcomes. Despite some challenges, many states also use Medicaid funds to support home visiting.

³⁰Baldini (2015).

Conclusion

The states represented in this report are involved in a variety of efforts to promote prenatal health and positive birth outcomes, including home visiting. These efforts cover a range of priority outcomes and goals, are varied in scope, and involve diverse partners. States carry out these efforts in several ways, including quality-improvement and data-monitoring projects, collaborations with stakeholders, targeted outreach and education campaigns, and Medicaid incentives and reimbursements. These efforts provide essential services, support, and infrastructure to improve prenatal health and birth outcomes across the country. Multiple funding streams, including Medicaid funding, support state efforts to promote prenatal health and positive birth outcomes, and to provide home visiting services.

The promotion of prenatal health and positive birth outcomes spans multiple disciplines and sectors, and therefore requires coordination and collaboration among stakeholders and partners at both the state and local levels. Common stakeholders and partners reported by respondents include public agencies, national organizations, and state collaborative groups. Respondents reported that coordinating with stakeholders and partners enables them to provide a continuum of services to families and avoid the duplication of services. While many interview respondents discussed the benefits of collaboration, they also indicated that collaboration can present a challenge when agencies have different goals and funding requirements.

It is of interest to note that the findings in this report suggest that state efforts focused solely on prenatal services are less common than efforts to provide a continuum of services from pregnancy through early childhood, probably because most agencies have a wide variety of program goals related to maternal, child, and family health and well-being. For example, respondents rated an average of 14 of the 23 program goals as a high priority. Agencies were more likely to discuss other state stakeholders and collaborative groups as being focused solely on prenatal services. This finding reinforces the importance of coordinating and collaborating with stakeholders and partners at the local and state levels to implement initiatives effectively and promote prenatal health and positive birth outcomes.

The findings presented in this report provide a snapshot of efforts and initiatives, which are only a fraction of the efforts to promote prenatal health and improve birth outcomes across the nation. Future studies could build on the work of this project and others to provide a comprehensive inventory of state efforts and initiatives to promote prenatal health and positive birth outcomes. A national inventory of state initiatives in this area could identify common challenges, accomplishments, and outcomes achieved across funding streams and delivery mechanisms. Describing these common challenges, accomplishments, and successes could in turn help researchers identify promising practices and draw lessons from existing work. A comprehensive inventory could also identify gaps in services and areas of continued need. Future work should

consider options for evaluating the impact of these state efforts as a whole, as well as for identifying promising practices.

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Earlier Publications on MIHOPE-Strong Start

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

2016. Helen Lee, Sarah Crowne, Kristen Faucetta, and Rebecca Hughes.

Design for the Mother and Infant Home Visiting Program Evaluation-Strong Start

2015. Charles Michalopoulos, Helen Lee, Emily K. Snell, Jill H. Filene, Mary Kay Fox, Keith Kranker, Tod Mijanovich, Lakhpreet Gill, 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-Strong Start

First Annual Report

2013. Jill H. Filene, Emily K. Snell, Helen Lee, Virginia Knox, Charles Michalopoulos, and Anne Duggan.

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