The transition to parenthood is a time of celebration as well as potential stress and worry—particularly for parents with low income and limited education, single or teenage parents, and families facing other types of adversity. It is during this period that children are most vulnerable. Six out of 1,000 babies in the US die before their first birthday, with unintentional injuries as a leading cause. In 2017, one in four children younger than age six visited a hospital emergency department, often because of an accident or injury. Many infants are at risk before they are even born: 6 percent of women delivering in the US report having no or delayed prenatal care, and 8 percent report using tobacco while pregnant.

Pregnancy and early infancy are optimal periods for adult learning and intervention to set the foundation for positive health and developmental trajectories for parents and children. At the biological level, the transition to parenthood is a sensitive developmental period when structural and functional changes occur in the brains of both mothers and fathers. For children, early experiences can chemically modify gene expression to enhance or suppress a child’s ability to reach their full potential. Intervening during pregnancy and early childhood to support parents can promote child health and well-being and set the family on a course to achieving self-sufficiency.

Parenting interventions are delivered in different settings and modalities, ranging from one-on-one and group-based parent education programs to home visiting services. The evidence of effectiveness underlying these programs varies, as do their target populations and targeted outcomes.

This brief focuses on early childhood home visiting programs, which are explicitly designed to improve maternal and child health. With roots dating back to the late nineteenth century, when private charities sent “friendly visitors” to provide guidance and model healthy behaviors to the urban poor, home visiting programs have evolved and expanded in recent decades in the US.
The Landscape Of Home Visiting Services

Early childhood home visiting connects new and expectant parents with a designated support person—a trained nurse, social worker, or early childhood specialist—who meets with them in their home or another preferred location. Services generally consist of four components: screening, case management, family support or counseling, and caregiver skills training.

Dozens of home visiting models exist in the US and abroad. The models vary in target populations, content, and the ages served, with some requiring enrollment prenatally and others enrolling children in infancy or later in early childhood. For example, two of the largest models in the US are Parents as Teachers (PAT), available in forty-nine states and the District of Columbia, and the Nurse-Family Partnership (NFP), available in forty-two states and the US Virgin Islands. PAT is designed for all families with young children not yet in kindergarten, with some local programs prioritizing enrollment of pregnant women and families with greater financial needs. In comparison, NFP targets first-time, low-income mothers. NFP requires clients to initiate services by the twenty-eighth gestational week and provides services until the child’s second birthday.

In contrast to these targeted models, some home visiting programs are offered universally to families in a specific geographic area. The Health Access Nurturing Development Services (HANDS) program is available to every new parent in Kentucky, with a recruitment focus on first-time pregnant women facing multiple challenges. The Family Connects model is a universal postpartum program started in Durham, North Carolina, that aims to improve population health. Every newborn in the target community is offered one to three nurse home visits after birth, during which the family is screened for various risks and referred to community resources.

The abovementioned models meet criteria to be designated “evidence based” by Home Visiting Evidence of Effectiveness (HomVEE), sponsored by the US Department of Health and Human Services. HomVEE is an ongoing, rigorous, and transparent review of the research literature. Evidence-based home visiting programs have been implemented in all fifty states, the District of Columbia, five US territories, and twenty-five tribal communities. Roughly 53 percent of US counties have evidence-based home visiting services, employing more than 19,000 home visitors nationwide.

In 2017, more than 300,000 families received evidence-based home visiting services during more than 3.5 million home visits. Approximately 21 percent of the families were black, 30 percent were Hispanic, and 28 percent spoke a primary home language other than English. Twenty-eight percent of caregivers had no high school diploma. Eighty-six percent of participating children received public health insurance, and 6 percent had no insurance at the time of home visiting services, indicating the low income of most families.

Estimates derived from US Census Bureau data show that nearly five million pregnant women and families with children under age six are living in poverty. Home visiting services reach about 6 percent of them. States with the greatest reach to infants and toddlers include Kansas, Missouri, and Rhode Island.

Launched in 2012, the federal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program is now the largest source of funding for home visiting in the US. The MIECHV program served approximately 80,000 families in fiscal year 2017.
Budget Act of 2018 reauthorized the program and allocated a flat funding amount of $400 million per year through fiscal year 2022. By law, state and territory grantees must spend the majority of their grants on implementing selected evidence-based home visiting models but may allocate up to 25 percent of funding to implement and evaluate promising approaches.

“In 2017, more than 300,000 families received evidence-based home visiting services.”

Multiple other funding streams support implementation beyond the MIECHV program, including private philanthropy, Medicaid, education funds, Temporary Assistance for Needy Families (TANF) dollars, tobacco settlements and taxes, lotteries, and state general funds.

Home Visiting Strategies To Improve Health

Typically, home visitors conduct an initial needs assessment and then visit families weekly or monthly to share resources and coach parents as they work toward goals. Common activities include:

• Screening for and responding to risk factors (for example, depression, family violence, and food insecurity);

• Identifying and addressing health care needs (for example, enrolling in Medicaid and finding a primary care physician);

• Assessing the safety of the home environment and advising parents on childproofing, such as locking up poisonous products;

• Educating pregnant women on the importance of prenatal care, nutrition, and exercise; the effects of smoking and secondhand smoke; and signs of labor;

• Sharing information on safe sleep, breast-feeding, immunizations, basic care (swaddling, diapering, and bathing), and how to handle sleep deprivation and stress;

• Educating parents on child development, responsive caregiving, and positive discipline practices;

• Supporting positive parent-child interactions and healthy attachment;

• Linking families to other resources to meet basic needs (for example, housing, nutrition, education, and employment); and

• Coaching parents to achieve their personal goals to better support their families.

In these efforts, home visitors target a broad range of health and developmental outcomes. Programs starting prenatally focus on healthy, full-term births, thus reducing the number of low-birthweight babies. Home visitors also focus on postpartum child health and safety by linking families to health insurance and medical homes and educating families on home safety protocols. Home visitors coach parents on building strong attachment to their babies, which is key to positive child development. Many home visitors are certified lactation educators and support mothers in breast-feeding their babies, as breast-feeding has positive impacts on the development of a child’s immune system and multiple maternal health benefits—such as decreased risk of breast and ovarian cancer and increased birth spacing. The support that home visitors and referrals provide is also intended to improve parental mental health by lowering stress, anxiety, and depression and improving confidence and motivation.

Research Connecting Home Visiting And Health

HomVEE identifies evidence of impacts in eight outcome domains: maternal health; child health; child development and school readiness; positive parenting practices; reductions in child maltreatment; family economic self-sufficiency; linkages and referrals; and reductions in juvenile delinquency, family violence, and crime.
During its review process, HomVEE screens all new research citations for relevance. Then each published article and unpublished evaluation report for a given model is assigned a rating of high, moderate, or low quality to reflect how well the study design can provide unbiased estimates of the model’s impact. For example, a high rating is reserved for randomized controlled trials (RCTs) with low sample attrition.

“Ten [home visiting] models show significant evidence of impacts on a range of primary health outcomes.”

Quasi-experimental designs and random assignment studies with high attrition are rated moderate quality. To meet the criteria for an evidence-based model, at least one high- or moderate-quality study of the model must show favorable and significant impacts in two or more outcome domains, or at least two high- or moderate-quality studies of the model using non-overlapping analytic samples must show one or more favorable and significant impacts in the same domain.

To date, HomVEE has reviewed evidence for forty-six models and identified twenty that are considered evidence-based; eighteen of the twenty qualify for MIECHV program funding. Many other emerging models do not yet have qualifying evaluation results. As additional evidence becomes available, the list of evidence-based models will likely grow.

Among the evidence-based models, the evidence of health impacts varies considerably. Ten models show significant evidence of impacts on a range of primary health outcomes (that is, those measured with direct assessments or medical records, not self-reports). Other models have positive impacts on maternal health, child maltreatment, and parenting practices—including home safety, which reduces risk of injury.

Key health-related findings from studies reviewed by HomVEE include the following:

- A statewide quasi-experimental study of the Kentucky HANDS program that compared participants to eligible nonparticipants found lower rates of newborn deaths (0 percent versus 2 percent), preterm babies (11 percent versus 14 percent), and low-birthweight babies (7 percent versus 12 percent).

- An RCT of the Nurse-Family Partnership found that first-time pregnant women receiving nurse home visiting were less likely to have pregnancy-induced hypertension (13 percent versus 20 percent), more likely to attempt breast-feeding (26 percent versus 16 percent), and more likely to delay having a second baby within two years postpartum (47 percent versus 36 percent).

- Families randomly assigned to the Family Connects nurse home visiting program had 50 percent less infant emergency medical care between birth and age twelve months than control families did, based on an analysis of hospital records.

- Children participating in Healthy Families America had lower rates of substantiated child abuse and neglect up to two years after enrollment, compared to children in a control group, according to administrative data and medical records for encounters with health care providers.

- At twelve months postpartum, compared to control group participants, mothers who received home visits through Child FIRST—which employs mental health clinicians to provide cognitive behavioral therapy to high-risk families—demonstrated fewer depressive symptoms on the Center for Epidemiological Studies Depression Scale (MI=13.5 versus MC=17.4) and lower rates of clinically concerning problems on the Parenting Stress Index (38.1 percent versus 57.6 percent).

- In a long-term follow-up of the Nurse-Family Partnership, an analysis of administrative records found that 1.6 percent of children in the control group had died before their twentieth birthday due to preventable causes (for example, homicide), versus 0 percent of children in the treatment group.

Besides these model-specific evaluations, the legislatively mandated Mother and Infant Home Visiting Program Evaluation (MIHOPE) randomly assigned...
about 4,200 families to either a MIECHV-funded program implementing one of four evidence-based models—Early Head Start, Healthy Families America, the Nurse-Family Partnership, or Parents as Teachers—or to a control group that received information on community services. Early findings reveal positive and significant impacts on multiple health outcomes, particularly for mothers, when children were fifteen months old (exhibit 1). While rates of child health insurance coverage and preventive care were high overall and not affected by home visiting, children assigned to home visiting were significantly less likely than children in the control group to be admitted to the hospital after they were born and had fewer emergency department visits (2.1 versus 2.2 on average since birth; data not shown). Effect sizes overall are small, but the results suggest that home visiting services could reduce health care costs for mothers and their infants.

Policy Implications And Remaining Questions

Home visiting is supported by a growing evidence base and multiple funding streams, yet services reach only a fraction of the families that could benefit. Even though the MIECHV program saw growth in funding and enrollment in its first five years, the current flat funding amount prevents service expansion. Unstable funding may jeopardize efforts to retain qualified staff members and engage in continuous quality improvement.

States are leveraging other funds to supplement the MIECHV program, with Medicaid offering a significant and underused opportunity. Federal guidance clarifies that Medicaid can cover many of the individual component services of home visiting programs (for example, screenings), but some components do not

EXHIBIT 1

Select findings from the Mother and Infant Home Visiting Program Evaluation

Outcome when child is 15 months old

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Treatment</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health insurance coverage for the mother</td>
<td>90%</td>
<td>98%</td>
</tr>
<tr>
<td>Mother’s health status, self-rated as poor or fair</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>Maternal depressive symptoms</td>
<td>14%</td>
<td>18%</td>
</tr>
<tr>
<td>Maternal experience with physical or sexual violence</td>
<td>17%</td>
<td>20%</td>
</tr>
<tr>
<td>Any nonbirth hospitalization for child</td>
<td>14%</td>
<td>18%</td>
</tr>
<tr>
<td>Household food insecurity</td>
<td>13%</td>
<td>17%</td>
</tr>
</tbody>
</table>

meet Medicaid requirements and may require separate funding. At least twenty states use Medicaid to finance home visiting.

The 2018 MIECHV program reauthorization allows states to implement a pay for outcomes (PFO) financing approach. The new model authorizes states to use up to 25 percent of their grant funds to enter into a PFO agreement with a private partner that finances the program up front. States are required to pay back the investment only if performance-based outcomes are met. Connecticut is the first state to reward MIECHV-funded service providers who reach target benchmarks. Bonus payments are capped at 3 percent of the total contract value for each provider—which, in the absence of year-to-year grant increases and cost-of-living adjustments for staff salaries, incentivizes performance.

Several important questions regarding home visiting remain. First, funding aside, services cannot be scaled up without a pipeline of qualified workers. How can institutions of higher education play a role in preparing the future workforce? Multiple programs employ nurse home visitors or licensed clinicians with master’s degrees who demand higher salaries. Emerging evidence of staff turnover because of low compensation, poor benefits, and lack of career advancement opportunities is concerning and warrants further attention.

Second, with so many models, there is a need to identify the “active ingredients” of effective models, to know why home visiting is effective and for whom. The evidence on this issue is sparse. Ongoing research in this area will shed light on this question and help identify program strengths.

Third, the field needs to learn more about universal programs. For example, what are the benefits of targeting all newborns in a high-needs community to move the needle on population-level outcomes (and to remove the stigma of social service program participation) versus targeting high-needs pregnant women and parents in a broader community? What approaches work best in which types of communities? Given the challenge some programs report with participant recruitment, how does screening for income or other eligibility criteria at enrollment affect participant enrollment and retention? Is there greater political will to support universal or targeted programs?

Lastly, several states are beginning to explore ways of integrating early childhood data systems to connect home visiting data with other child services and outcomes. These exciting efforts will give states the capacity to track impacts past service end dates, using state administrative data, and to better coordinate services across programs and state agencies. Building states’ data and research capacity is a prominent area for future investment, as richer and more precise evidence is needed to inform funding decisions and quality improvement initiatives.

“Funding aside, services cannot be scaled up without a pipeline of qualified workers.”