review

Home visiting programs: Four evidence-based lessons for policymakers

Cynthia Osborne

Summary. Home visiting programs (HVPs) aim to help low-income parents enhance their parenting skills and improve a host of early health and developmental outcomes for young children. Over the past five decades, numerous HVP models have been developed and implemented, albeit with modest or even null results, according to meta-analyses and comprehensive reviews. In 2010, in an effort to advance HVPs' effectiveness, federal lawmakers vastly expanded funding for HVPs with certain caveats, one being the requirement that the majority of programs be evidence based. Although the new requirement is a policy win, this review presents four main areas that must be addressed and improved upon if this new funding effort is to maximize positive outcomes. Pointedly, HVPs should have built-in flexibility for states to match the specific or unique needs of a family to a program model that has demonstrated effectiveness in meeting those specific needs. Further, program developers should clearly demonstrate what it is specifically about their model that works, in what context, and for whom. Ultimately, not unlike personalized medicine, state policymakers should target delivery of the right HVP model to the right family at the right time.

Home visiting is a promising early intervention strategy that aims to improve child and family outcomes by providing support, education, and access to resources for expectant parents and families with young children. Over the past five decades, numerous home visiting program (HVP) models have been developed with goals such as reducing child abuse and neglect, promoting healthy birth outcomes, increasing school readiness, and enhancing family economic self-sufficiency. Several HVP models have undergone rigorous evaluations to quantify the short- and longer term benefits for mothers and their children, and this evidence base has generated widespread hope that home visiting will reduce disparities in children's outcomes.

In 2010, Congress and President Obama established the Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV), enacted as part of the Affordable Care Act and funded to the tune of $1.5 billion in formula grant funding over 5 years. The MIECHV

Osborne, C. (2016). Home visiting programs: Four evidence-based lessons for policymakers. *Behavioral Science & Policy, 2*(1), pp. 29–36.

initiative was a massive scale-up of the Evidence-Based Home Visiting program of 2008 launched under President Bush. In an effort to improve outcomes achieved from HVPs, MIECHV requires states to spend at least three-quarters of the federal funds allocated on HVP models that meet the federally established criteria of evidence-based effectiveness.[1] To be considered evidence based, the HVP model must have been evaluated using a randomized control or quasi-experimental study design.

The decision of the federal government to rely on social science evidence to guide funding was hailed as a victory for both fiscal responsibility and evidence-based policy.[2] By spring 2016, 19 HVP models had been determined to meet the federal criteria and are on the list of approved programs from which states can choose.[3]

Demonstrating impact in randomized control trials, however, does not always translate to impact at the community level. The developers of the HVP models that are being used widely across the United States have a responsibility to taxpayers and to the states to demonstrate that their models' effects can be retained when taken to scale. Scaling up any intervention is difficult, but unless programs retain their effectiveness when implemented widely, evidence-based programs will not fulfill their promise and policymakers may reduce or eliminate spending on home visiting.

Since 2011, I have been the lead evaluator of the Texas Home Visiting (THV) program, the largest HVP program in the country, serving over 6,500 families in 13 diverse communities across the state. The THV program has used four of the most common home visiting program models—Nurse-Family Partnership (NFP), Parents as Teachers (PAT), Early Head Start–Home Based (EHS-HB), and Home Instruction for the Parents of Preschool Youngsters (HIPPY)—although in 2015, we stopped using the EHS-HB. (See Table 1 for an overview of effectiveness of these programs—as well as another popular HVP—on six federal outcome measures.) Some communities implemented all four program models,

Table 1. Home Visiting Program Model Impacts on Federal Priority Outcome Domains

Outcome measure	Early Head Start – Home Based (EHS-HB)	Healthy Families America (HFA)	Home Instruction for Parents of Preschool Youngsters (HIPPY)	Nurse Family Partnership (NFP)	Parents as Teachers (PAT)
Maternal and newborn health	No effect	Favorable (secondary)	Not measured	Favorable (primary)	No effect
Prevention of child injuries, child abuse, neglect, or maltreatment and reduction of emergency department visits	Favorable (secondary)	Favorable (primary)	Not measured	Favorable (primary)	Favorable (primary)
Improvement in school readiness and achievement	Favorable (primary)	Favorable (primary)	Favorable (primary)	Favorable (primary)	Favorable (primary)
Reduction in crime or domestic violence	Not measured	Favorable (secondary)	Not measured	Favorable (secondary)	Not measured
Improvements in family economic self-sufficiency	Favorable (secondary)	Favorable (secondary)	Not measured	Favorable (primary)	Favorable (primary)
Improvements in the coordination and referrals for other community resources and supports	Favorable (secondary)	Favorable (primary)	Not measured	No effect	Not measured

Note. Source: US Department of Health and Human Services (2015). Home Visiting Evidence of Effectiveness (HomVee).

Primary outcomes are measured through direct observation, direct assessment, or administrative data or are self-reported data collected using a standardized (normed) instrument. **Secondary outcomes** include most self-reported data, excluding self-reports based on a standardized (normed) instrument. Data are accessed and adapted from "Home Visiting Program Model Effects" [Table], U.S. Department of Health and Human Services, Administration for Children and Families, 2015, http://homvee.acf.hhs.gov/EvidenceOverview.aspx?rid=4.

whereas others implemented only two, for a total of 34 MIECHV-funded programs across the state.

As part of the THV evaluation, my research team and I have visited each of the communities multiple times, repeatedly interviewed the program administrators and home visitors, conducted seven focus groups with parents, executed longitudinal surveys of the mothers (N = 1,698) and home visitors (N = 135), and analyzed data collected by the state from each of the four HVP models. This analysis, combined with two extensive evidence reviews that I completed with my staff,[4,5] illustrates the strengths and potential limitations of the evidence-based approach to home visiting. Texas constitutes a living laboratory that presents essential lessons for the future. Four of these lessons are especially pertinent; failing to heed them could jeopardize the success of the MIECHV initiative and evidence-based policymaking across the United States.

Lesson 1: Align the Strengths of the HVP Models with Community Goals

Within MIECHV, administrators often assume that because an HVP model is on the list of 19 federally approved programs, it will solve all family and early childhood problems. Administrators are rarely steeped in the home visiting evidence base and therefore may choose HVP models that are less than ideal for addressing the problems they are trying to resolve in either an individual family or the community as a whole.

No HVP model can do it all. There is no program model that has demonstrated improvement for each of the federal priority outcome areas stipulated in the MIECHV legislation. Too often, communities make the specious assumption that any HVP model will work for all populations and on any outcome. But program models vary considerably across a range of factors, including their goals, their target population, the curriculum, the required qualifications of home visitors, and the frequency and duration of the visits. The four program models used in Texas illustrate this variety.

Parents as Teachers (PAT) aims to provide general parenting education and serves a broad range of families, including pregnant women and families with children from birth through age 5 years. For higher risk families, the home visitor comes twice a month, although the standard program requires only a single visit per month.

Early Head Start – Home Based (EHS-HB), which uses the PAT curriculum in THV, serves low-income pregnant women and families with children from birth to age 3 years. The home visits are provided weekly, and the parents participate in several additional enrichment activities.

Home Instruction for the Parents of Preschool Youngsters (HIPPY) focuses on school readiness. The program does not have an income eligibility requirement and serves parents of children ages 3 to 5 years old. The program lasts 10 months and includes 30 weekly visits, plus group meetings.

Nurse Family Partnership (NFP) emphasizes maternal and child health; it has a higher recommended frequency and duration of visits than the other models and strenuous eligibility requirements. Recipients must be low-income, first-time mothers who are not more than 28 weeks pregnant. It is also the only model of the four used in Texas that requires the home visitor to have a bachelor's degree in nursing. The other models employ paraprofessionals or former program recipients to deliver the home visits.

This variation in service delivery and goals is mirrored in the outcomes for the models involved. All HVPs have met the evidence-based outcomes criteria on at least one of the six federally defined priority outcome areas: maternal health, child maltreatment, school readiness, crime or domestic violence, economic self-sufficiency, and referrals to services. But some models demonstrate impacts on multiple outcomes. Specifically, across the six benchmark areas prioritized by MIECHV, NFP shows at least one favorable impact in five areas; EHS-HB and PAT show favorable impacts in four and three of the six benchmarks, respectively; and HIPPY shows an impact in only one.

The reality is that no program model has proven benefits in all six federal benchmark outcome areas. Given that MIECHV requires states to demonstrate progress in four of the six priority benchmark areas, states may be wise to use several program models and models with more comprehensive impacts, which is the strategy followed by most states.

Often, a community chooses its HVP models on the basis of factors such as the age of the children served and whether a given model already exists within that community. Aligning the chosen model with particular community goals happens far too infrequently. In light of this, the federal government should require

that states and communities demonstrate their knowledge of the evidence base associated with their chosen program models and align HVP models with the specific outcomes the community is trying to achieve.

Lesson 2: Set Realistic Expectations

Communities often set unrealistic expectations for the programs they decide to use. All models have shown benefits on one or more outcomes in previous rigorous research, but the impacts are typically small, and they may not translate into large, community-level improvements. Meta-analyses and comprehensive reviews of home visiting evaluations find that most high-quality studies report null effects; even when effects are positive, the impacts are usually modest. In addition, the effects tend to be more pronounced among the most disadvantaged or high-risk subgroups.[6,7,8]

The attention home visiting receives in the media and from policymakers does not reflect the tepid impacts found in the evidence base. Indeed, President Obama's Plan for Early Education for All Americans cites evidence-based home visiting programs as having "been critical in improving maternal and child health outcomes in the early years, leaving long-lasting, positive impacts on parenting skills; children's cognitive, language, and social-emotional development; and school readiness."[9] In a similar vein, Nicholas Kristof, a *New York Times* columnist, commented in an op-ed coauthored with his wife Sheryl WuDunn that "the visits have been studied extensively through randomized controlled trials—the gold standard of evidence—and are stunningly effective."[10]

Home visiting programs are the most promising early childhood intervention we have, but they are not a magic bullet. A public dialog that sets realistic expectations for what home visiting programs can do for disadvantaged families and children will help states and communities understand whether their efforts are successful and aligned with reality. This will also help to avoid disappointment if future impacts continue to be null or modest.

To demonstrate the range of benefits—and the limits—found in home visiting, my colleagues and I examined findings reported in the literature for four widely used program models: EHS-HB, NFP, PAT, and Healthy Families America (HFA), a model commonly used in MIECHV-funded states that was designed to reduce child maltreatment. We examined a sample of important parenting behaviors, including prenatal care, breastfeeding, well-child visits and immunizations, learning support, and child maltreatment. We found that the HVP models generally have a robust impact on learning support and child maltreatment but limited or null impacts on the other parenting outcomes we examined.

For example, NFP is the only program model of the four that has demonstrated any impact on prenatal care at all. That beneficial outcome was measured through a study of NFP conducted in Elmira, New York, in the 1970s: Researchers demonstrated that mothers visited by program nurses were more likely to attend a childbirth class during pregnancy and knew more about available prenatal services. But even there, the program did not increase the level of prenatal care received.[11] The overwhelming majority of mothers who participated in EHS-HB and HFA received prenatal care services during their pregnancy, but we lack information on the comparison groups' outcomes, making it impossible to determine if the program had an impact.[12,13] Despite the fact that PAT serves mothers prenatally, researchers have not tested its impact on prenatal care.

The models have also had minimal and varied impacts on breastfeeding. Neither EHS-HB nor HFA demonstrated an impact on breastfeeding, and PAT's impact on breastfeeding has not been tested at all. NFP did demonstrate a positive impact on breastfeeding, but the findings were limited primarily to first-time African American mothers in Memphis in the early 1990s, 26% of whom initiated breastfeeding, compared with only 16% of mothers in the control group. At the 6-month follow-up, there was no difference between the groups in breastfeeding duration.[14] The impact on breastfeeding was not replicated in other NFP evaluations. Similarly, the four models also have had limited and varied impacts on well-child visits and immunizations.[15]

The evidence for impacts on learning support is stronger than the evidence for the other outcomes. Indeed, EHS-HB, NFP, and PAT all show positive impacts on parent's support for children's learning, although the construct was measured differently across programs. For example, EHS-HB[16] and NFP[14] showed positive impacts on the Home Observation Measurement of the Environment (HOME) Inventory, which measures the quality and quantity of stimulation and support available to a child in the home environment. The results for NFP

applied to the mostly African American sample of high-risk mothers in Memphis and the most disadvantaged mothers in Elmira,[17] but marginal results were found for the more diverse sample of mothers in a Denver study.[18] EHS-HB also showed modest impacts on reading to children daily by the time they reached kindergarten. And PAT showed a positive impact on reading aloud and parent engagement, but the findings were limited to the most disadvantaged children in the study.[19] The HFA studies found virtually no impact on learning supports. Each of the four models had a positive impact on reducing child maltreatment, but the findings were more robust among the most disadvantaged groups.

The HVP models have demonstrated impacts on several outcomes not discussed here, but this brief summary sheds light on the mixed and generally modest results found in the evaluations that make up the evidence base. States and communities should not rely on HVPs alone to reduce childhood adversity and create better outcomes for children and families. Home visiting programs should be one component of a continuum of care that supports parents and children. To gain the most benefit, communities and administrators must understand the impacts they can expect from each well-implemented HVP model.[20] They would also do well to remember that impacts at the population level tend to be far more difficult to detect than impacts at an individual level, particularly if the individual changes are modest. To prevent disillusionment, politicians, policymakers, pundits, and academics should set fair expectations for HVP results rather than engage in hyperbole.

Lesson 3: Understand Why Each HVP Model Works and In What Context

The third important lesson from the evidence-based home visiting approach is that context matters. It is unreasonable to expect that the results found in the evidence base will be replicated precisely in the real world. Indeed, the home visiting evidence base is replete with mixed results across models and, more important, within each model. The findings from one HVP model study are seldom replicated when the model is implemented in a different geographic or demographic context.[21]

This lack of replication and generalizability means that the home visiting evidence base is limited. Program model developers have only been required to demonstrate whether their program works; they have not had to illuminate what about the program model works best, under what circumstances, and for whom. Although this information is difficult to determine through large, rigorous impact evaluation studies, strong implementation studies and smaller outcome studies that examine various aspects of the program models can be valuable tools. Without this additional information, states and communities lack guidance on how to reap the benefits promised by the evidence-based model they are using.

An excellent example of the importance of context matters in HVP model impacts is demonstrated in studies of NFP, the longest running and most rigorously evaluated home visiting model. Over the years, three major studies of NFP, based in Elmira, Memphis, and Denver, respectively, have evaluated specific outcomes, yet none has been proven and replicated across all three studies. The Elmira study has so far demonstrated the largest and longest term impacts, whereas fewer impacts were found in Memphis or Denver. (The variation may be due, in part, to the different time periods in which the studies were conducted and the cultural and demographic differences in the populations studied. The Elmira study took place in 1978–1980 and included 400 first-time mothers; 90% of the sample was White. The Memphis study of 1,139 first-time mothers took place a decade later; there, 92% of participants were African American. The Denver study of 735 first-time mothers ran from 1994–1995 and had a more diverse sample: 46% were Hispanic, 36% were White, and 15% were African American.)

Also illustrative of this lack of replication/reproducibility in studies of HVPs: while five evaluations of HFA have been reviewed by the federal government, the results from one study have not typically been replicated in another context; also troubling is that the developers of the model have not provided enough insight as to why.

Given the inability to replicate findings from one context to another, states and communities cannot feel confident that benefits proven in one population or situation will work elsewhere. In Texas, this seems to be the case. One example of variation in Texas outcomes is with breastfeeding initiation: Among nine communities serving pregnant mothers using various HVPs, rates of breastfeeding initiation ranged between 19% and 95%. One program model had very high rates of initiation

(over 80%) in each community, whereas another model showed considerable variation across communities (from 19% to 41%).

Low adherence to model fidelity may be another reason for the large variation in outcomes.[22] Few home visitors pay strict attention to their model's curriculum. A common refrain from home visitors is that although they begin a home visit with the intention of addressing the prescribed topic for the visit, "life gets in the way," and they spend time meeting the individual needs of the mother. A discussion on car seat safety, for example, seems less important than helping a mother who is about to be evicted locate the resources she needs to retain her home. Allowing home visitors the flexibility to meet the mother's goals and needs is part of the philosophy of some of the programs, yet that makes it difficult to determine what information is actually being shared with parents consistently. Measuring fidelity to the curriculum and learning the core principles of the model are nearly impossible with this flexible approach.

Partial participation and attrition from the program offer additional explanations for variation in results. Each program is committed to serving its families, but programs that enroll teen parents or parents with high levels of risk have greater difficulty meeting with the parents as planned. Home visitors lament that missed appointments and families leaving the program before completion interfere with meeting a family's goals. To the extent that dosage and attrition differ across HVP models, outcomes are likely to be affected.

It is no surprise that outcomes will vary given the variation in inputs and contexts. But model developers need to better define what level of variation is part of the model and what variation conflicts with the model's fidelity. If delivery of the curriculum is believed to be what is responsible for the model's success, then the curricular elements need to be identified and replicated each time the model is implemented. Currently, neither the home visitor, the developers of the models, nor the states are closely monitoring fidelity because no one is certain what *fidelity* actually means. If fidelity to the model is not a priority and is not adhered to, then is MIECHV really an evidence-based policy approach?

To be on the federal government's approved list of evidence-based programs, the HVP model's developers should be responsible for identifying their core program components and activities. The developers should also explain what it is about their model that produces specific outcomes, as well as why, for whom, and under what conditions. Without this peek inside the black box, communities do not know which elements of the model to faithfully replicate and which elements they could alter to fit their circumstances.

Identifying core elements of HVPs may ultimately permit states and communities to move away from strict adherence to a particular program model and develop an approach that is tailored to the varying needs of families. Ideally, every mother during pregnancy and at birth would receive one home visit devoted to parenting education, screening for potential risk factors, and connecting with necessary resources. Mothers with identified risks would receive additional home visits commensurate with their needs. But without understanding the core elements of a model, it is virtually impossible to custom design a given program for each parent's needs.

Lesson 4: Innovation Is Important for Ongoing Success of Home Visiting

A final concern about the evidence-based policy approach is that it may fail to foster innovation. The existing evidence base must be strengthened through evaluations of new program models that meet families' needs. It is encouraging that MIECHV contains important research elements that may strengthen the evidence base. Specifically, MIECHV allows states to use one-quarter of formula funds on program models that have not yet met the high standard of evidence but are undergoing evaluations. (MIECHV also funded the Maternal and Infant Home Visiting Program Evaluation, which will examine the outcomes of the four most widely used program models—NFP, EHS-HB, HFA, and PAT—and study variation in program implementation.)[23]

In addition to improving the existing research base, researchers and policymakers need to develop new program models that address today's most pressing health and social policy issues. For example, prenatal smoking was a serious concern in the 1970s, and the NFP model demonstrated a substantial impact on reducing the incidence of prenatal smoking. However, today, maternal prenatal obesity and early childhood obesity are widely prevalent health concerns, yet no program has been designed to address obesity.

Innovation may also be stifled by inertia. Over time, communities accumulate knowledge and expertise on

how to administer and support a particular HVP model, and the community may be reluctant to change course, even if that model is not making a difference in families' outcomes. To correct for this, an evidence-based approach to policy making should entail continuous assessment and modification.

To strengthen the evidence base, the federal government must implement a mechanism in MIECHV that requires program model developers to continually evaluate and enhance their models to remain on the list of evidence-based models. Models yielding results that demonstrate that their impacts are robust across time and populations and models that identify their core elements should be considered evidence based. Other models might be considered promising practices.

Policymakers should move away from offering families pre-determined programs and move toward providing families with what they actually need. In practice, however, communities are not typically aligning a family's needs with a model designed to meet those needs. Rather, communities are generally delivering the model they offer to any family who meets the eligibility requirements, regardless of that family's needs. Some families may be overserved and others underserved in a quest to implement a preferred model(s). For example, a family may need 2 weeks of minimal services to connect them to other resources but, instead, the family is put into a program that offers services for years. Alternatively, a family may need intense case management, but the program model in which they are enrolled may provide only monthly home visits. With greater clarity over what it is about home visiting services that impacts family outcomes, programs could move toward offering more individualized services aligned to families' needs.

Conclusion

Using evidence to inform decisions about what programs to fund is a reasonable and prudent approach to policymaking. But taking an evidence-based policymaking approach to home visiting means that program developers and administrators must identify what it is about their HVP model or models that positively impacts families and which family needs are best met by their programs. Policymakers and administrators in states and communities have a responsibility to know the evidence base and implement programs that will address the goals they establish. It is imperative to align a model's evidence of impacts with the needs it is being put in place to meet. Finally, federal policymakers should take steps to strengthen the evidence base and put it to targeted use while simultaneously fostering innovation. Using the evidence base to inform efforts to target services more effectively to families so that they receive the right level and elements of services to meet their needs and improve their children's lives is sound policy.

author affiliation

Osborne, LBJ School of Public Affairs, University of Texas at Austin. cosborne@prc.utexas.edu

References

1. U.S. Department of Health and Human Services, Administration for Children and Families. (2013). Home visiting evidence of effectiveness: About us. Executive summary. Retrieved from http://homvee.acf.hhs.gov/About-Us/5/Executive-Summary/20/2
2. Haskins, R., & Margolis, G. (2014). *Show me the evidence: Obama's fight for rigor and results in social policy*. Washington, DC: Brookings Institution Press.
3. U.S. Department of Health and Human Services, Administration for Children and Families. (n.d.). Home visiting evidence of effectiveness: Models. Retrieved July 30, 2016, from http://homvee.acf.hhs.gov/Models.aspx.
4. Osborne, C., Bobbitt, K., & Ansari, A. (2015). *From randomized controlled trials to community-level change: What should be expected when taking home visiting programs to scale?* [Working paper]. Austin: The University of Texas at Austin, Child and Family Research Partnership.
5. Bobbitt, K., & Osborne, C. (2015). *Reality check: Can the effects of home visiting programs found in RCTs be replicated in the real world?* [Working paper]. Austin: The University of Texas at Austin, Child and Family Research Partnership.
6. Astuto, J., & Allen, L. (2009). Home visitation and young children: An approach worth investing in? *Social Policy Report, 23*(4). Retrieved from http://srcd.org/sites/default/files/documents/23-4_astuto_allen.pdf
7. Azzi-Lessing, L. (2011). Home visitation programs: Critical issues and future directions. *Early Childhood Research Quarterly, 26,* 387–398.
8. Sweet, M., & Appelbaum, M. (2004). Is home visiting an effective strategy? A meta-analytic review of home visiting programs for families with young children. *Child Development, 75,* 1435–1456.
9. White House, Office of the Press Secretary. (2013, February 13). *Fact sheet President Obama's plan for early education for all Americans* [Fact sheet]. Retrieved from https://www.whitehouse.gov/the-press-office/2013/02/13/fact-sheet-president-obama-s-plan-early-education-all-americans
10. Kristoff, N., & WuDunn, S. (2014, September 12). The way to beat poverty. *The New York Times*. Retrieved from http://www.nytimes.com
11. Olds, D., Henderson, C., Tatelbaum, R., & Chamberlin, R. (1986). Improving the delivery of prenatal care and outcomes of pregnancy: A randomized trial of nurse home visitation. *Pediatrics, 77,* 16–28.

12. Chazan-Cohen, R., Raikes, H., & Vogel, C. (2013). Program subgroups: Patterns of impacts for home-based, center-based, and mixed-approach programs. *Monographs of the Society for Research in Child Development, 78,* 93–109.
13. Daro, D. A., & Harding, K. A. (1999). Healthy Families America: Using research to enhance practice. *The Future of Children, 9,* 152–176.
14. Kitzman, H., Olds, D. L., Henderson, C. R., Jr., Hanks, C., Cole, R., Tatelbaum, R., . . . Barnard, K. (1997). Effect of prenatal and infancy home visitation by nurses on pregnancy outcomes, childhood injuries, and repeated childbearing: A randomized controlled trial. *JAMA: The Journal of the American Medical Association, 278,* 644–652.
15. Landsverk, J., Carrilio, T., Connelly, C. D., Ganger, W., Slymen, D., Newton, R., et al. (2002). *Healthy Families San Diego clinical trial: Technical report*. The Stuart Foundation, California Wellness Foundation, State of California Department of Social Services: Office of Child Abuse Prevention. Referenced on the HomVee evidence website: http://homvee.acf.hhs.gov/Effects/1/Healthy-Families-America--HFA-/10/Child-Health/2/4/#2.
16. Harden, B. J., Chazan-Cohen, R., Raikes, H., & Vogel, C. (2012). Early Head Start home visitation: The role of implementation in bolstering program benefits. *Journal of Community Psychology, 40,* 438–455.
17. Olds, D., Henderson, C., & Kitzman, H. (1994). Does prenatal and infancy nurse home visitation have enduring effects on qualities of parental caregiving and child health at 25 to 50 months of life? *Pediatrics, 93,* 89–98.
18. Olds, D., Robinson, J., Pettitt, L., Luckey, D. W., Holmberg, J., Ng, R. K., . . . Henderson, C. R., Jr. (2004). Effects of home visits by paraprofessionals and by nurses: Age 4 follow-up results of a randomized trial. *Pediatrics, 114,* 1560–1568.
19. Wagner, M., Spiker, D., & Linn, M. (2002).The effectiveness of the Parents as Teachers program with low-income parents and children. *Topics in Early Childhood Special Education, 22,* 67–81.
20. Gottfredson, D. C., Cook, T. D., Gardner, F. E., Gorman-Smith, D., Howe, G. W., Sandler, I. N., & Zafft, K. M. (2015). Standards of evidence for efficacy, effectiveness, and scale-up research in prevention science: Next generation. *Prevention Science, 16,* 893–926.
21. Azzi-Lessing, L. (2013). Serving highly vulnerable families in home-visitation programs. *Infant Mental Health Journal, 34,* 376–390.
22. Paulsell, D., Del Grosso, P., & Supplee, L. (2014). Supporting replication and scale-up of evidence-based home visiting programs: Assessing the implementation knowledge base. *American Journal of Public Health, 104,* 1624–1632.
23. Michalopoulos, C., Lee, H., Duggan, A., Lundquist, E., Tso, A., Crowne, S. S., . . . Knox, V. (2015). *The Mother and Infant Home Visiting Program Evaluation: Early findings on the Maternal, Infant, and Early Childhood Home Visiting Program. A report to Congress* (OPRE Report 2015-11). Washington, DC: U.S. Department of Health and Human Services.